



**Action Aimed at Promoting Standards and
Interoperability in the Field of AAL**

Deliverable D7

**Use Cases in the
Ambient Assisted Living domain:
a selected collection from AAL JP,
FP6 and FP7 projects**

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Action Aimed at Promoting Standards and Interoperability in the Field of AAL

Deliverable D7: Use Cases

Report for Ambient Assisted Living Association, Brussels

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About Ambient Assisted Living Association: The Ambient Assisted Living Association (AALA) is implementing the Ambient Assisted Living Programme (AAL). The AAL Programme aims at enhancing the quality of life of older people and strengthening the industrial base in Europe through the use of Information and Communication Technologies (ICT). Therefore, the AAL Programme is an activity that operates in the field of services and actions to enable the active ageing among the population. The programme is financed by the European Commission and the European countries that constitute the Partner States of this Joint Programme. See more at: <http://www.aal-europe.eu/>.

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Table of Contents

| | | |
|---|---|----|
| 1 | Introduction | 8 |
| 2 | Use Cases | 9 |
| | UC 001-02: Monitoring of Chronic Diseases | 9 |
| | UC 002-02: Home Safety and Care | 12 |
| | UC 003-02: Personal Activity Management | 13 |
| | UC 004-02: Localization/Positioning Assistance | 15 |
| | UC 005-02: Mobility and Transportation - Public Transportation | 16 |
| | UC 006-02: Mobility and Transportation - Intelligent Car | 18 |
| | UC 007-02: Sensorial Supervision - Fall Detection | 20 |
| | UC 008-02: Sensorial Supervision - Vital Signs and Mental State | 21 |
| | UC 009-02: Medication Assistance - Mobile Phone | 23 |
| | UC 010-02: Medication Assistance - Service Robot | 24 |
| | UC 011-02: Healthy Lifestyle Interventions - Fitness Exercises | 25 |
| | UC 012-02: Healthy Lifestyle Interventions - Workout Gaming | 26 |
| | UC 013-02: Healthcare Management - Professional Network | 28 |
| | UC 014-02: Healthcare Management - Tele-consultation | 29 |
| | UC 015-02: Rehabilitation & Disabilities Compensation - Neuro-cognitive Compensation | 31 |
| | UC 016-02: Rehabilitation & Disabilities Compensation - Physical Compensation | 32 |
| | UC 017-02: Rehabilitation & Disabilities Compensation - Rehabilitation | 33 |
| | UC 018-02: Ageing at Work - Adjusted Working Space/ Craftsman | 35 |
| | UC 019-02: Ageing at Work - Adjusted Working Space/ Office Worker | 36 |
| | UC 020-02: Socializing - Virtual Communities | 37 |
| | UC 021-02: Socializing - Social Events Management | 39 |
| | UC 022-02: Entertainment - Gaming | 40 |
| | UC 023-02: Entertainment - Cultural Activities | 41 |
| | UC 024-02: Entertainment - Recreation Activities | 42 |
| | UC 025-02: Learning - Remote Learning | 44 |
| | UC 026-02: Learning - Experiences Exchanging | 45 |
| | UC 027-03: Virtual partner for supporting activities of daily living | 46 |
| | UC 028-02: Remote physical training of older adults at home by specialised coaches | 48 |
| | UC 029-02: Personal IADL Assistant | 49 |
| | UC 031-03: Online support for informal caregivers | 51 |
| | UC 033-03: Care4Balance - Dashboard-based interaction between caregivers and older adults | 52 |
| | UC 035-02: Improving cooking skills and nutritional knowledge of older adults | 55 |
| | UC 039-03: Support for informal carers of demented relatives | 57 |
| | UC 043-02: Digital health coach for older adults | 59 |
| | UC 046-02: Service robot for tele-presence and support | 61 |
| | UC 056-03: Tablet based self-management and interaction with informal carers | 62 |
| | UC 057-02: Online support for informal caregivers with stress level recognition and behaviour monitoring | 64 |
| | UC 062-03: Exoskeleton legs | 66 |
| | UC 065-02: Mobility and safeguarding assistance services for people with dementia | 68 |
| | UC 067-02: Multimodal social journey planning with real time guidance | 70 |
| | UC 070-02: Travel planning and support tool for older adults | 71 |
| | UC 071-03: Assistive systems for people with mild hearing loss | 73 |
| | UC 072-02: Physical mobility assistance platforms | 75 |
| | UC 075-02: Recognition of Depressive Episodes | 76 |
| | UC 076-02: Recognition of early cognitive deterioration (2013-09-04) | 77 |
| | UC 077-03: Travel planning and support tool for older adults | 78 |
| | UC 078-02: Personalized assistant for public transport and navigation for older adults with or without cognitive impairment | 80 |
| | UC 079-03: Fall prevention and rehabilitation with excercises through serious games | 82 |
| | UC 081-02: Travel planning and support tool for blind users | 84 |
| | UC 084-03: Navigation support tool for older adults with cognitive impairment | 85 |
| | UC 086-02: Recognition of Aggressive Episodes | 87 |
| | UC 089-02: Multimedia system for people with dementia | 88 |
| | UC 091-02: Behaviour monitoring and emergency detection through vision sensor | 89 |
| | UC 092-03: Medication management, social integration and emergency detection | 91 |

| | |
|---|-----|
| UC 109-02: Behavior monitoring, assistance and communication using a Smart TV platform | 92 |
| UC 129-02: Physical Activity Monitoring And Tele-Support..... | 94 |
| UC 138-02: 3rD-LIFE virtual world for communication and socialization..... | 97 |
| UC 139-02: 3rD-LIFE exhibition photos and offer..... | 99 |
| UC 140-02: 3rD-LIFE language course in virtual world | 100 |
| UC 141-02: ALIAS robot phone call function | 102 |
| UC 142-02: ALIAS robot's single and multi-user game possibilities..... | 103 |
| UC 145-02: ALIAS robot - information on culture and leisure..... | 104 |
| UC 146-02: ALIAS robot's reading, letter writing and ground lighting support | 105 |
| UC 147-02: ALIAS robot - ground lighting | 106 |
| UC 148-02: ALIAS robot - monitoring system, emergency detection and remote control | 108 |
| UC 150-02: ELDER-SPACES - composing professional groups (part 1) | 110 |
| UC 151-02: ELDER-SPACES - composing professional groups (part 2) | 111 |
| UC 152-02: ELDER-SPACES - promoting intergenerational activities (part 1) | 113 |
| UC 153-02: ELDER-SPACES - promoting intergenerational activities (part 2) | 116 |
| UC 154-02: ELDER-SPACES - grouping to organize events | 118 |
| UC 155-02: ELDER-SPACES - group forming for common activities (part 1)..... | 121 |
| UC 156-02: ELDER-SPACES - group forming for common activities (part 2)..... | 123 |
| UC 157-02: ELDER-SPACES - group forming for common activities (part 3)..... | 124 |
| UC 158-02: ELDER-SPACES - organizing events by social service provider..... | 126 |
| UC 159-02: ELDER-SPACES - lifelong learning and structured training | 128 |
| UC 160-02: ELDER-SPACES - search function | 130 |
| UC 163-02: Fosible - Smart TV..... | 131 |
| UC 164-02: Fosible - Smart Furniture | 135 |
| UC 165-02: Fosible - Awareness | 136 |
| UC 166-02: Fosible - Sharing Things Together | 138 |
| UC 167-02: Fosible - Museum Visits..... | 139 |
| UC 168-02: Fosible - Round-table discussions..... | 140 |
| UC 169-02: Fosible - Gaming | 142 |
| UC 170-02: Fosible - Social TV..... | 144 |
| UC 171-02: Fosible - Reading Club | 145 |
| UC 173-02: HomeDotOld - Video Conference | 147 |
| UC 174-02: HomeDotOld - Media Sharing..... | 148 |
| UC 175-02: HomeDotOld - Social Voluntary Work | 149 |
| UC 176-02: HomeDotOld - Intelligent Calendar..... | 151 |
| UC 177-02: HomeDotOld - Remote Dining | 152 |
| UC 178-02: HomeDotOld - News Headlines..... | 154 |
| UC 183-02: Accompany - Drinking Reminder | 155 |
| UC 184-02: Accompany - Activity Reminder | 156 |
| UC 185-02: Accompany - Communication Assistance | 158 |
| UC 186-02: Accompany - Daily Assistance | 159 |
| UC 187-02: Accompany - Activity and Daily Assistance..... | 160 |
| UC 188-02: Cardiac - Dynamic composition complex interfaces (mash-up of services)..... | 161 |
| UC 189-02: Cardiac - Personal Communicator (P-Com)..... | 162 |
| UC 190-02: Cardiac - Control and interaction with the environment for blind people..... | 164 |
| UC 191-02: Cardiac - Control and interaction with the environment for deaf people | 165 |
| UC 192-02: Cardiac - Learning and communicating for blind people | 167 |
| UC 193-02: Cardiac - Learning and communicating for deaf people..... | 170 |
| UC 194-02: Cardiac - Informal cooperation for blind people..... | 172 |
| UC 195-02: Cardiac - Informal cooperation for deaf people | 174 |
| UC 196-02: Cardiac - Moving through the city for blind and/or deaf people..... | 175 |
| UC 197-02: Cardiac - Leisure activities for blind people..... | 177 |
| UC 198-02: Cardiac - Leisure activities for deaf people | 179 |
| UC 199-02: Cardiac - Control and interaction with the environment for old people | 181 |
| UC 200-02: EPAL - Senior professionals association..... | 183 |
| UC 201-02: EPAL - Elderly person volunteering services | 184 |
| UC 202-02: EPAL - Virtual Volunteering: cyber-grandparents | 186 |
| UC 203-02: EPAL - Identifying Problems and providing solutions..... | 187 |
| UC 204-02: EPAL - A virtual well of knowledge and expertise | 189 |
| UC 205-02: EPAL - Specialized and adaptive IT systems for seniors..... | 191 |

| | |
|---|-----|
| UC 206-02: EPAL - A service market portal..... | 193 |
| UC 207-02: EPAL - Remote working and virtual workers | 194 |
| UC 208-02: EPAL - Tri-partite company | 196 |
| UC 209-02: EPAL - Multi-actor network..... | 197 |
| UC 210-02: EPAL - Knowledgeable jubilees | 199 |
| UC 211-02: EPAL - Paid work involving senior professionals | 200 |
| UC 212-02: Florence - Keeping in touch..... | 202 |
| UC 213-02: Florence - Advanced Home Interface | 203 |
| UC 214-02: Florence - Fall situation handling | 204 |
| UC 215-02: Florence - Agenda reminder | 206 |
| UC 216-02: Florence - Lifestyle improvement | 207 |
| UC 217-02: Florence - Collaborative gaming..... | 208 |
| UC 218-02: Florence - Logging system | 209 |
| UC 219-02: Future BNCI - Sleep Coach | 211 |
| UC 220-02: Future BNCI - Tension Indicator | 212 |
| UC 221-02: Future BNCI - Gaming with your brain | 213 |
| UC 222-02: Future BNCI - Fatigue and error detector | 214 |
| UC 223-02: Future BNCI - BCI as neuroscience tool | 215 |
| UC 224-02: Future BNCI - Brain toy | 216 |
| UC 225-02: Future BNCI - Usability studies..... | 217 |
| UC 226-02: Future BNCI - Cognitive enhancer | 218 |
| UC 227-02: Future BNCI - BCI-supported user interface for communication, affect expression and enhanced human-computer interaction in locked-in patients | 219 |
| UC 228-02: Future BNCI - Persuasive rehabilitation after stroke with a BCI game..... | 221 |
| UC 229-02: GUIDE - Telelearning application | 222 |
| UC 232-03: MOBISERV - Function for reminder and encouragement to eat (Nutritional Assistance) | 225 |
| UC 233-03: MOBISERV - Function for Reminder and Encouragement to drink (Dehydration Prevention) | 226 |
| UC 234-03: MOBISERV - Function for Reporting to health professionals..... | 228 |
| UC 235-02: MOBISERV - Function for a tele-medicine/self-check..... | 229 |
| UC 236-03: MOBISERV - Function for Games for Social and Cognitive Stimulation..... | 230 |
| UC 237-03: MOBISERV - Function for Voice/Video/SMS via robot communication with friends and relatives | 231 |
| UC 238-03: MOBISERV - Function for a mobile intercom for enabling front door entry | 233 |
| UC 239-03: MOBISERV - Function for responding to call for help from the user | 234 |
| UC 240-03: MOBISERV - Function for Encouragement for exercising | 235 |
| UC 241-01: MYUI - Email Client Scenario | 237 |
| UC 242-01: MYUI - Physiotherapy Scenario | 238 |
| UC 243-01: MYUI - Email Client Scenario 2 | 240 |
| UC 244-01: RUBICON - Cooking..... | 241 |
| UC 245-01: RUBICON - Eating..... | 242 |
| UC 246-01: RUBICON - Laundry | 243 |
| UC 247-01: RUBICON - Lightning Scenario | 244 |
| UC 248-01: RUBICON - Room Localization | 245 |
| UC 249-01: RUBICON - Ressource Addition | 246 |
| UC 250-01: SRS - Preparing Food Scenario | 247 |
| UC 251-01: SRS - Fetching and carrying of difficult objects..... | 249 |
| UC 252-01: SRS - Fetch and carry + video call scenario | 250 |
| UC 253-01: SRS - Emergency scenario | 252 |
| UC 254-01: universAAL - IT developer view | 253 |
| UC 255-01: universAAL - Student view..... | 254 |
| UC 256-01: universAAL - Elderly person view | 256 |
| UC 257-01: universAAL - Medical specialist view..... | 257 |
| UC 258-01: universAAL - Relatives view | 259 |
| UC 259-01: universAAL - IT provider view..... | 260 |
| UC 260-01: universAAL - Maintenance providers view | 262 |
| UC 261-01: universAAL - Retirement residences view | 263 |
| UC 262-01: universAAL - Health insurance companies view | 265 |
| UC 263-01: universAAL - Social service department view | 267 |

| | |
|---|-----|
| UC 264-01: VERITAS- Car interior accessibility development | 268 |
| UC 265-01: VERITAS - Motorcycle handling accessibility development | 270 |
| UC 266-01: VERITAS - Smart living places & workplaces & domotics & collaborative tools | 272 |
| UC 267-01: VERITAS - Infotainment | 273 |
| UC 268-01: VERITAS - Healthcare | 275 |
| UC 269-01: AALIANCE1 - Person-Centred health management | 276 |
| UC 270-01: AALIANCE1 - Mobile Support for Care Givers | 278 |
| UC 271-01: AALIANCE1 - Personal activity management | 279 |
| UC 272-01: AALIANCE1 - Services for remote social activities | 281 |
| UC 273-01: AALIANCE1 - Accessing information | 282 |
| UC 274-01: AALIANCE1 - Physical access to services and activities | 283 |
| UC 275-01: AALIANCE1 - Hobbies | 284 |
| UC 276-01: AALIANCE1 - Supporting individual physical mobility | 285 |
| UC 277-01: AALIANCE1 - Public transport | 287 |
| UC 278-01: AALIANCE1 - Marie's working day | 288 |
| UC 279-01: AALIANCE1 - Interaction of Wheelchair with Working Space | 290 |
| UC 280-01: AALIANCE1 - Work Assistant Robot | 291 |
| UC 281-01: AALIANCE1 - Working Environment and Workers' Health Monitoring | 293 |
| UC 282-01: AALIANCE2 - Prevention @ Work | 294 |
| UC 283-01: AALIANCE2 - Fall prevention | 296 |
| UC 284-01: AALIANCE2 - Parkinson's disease | 297 |
| UC 285-01: AALIANCE2 - Alzheimer's disease | 298 |
| UC 286-01: AALIANCE2 - Prevention of Dementia | 299 |
| UC 287-01: AALIANCE2 - Modular and adaptable point of care | 300 |
| UC 288-01: AALIANCE2 - Healthy Living | 302 |
| UC 289-01: AALIANCE2 - Air quality @ work | 303 |
| UC 290-01: AALIANCE2 - Air quality management in Smart City | 304 |
| UC 291-01: AALIANCE2 - Diabetes prevention | 305 |
| UC 292-01: AALIANCE2 - Smart home | 306 |
| UC 293-01: AALIANCE2 - Monitoring and Assistant | 308 |
| UC 294-01: AALIANCE2 - Personal Management of Chronic Diseases | 309 |
| UC 295-01: AALIANCE2 - Daytime management | 310 |
| UC 296-01: AALIANCE2 - Support in Driving | 312 |
| UC 297-01: AALIANCE2 - Rehabilitation assistance | 313 |
| UC 298-01: AALIANCE2 - Security @ Home | 314 |
| UC 299-01: AALIANCE2 - Safety | 316 |
| UC 300-01: AALIANCE2 - Keeping Social Contact | 317 |
| UC 301-01: AALIANCE2 - Avoiding caregivers isolation | 319 |
| UC 302-01: AALIANCE2 - Having Fun | 320 |
| UC 303-01: AALIANCE2 - Aging-Friendly Environment | 321 |
| UC 304-01: AALIANCE2 - Keeping control over life and decisions | 323 |
| UC 305-01: AALIANCE2 - Senior citizens at work | 324 |
| UC 306-01: AALIANCE2 - Telework for caregivers | 325 |
| UC 307-01: AALIANCE2 - Dependability of technology | 327 |
| UC 308-01: Goldenworkers - Nurse in a hospital | 328 |
| UC 309-01: Goldenworkers - Public Administration | 330 |
| UC 310-01: Goldenworkers - Factory worker | 332 |
| UC 311-01: Goldenworkers - SME | 334 |
| UC 312-01: Goldenworkers - Golden Manager Scenario | 336 |
| UC 313-01: Goldenworkers - Golden Entrepreneur Scenario | 338 |
| UC 314-01: Goldenworkers - Golden Employees Scenario | 340 |
| UC 315-01: Goldenworkers - Golden Work Seeker Scenario | 342 |
| UC 316-01: HERMES - Facilitation of episodic memory | 344 |
| UC 317-01: HERMES - Cognitive training | 346 |
| UC 318-01: HERMES - Advanced activity reminding | 348 |
| UC 319-01: HERMES - Conversation support | 351 |
| UC 320-01: HERMES - Mobility support | 352 |
| UC 321-01: HERMES - Facilitation of lexical access to people's names | 353 |
| UC 322-01: HERMES - Searching for common-use objects. Helping to remember where objects have been left | 355 |

| | |
|---|-----|
| UC 323-01: eEIF/Antilope - Involvement of patient in documentation of his/her specific chronic disease and making it available via personal computer (PC) or web based applications to healthcare provider..... | 357 |
| UC 324-01: eEIF/Antilope - Involvement of patient in documentation of his/her specific chronic disease and making it available via mobile monitoring devices and mobile phones to healthcare provider | 358 |
| UC 325-01: eEIF/Antilope - For ever-present care outside conventional care facilities, involving the interoperability necessary from sensor devices to monitor activity, e.g., of elderly people .. | 359 |
| UC 326-01: Fall prevention and rehabilitation with excercises through serious games | 360 |
| UC 327-01: ASSAM - Intelligent Walker 1 | 362 |
| UC 328-01: ASSAM - Intelligent Tricycle 1 | 363 |
| UC 329-01: ASSAM - Intelligent Walker 2 | 365 |
| UC 330-01: ASSAM - Intelligent Wheelchair..... | 366 |
| UC 331-01: ASSAM - Intelligent Tricycle 2 | 368 |
| UC 332-01: Care4Balance - Application-based interaction between caregivers and older adults | 369 |
| UC 333-01: ActGo-Gate | 374 |
| UC 334-02: Active @ Work Scenario 1..... | 375 |
| UC 335-02: Active @ Work Scenario 2..... | 377 |
| UC 336-01: AXO Suit..... | 378 |
| UC 337-01: EldersUp | 380 |
| UC 338-01: ExpAct..... | 382 |
| UC 339-01: Give & Take | 383 |
| UC 340-01: Healthy@Work..... | 385 |
| UC 341-01: LetItFLOW..... | 387 |
| UC 342-01: ProMe | 389 |
| UC 343-01: Revolution..... | 391 |
| UC 344-01: SOPHIA | 392 |
| UC 345-02: SpONSOR | 393 |
| UC 346-01: StayActive Scenario A | 395 |
| UC 347-01: StayActive Scenario B | 396 |
| UC 348-01: wellbeing..... | 397 |
| UC 349-01: PEARL | 399 |

1 Introduction

In May 2013, the AAL Joint Programme published a call for tenders for an “Action Aimed at Promoting Standards and Interoperability in the Field of AAL”, i.e. a small project with the following goals:

- **Make existing standards more easily accessible through use-cases:** Identify a set of use-cases covering the AAL domain, in particular covering the topics of all six calls for proposals published by the AAL JP until 2013; identify and match existing technical standards to these use-cases that can help promote interoperability; analyse these existing technical standards and provide guidance on their use for AAL JP projects and the wider AAL community.
- **Raise awareness of existing standards in the field of AAL:** Based on the use-cases, raise awareness of existing standards in the field of AAL by organising two workshops, including partners of AAL JP projects (all 6 calls) as well as the wider AAL community, i.e. stakeholders active in the field of AAL but not funded by the AAL JP (including all potential future applicants).

Many AAL projects have tried to describe their vision of ambient assisted living in the form of a “use case” or “storyboard”, i. e. the story of a fictitious user of the AAL system to be developed. These storyboards form the starting point for the development of integration profiles.

Use cases have been collected from a number of sources, including deliverables of AAL Joint Programme projects and FP6/FP7 AAL research projects, the collection of “ICT & Ageing Scenarios published by the BRAID project, the AALIANCE roadmap, and the ANTILOPE use cases (which are based on the eHealth European Interoperability Framework). The use cases were documented in a structured manner in a Wiki system using a template devised by IEC Strategic Group 5 “Ambient Assisted Living” (now IEC System Committee on Active Assisted Living). This template comprises of four sections:

- General information: this section contains basic information like name of the use case, version management, editor, source, maturity of the use case (with a range from visionary to in business operation), confidentiality status and keywords for classification.
- Narrative of the use case: this section contains the extracted narrative texts from the sources.
- Details: this section contains information about actors, issues (legal information and other constraints), referenced standards and relation with other (known) use cases.
- General remarks: this section contains other general remarks about the use case.

For the purposes of the project the sections “Details” and “General remarks” have been filled only for the representative use cases published in Deliverable D2 “AAL Use Cases and Integration Profiles”; developing these sections for all identified use cases was not in the scope of this action. The empty sections have been removed from this deliverable. Sources for all use cases have been provided by stating the name of the document and, if possible, adding a link to a public website. Use cases included in this document were collected either from deliverables with public dissemination level that are freely available from the projects’ websites, or where explicit permission was granted by the original authors to include the use case texts into this collection. No confidential information is (or should be) present in this document.

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2 Use Cases

UC 001-02: Monitoring of Chronic Diseases

General

| Name of Use Case | | | | |
|--|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 001 | | | Monitoring of Chronic Diseases | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-23 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:robotic, #key_enabling_technology:telemedicine, #key_enabling_technology:vital_parameters, #key_enabling_technology:communication_functions, #vital:hematological, #stakeholder:secondary:doctors | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| This Use Case introduces a humanoid robot for chronic disease monitoring, nursing services, mobile laboratory diagnostics and taking blood samples. The robot system also offers communication services to the doctor including video connection. |
| Complete Description |
| It is 8 o'clock in the morning and Howard starts listening to a voice calling him. He opens his eyes and verifies that it is Joshua, his latest humanoid robot acquisition that is trying to wake him up. It is time for his daily monitoring of the blood cells counts. Howard is 65 years old and 9 months ago was diagnosed a colon cancer. Since then his life turned upside |

down, and suddenly he saw himself in a very painful situation that he had to face alone once he doesn't have any more living relatives.

When he started the chemotherapy sessions, he was told about a new monitoring system that comprises a humanoid robot and that could help him at his house and with his treatments. At the beginning, he didn't like very much the idea of having a robot nursing him. But after some workshops he realized that with this he could have a good monitoring system of his health as well as a companion.

According to his cancer type, he needs to get the treatment once a week. Meanwhile he needs a systematic blood cells counts monitoring in order to be sure that no serious complication arise due to low levels of blood cells.

Howard is still sleepy while Joshua takes a blood sample from a vein in Howard's arm using a test called a complete blood count (CBC). After that, Joshua places the sample in a special device that automatically examines the blood and sends the analysis results immediately to Howard's doctor. Then, Howard gets up of the bed and goes for his daily shower.

When he returns to the bedroom, Joshua has already established the video connection with Howard's doctor that is checking the blood analysis results. Fortunately all the blood cells levels, white and red blood cells and the platelets, are normal according to his condition. After talking to Howard for a while, the doctor closes the communication channel.

Howard is now in good shape to go for a walk, especially because the day is shiny and warm... [from source]

Details

| Actors: People, Systems, Applications, Databases, the Power System, and Other Stakeholders | | | |
|---|---|--|--|
| Actor Name | Actor Type | Actor Description | Used Technology |
| Howard | Human User | Uses the robot as an end-user | User Interface |
| Joshua | Humanoid Robot | Provides automated blood taking, mobile laboratory diagnostics and video communication between end- and business users | Robotics, mobile laboratory diagnostics, video communication |
| Doctor | Human User | Uses the communication platform as business user/ service provider | User Interface |
| Issues: Legal Contracts, Legal Regulations, Constraints and others | | | |
| Issue - here specific ones | Impact of Issue on Use Case | Reference – law, standard, others | |
| Medical device | Automated blood taking – this is an invasive procedure which defines the robot as a medical product | MPG | |
| Medical procedure | Blood taking only | Health laws | |

| | permitted to medical personnel (nurses, physicians) | | | |
|---|---|---|--|---|
| Referenced Standards and / or Standardization Committees (if available) | | | | |
| Standard needed for | Standards have to be considered in the Use Case | Relevant Standardization Committees | Standard Status/ Current Version | Link to Standards Wiki |
| Video communication | RTP: Real-Time Transport Protocol | IETF Audio-Video Transport Working Group | RFC3550 (July 2003) | http://nero.offis.de/projects/aalliance2/rtp |
| Video format | H.264/MPEG-4 AVC/ ISO/IEC 14496-10 | ISO/IEC JTC 1/SC 29 Coding of audio, picture, multimedia and hypermedia information | ISO/IEC 14496-10:2012 | http://nero.offis.de/projects/aalliance2/h264 |
| Laboratory diagnostic data set/ blood values presentation | CDA | ISO/TC 215 Health informatics | ISO/HL7 27932:2009 (for CDA Release 2) | http://nero.offis.de/projects/aalliance2/cda |
| Robots | ISO/DIS 13482: Robots and robotic devices – Safety requirements for non-industrial robots – Non-medical personal care robot (see general remarks) | ISO/TC 184/SC 2 Robots and robotic devices | ISO/DIS 13482 under development | http://nero.offis.de/projects/aalliance2/iso_dis_13482 |
| Relation with other known use cases | | | | |
| Known use case | Source | UC Status | | |
| | | | | |

General Remarks

- ISO/DIS 13482: Robots and robotic devices – Safety requirements for non-industrial robots – Non-medical personal care robot: This standard applies to non-industrial and to non-medical robots. Since this use case contains a non-industrial but medical robot, this standard might be considered because a standard containing safety requirements for personal medical robots is not available yet.
- The Use Case does not describe the communication between the robot and the doctor's office in detail. There are at least two possibilities: 1) the robot communicates via a mobile web connection (like UMTS/HSPA, LTE) or 2) the robot is connected via wireless network (WLAN, BlueTooth) to a router and then is handled via regular internet protocols (TCP/IP).
- The Use Case does not describe if the end- and business users are connected directly or if there is a data processing centre in the middle handling all communication connections.

UC 002-02: Home Safety and Care**General**

| Name of Use Case | | | | |
|--|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 002 | | | Home Safety and Care | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-28 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:mobile_devices, #stakeholder:secondary:professional_care, #stakeholder:secondary:relatives, #general_tasks:daily_routine, #purpose:safety:alert_detection, #key_enabling_technology:communication_functions, #human_communication, #purpose:safety:fall_detection, #domestic_life:household_tasks, #purpose:security:access_control | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| <p>This Use Case includes household assistant system with sensors (video cameras), actors (floor-cleaning robot) and connected devices (video-conference system, smart-cooking device). A caring center is connected and can react in cases of emergencies. Relatives are also connected to the system and can interact with their devices and can control connected devices in the inhabitants' house (for example control the smart-cooking device and preparing meals). A security system at the door distinguishes between familiar persons and foreigners.</p> |
| Complete Description |
| <p>Alfredo, 80, lives in the city's outskirts and is retired. In spite of his physical limitations, he lives alone because his home is prepared to provide daily life assistance to an elder person. A system installed in his</p> |

house provides an environment with a range of interconnected sensors, devices and smart appliances working together to provide a safe and secure place to live.

These appliances allow Alfredo an easy utilization due to their customized interfaces and are connected to Alfredo's neighborhood care centre. This allows, when necessary, remote operation by authorized personnel. As part of the system infrastructure, the smart phones of Pedro and Joana, his children, also interact with his home.

Several video cameras distributed along the house allow observing Alfredo's daily routines (by authorized people) and, at the same time, maintain his privacy. The system, is capable of interpreting the situation from the captured images, and can react in order to provide assistance to Alfredo in case of need. This assistance ranges from the simplest activities, like making tea to more complex activities involving the interaction with the care center. During the afternoon Alfredo lit the stove to make tea, but forgot to put the pot with water on the flame. The system alerted him of that situation.

While drinking his tea, Alfredo receives a video conference call. The video-conference facilities works in a way that provides "virtual" presence of other people, like Alfredo's children and friends. Alfredo interacts with them through a giant and thin television held on the wall. When wearing the 3D glasses, he can even see and talk to his children, as if he could almost touch them, helping to reduce his feeling of loneliness.

The installed system is also able to react to the most common domestic accidents that are recurrent to people living alone. If it sees Alfredo suffering a potential injury, like falling on the floor or cutting himself, the system inquires him to make sure he is well. This interaction is done via spoken natural language. If there is no reply, an alert is immediately sent to his children and the care centre.

When Alfredo goes to the five o' clock walk, a floor-cleaning robot starts its work. Meanwhile, Joana remotely sets the smart-cooking device to start preparing Alfredo's dinner. At seven o' clock, while taking his dish out of the smart-cooking, the door bell rings. Immediately the camera starts collecting images from the person outside. An event is sent to the care centre and their children, proposing video stream interaction with the person. The devices positioned at the door and windows provide the required safety against intrusion by burglar. There is nothing to worry about, as it is Alfredo's girlfriend. The door automatically swings open, as the house already knows she has permission to get in. [from source]

UC 003-02: Personal Activity Management

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 003 | | | Personal Activity Management | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-28 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in | | | | |

| |
|---|
| preparation, visionary ...) |
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #mental, #general_tasks:daily_routine, #key_enabling_technology:mobile_devices, #human_communication, #life_areas:economic_life, #self_care:eating, #purpose:safety:disease_detection, #domestic_life:shopping, #stakeholder:secondary:non_medical_services, #self_care:toileting, #self_care:looking_after_ones_health, #relationships, #stakeholder:secondary:relatives |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| <p>This Use Case introduces a mobile Personal Social Assistant for people with short-term memory loss/ slight cognitive impairments. The system offers a human interaction feeling and reasoning functions. The system reminds on activities of daily living. It also has a small set of (unspecified) sensors to detect physical values and signs of mental problems like stress or depression. It is also connected to the environment and can interact with other systems installed in shopping facilities or caring services.</p> |
| Complete Description |
| <p>John is a 78 years old person living alone in his house in the town's outskirts. Although he is a relatively healthy person he has a problem related to shortterm memory loss which is affecting his daily-life. Therefore, he needs some assistance to help him carry on his daily activities. Due to the demographic trends of last decades, there are not enough youngsters to assist the huge amount of elderly people. Fortunately, technology has evolved in the recent years. Personal computers and the so-called smart mobile devices have evolved and can now do fancy and interesting things. John's pervasive computing infrastructure is everywhere in the house and his smart-device goes everywhere with him, operating as a Personal Social Assistant (PSA). John's PSA is capable of sophisticated reasoning, able to plan, run and coordinate complex activities and tasks. In addition, it is able of advanced human interaction, and can even resemble "human" emotions in order to enhance interaction.</p> <p>Due to his short-term memory problems, John relies more and more on his PSA to support carrying out his daily activities, and maintaining his autonomy. As they are together for a long time, the PSA knows every aspect of John's daily life, including his habits and preferences. Some of the PSA's responsibilities are agenda (reminding) management, utility bills management, dietary organization, and leisure organization. The PSA also comprises several sensors for obtaining some physiologic values, which helps perceiving John's welfare. It also anticipates eventual health problems, like feeling stressed or suffering from depression. The PSA takes care of John's daily shopping. After checking the contents of John's fridge and storage room, the PSA sends out an order to fill up John's basic stock of supplies and, if John is in the mood for cooking, the ingredients of the recipes he has selected. The products will be delivered by a shopping service. Sometimes, John enjoys going to shop for food and other things himself, in order to meet and have a chat with local shop owners and other people on the market he knows. The PSA takes care for him here also and sends a special (radio) signal whenever John enters a store, so sales people know immediately that this customer needs special assistance. Another feature of the PSA is the management of John's personal hygiene assistance. John is able to take care of very basic things, but when it comes to shaving or taking a bath, he needs help. John's carer stops by his house in regular intervals. The PSA reminds John when it is time for a shave or a bath again, so he knows that the carer is about to come by. When John's schedule changes, e.g. when his family comes for a surprise visit, the PSA notifies the carer</p> |

that there is no need to visit John. The PSA is also able to intelligently search for information and news-media on the topics of John's interest. "Listen John. I've just heard "Prokofiev's violin concert number one" is being played in the theatre next month. Would you want me to make a reservation?" asked the PSA. "Yes, please". The fact that John interacts with the PSA in such a natural way is beneficial to minimize John's loneliness. "Don't forget to take the blue pill from the second drawer John". Sandra, John's long date friend has just called. "Would you like to receive Sandra's call, John?" "Yes, please". At that moment it turned into a stand-alone state, letting Sandra talk through its interfaces. "Hi John. How are you?.. [from source]

UC 004-02: Localization/Positioning Assistance

General

| Name of Use Case | | | | |
|--|---|--|-------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 004 | | | Localization/Positioning Assistance | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-28 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #purpose:safety:orientation, #vital:respiratory, #vital:cardiovascular, #key_enabling_technology:mobile_devices, #localization:outdoor, #key_enabling_technology:environmental_parameters, #life_areas:economic_life | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| This Use Case introduces a mobile personal assistant installed on a mobile phone for seniors. The system offers outdoor (based on GPS) and indoor (based on WLAN and available card material) navigation functionalities. There are also enhanced functionalities like environmental warnings (on ozone through |

unspecified sensors) or payment functions (via NFC). There are multi-modal outputs like text, pictograms and audio (via ear-plug).

Complete Description

Angela is 72 and very active. She has many friends and likes to go out regularly. As she lives in the city centre, she finds it convenient to walk, as she always has. She is, however, suffering from angina and asthma which makes walking, although beneficial for both conditions, more of a challenge. This makes her planned trip to meet her friend Rosemary at the Science Museum more of a challenge than it was five years ago.

But in those five years a single piece of technology has revolutionized Angela's life: the "smart" mobile phone. She has used a mobile phone for some years but found the previous model difficult to use due to the small size of the keys. Recently she purchased a new-model phone with larger keys, larger display, and comprehensive functionality including adjustable color contrast, adjustable text size, zoom functions, digital maps, GPS, wireless and near-field communication (NFC), and different methods of output (text, pictograms and audio).

It has been many years since Angela first visited the Science Museum (Galileo was still a scientist and astronomer rather than a satellite system at that time), so she does some pre-trip research about its location using the Internet. Then she pre-sets the location of the Science Museum into her smart phone. Once she leaves her house, she is able to consult her satellite-based positioning and route guidance system. She is informed audibly of the directions to take via an earpiece, which means she can leave the phone (and digital map) in her pocket. This is more reassuring to her as it enables her to focus on the route ahead rather than a device in her hand. Because the digital map is highly detailed and regularly updated to take account of things like road works or re-modeled pedestrian crossings, or even re-sited street furniture, she is able to rely on the audible output.

Halfway through her journey she receives an audible warning that the presence of ozone is above the recommended level in that area. To avoid a possible asthma attack, she accesses a web-based journey planner on her smart phone to adjust her route to avoid the environmental problem.

Soon Angela arrives at the museum. Upon entering, her smart phone switches seamlessly from satellite-based navigation to wireless-based, as the museum is equipped with a dense wireless network. As the phone is NFC-enabled, she is able to pay her concessionary entry fee by swiping the phone a few centimeters from a reader, with the fee automatically deducted from her credit account.

She has arranged to meet her friend Rosemary in the café on the third floor. To find the café she consults the map of the museum on her phone display and plots out an appropriate route based on her personal profile. This route will include some stairs to provide beneficial physical exertion. The map is able to display multi-floor visual representations of the museum and alternative routes between amenities and exhibits when required; Angela is able to click on features of interest, and in this way soon locates the café. She is also able to access information about the café's menu and services. Within a few minutes she has met up with her friend. Angela is happy that the powerful functionality of her smart phone combined with satellite and mobile technologies, and the wireless and sensor networks deployed in the city and on the building, have helped her enjoy a hassle-free and health-beneficial trip. [from source]

UC 005-02: Mobility and Transportation - Public Transportation

General

| Name of Use Case | | | | |
|--------------------|-------------|----------|---|-----------------|
| ID | Domain Role | Function | Name of Use Case | |
| 005 | | | Mobility and Transportation - Public Transportation | |
| Version Management | | | | |
| Changes / Version | Date | Name | | Approval Status |

| | | Author/Editor(s) or Committee | | draft, for comments, for voting, final |
|---|---|-------------------------------|---------------------------------|--|
| 01 | 2013-08-28 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #sensory:seeing, #relationships, #mobility:transportation, #life_areas:economic_life, #purpose:safety:alert_detection, #general_tasks:handling_stress, #purpose:safety:orientation, #localization:outdoor | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| |
|--|
| Narrative of Use Case |
| <p>This Use Case introduces a pervasive information system for public transportation. Information on connections and tickets are available as well as information on points of interest. Both can be accessed via a smart card based on NFC. The system allows to define travelling targets and routes. It also contains information on the personal network of a user to provide assistance in cases of emergency by the geographically nearest contact person.</p> |
| Complete Description |
| <p>Pete is 70. Due to a worsening eye condition, he finally gave up driving two years ago, but since then he has found it difficult to maintain his previous social life. After several decades of relying on the car, he feels he has “forgotten” how to use public transport. Moreover, he has been put off by stories of complex fare structures, unreliability and anti-social behavior. He has lost his confidence in public transport. However, tonight Pete is due to attend a concert in the city center, and he decides to set himself a challenge: to attend by public transport.</p> <p>First of all, Pete carries out some pre-trip planning. Using the Internet he accesses details of the railway timetable; he needs to take the train in order to travel from his suburban town to the city centre (Central station). He knows that Central Station isn’t very close to his final destination, but from his research he discovers that the “Quaylink” bus departs from just outside the Central station and takes him to the quayside area and so within walking distance of the concert venue.</p> <p>Reassured by this pre-trip planning, Pete sets off for his local station. His first step is to purchase his ticket using the smart card that he originally obtained for use in his local library, but which also has a transport application through an arrangement with the local transport operator. The smart card automatically deducts the cost of the ticket from Pete’s smart card balance. By swiping his NFC (Near Field Communication)-</p> |

enabled mobile phone against an information point, he receives an audio message that informs him of the time of the first available train and its time of arrival at Central station, plus additional information about the frequency of the train service.

On his journey, Pete realizes he will travel through the village where his friend Graham lives. Having not seen Graham for over a year he decides it would be a great idea to stop off briefly for a cup of tea. He calls Graham on his mobile and arranges to meet at the station café.

After an engrossing conversation, Pete realizes he risks being late for the concert. His fear is worsened by an automatic alarm on his mobile phone that is triggered when he misses the next train. Because the system knows Pete's current location and the time, it notifies him that there is not another train for half an hour, but the bus number X11 runs from the adjacent bus station in ten minutes. This service will arrive at the main railway station in time for him to connect to the "Quaylink" service. All this information is relayed to him in audio form because of his poor eyesight. On boarding the bus, Pete uses his smart card to pay the fare. Meanwhile the onboard information system informs him that his bus will arrive at bus stop R, whilst the "Quaylink" service will depart from bus stop T within five minutes of his arrival. He is advised that the walk between the two stops should take only two minutes. Pete discovers that his train ticket will also be valid on the "Quaylink" bus due to an arrangement between the operators.

Suddenly aware that he has never visited the concert hall before, he remembers comments from friends about how large the venue is and how many stairs there are to negotiate. He decides to find out more about the physical access of the building by accessing a point of interest database on his mobile phone, finding reassurance that there are plenty of lifts – and assistance if required.

Pete enjoys the show and feels that he will be much more comfortable using public transport in the future due to the assistance, convenience and reassurance that technology was able to provide for him. On the way back home however, Pete misses the last train. He is not carrying enough money for a taxi and starts to panic and hyperventilate. Using a speed call emergency number on his phone, he reaches a friend who calms him down. At the same time this number activates a localization service which determines which person from Pete's network is closest to him, and notifies this person to pick him up and bring him home.

[from source]

UC 006-02: Mobility and Transportation - Intelligent Car

General

| Name of Use Case | | | | |
|--------------------------------|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 006 | | | Mobility and Transportation - Intelligent Car | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |

| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) |
|---|
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #localization:outdoor, #mobility:transportation, #purpose:safety:orientation, #key_enabling_technology:vital_parameters, #purpose:safety:alert_detection, #purpose:security:access_control, #domestic_life:household_tasks, #localization:indoor, #key_enabling_technology:ambient, #key_enabling_technology:robotic, #key_enabling_technology:vital_parameters, #stakeholder:secondary:relatives |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|--|
| <p>This Use Case introduces an intelligent car with autopilot functions, navigation systems, eye-tracking, emergency detection, collision detection and a human voice interface. The driver can decide whether to use the autopilot or to drive autonomous. The car is also connected to the domestic infrastructure and is part of an emergency escalation chain. In case of domestic emergencies the car can take up the driver and drive via autopilot to the next hospital with signaled emergence march while the medical staff waiting is already informed about the emergency.</p> |
| Complete Description |
| <p>Zooming along a familiar winding road on his way home from his Thursday consulting session, Tom turned off the autopilot in his leased electric car – enjoying the feeling of control. He likes to take over from the autopilot to keep up his driving skills and anyway, his coach encourages him to practice as much as possible without automation. Tom interacts with the autopilot via voice commands, as it understands natural language. He would sit and say “Hi Auto, take me home, please.” Tom liked to treat it as Auto. “Sure.”, replied Auto. But as Tom this time was taking control, Auto just monitors his driving and advises about the directions to take, as a regular GPS navigator.</p> <p>Tom allows himself the luxury of the leased car since his 75th birthday while he is still commuting to his part-time work – he is actually enjoying helping a couple of young kids starting their own bakery. But now a chime suddenly interrupted Tom’s thoughts – the Auto’s automobile safety system detected an attention lapse by his eye movement pattern and by EEG measurements using remote laser sensors. The chime came just in time – he almost hit a pedestrian crossing the street in the front of his own house. This does not happen frequently in the outskirts of the city.</p> <p>The garage door, as well as the front door opened as soon as the security system in his house detected the RFID signal transmitted by his special watch. He appreciated the welcoming whiff of balmy air activated by the remote climate control anticipating his arrival, and the welcome of his companion robot, which helps him inside the house. At the same time, Auto started a self-cleaning process both inside and outside the car, using a built-in water-saver cleaning device. After which it parked itself in the garage and initiated its fuel-cells charge process.</p> <p>Suddenly, the ambient living system inside the house told Auto to ignite the engine and prepare to go, as Tom was not feeling well. Considering time-factor, the house decided that calling in an ambulance could be too late. The companion robot helped Tom going to the car, gently laying him inside. Auto knew already what to do exactly, taking Tom to the nearest hospital with signaled emergence march. Staff in the hospital was already notified about Tom’s arrival, waiting at the door with a reanimation kit if that was necessary.</p> |

Fortunately, Tom fainted due to low blood-pressure, and there was no immediate danger to his health. Accompanied with his daughter Maria, who was also notified by the house, Tom agreed to sleep in Maria's home. "This time, I want you to take me to Maria's house, Auto". "Already going sir. I'm glad you feel better now". Replied Auto. "Yes, thank you Auto". [from source]

UC 007-02: Sensorial Supervision - Fall Detection

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 007 | | | Sensorial Supervision - Fall Detection | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mobility:walking, #relationships, #purpose:safety:fall_detection, #key_enabling_technology:ambient, #stakeholder:secondary:professional_care, #stakeholder:secondary:relatives, #stakeholder:secondary:emergency_call_services, #purpose:safety:alert_communication, | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| <p>This Use Case introduces a fall detection and monitoring system based on multiple sensors (presence, floor pressure, cameras and other unspecified sensors), multiple user interfaces (touchscreens) and a connected network of formal and informal caregivers. Daily activities are monitored and anomalies are reported. In case of an emergency the escalation chain is activated and a contact person can communicate (audio and video) with the inhabitant until the assistance arrived.</p> |

| Complete Description |
|---|
| <p>Maria is a 70 years old lady living in a fancy apartment in the city center. She used to work as an art consultant in the city museum.</p> <p>Ten years ago, she underwent a knee prosthetic and is now retired. Even with motion limitations, it will not be this problem that will prevent her from living her life as she wants. In fact, she has a strong character and she does not admit a change in her habits.</p> <p>Her two children live in outside the city and do not have the possibility to visit their mother as they would wish. Their biggest fear is related to the possibility that Maria could fall in her apartment and not be able to ask for help. To worsen the situation, in the last year her other knee suffered an aggravation augmenting the risk and the consequences of a falling.</p> <p>Therefore, due to these problems, and trying to avoid the alternative option, hospitalization or going to an elderly residence, Maria accepted to have installed in her apartment a supervision system integrating a set of different types of sensors (presence, floor pressure, cameras, etc) that connected to a network of health caregivers and practitioners, health institutions and their children would be able to monitor her movements highlighting if any motion anomaly occurs.</p> <p>The system is not invasive and comprises a set of touch screens all over the apartment. All her daily activities are informed through a responsible caregiver who interacts with her through the screen located in the room where she is.</p> <p>In the morning, Maria was extremely excited because her two children and grandchildren were going to visit her. As so, she tidy up the apartment and then she went to the bathroom to take a bath before leaving to the supermarket. When she was leaving the bathtub she felt dizzy and fell. Immediately the pressure sensors in the bathroom floor were activated and the responsible caregiver appeared in the touch screen calling for her. Maria answered saying that she was ok, but she could not get up alone so the system automatically alerted the emergency services and the caregiver continued interacting with her just to be sure that she remained conscious.</p> <p>At the same time, her two children received an alert on their mobile phones informing about their mother's situation and establishing a video communication to check if the emergency services were already at the place. They verified that she was already laid down on her bed and that the doctor was making a diagnosis. Fortunately nothing had been broken and her prosthetic knee was intact, and although she suffered several bruises, they were nothing to worry about. She only needed to rest for a while.</p> <p>Of course, that the dinner with her children and grandchildren was postponed for another day... [from source]</p> |

UC 008-02: Sensorial Supervision - Vital Signs and Mental State

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 008 | | | Sensorial Supervision - Vital Signs and Mental State | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|---|---|---------------------------------|
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:home_automation, #key_enabling_technology:vital_parameters, #key_enabling_technology:ambient, #digestive:metabolism, #mental, #stakeholder:secondary:relatives, #stakeholder:secondary:professional_care, #stakeholder:secondary:doctors, #vital:cardiovascular, #stakeholder:secondary:emergency_call_services, #key_enabling_technology:telemedicine, #purpose:safety:alert_detection, #purpose:safety:alert_communication | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| <p>This Use Case introduces a vital parameter and mental state monitoring system. The system can measure and report sleep quality. It also can detect emergencies like heart attacks or upcoming depression bouts and is then able to activate an emergency call and give first aid advices to the inhabitant. The sysmte also includes a reminder function for medical measurements (blood values) and is able to control some home automation functions like lighting control and wake up calls.</p> |
| Complete Description |
| <p>Patricia awoke just after dawn as usual; just before her smart home monitor system triggered her wake up alarm and turned on the lights in her bedroom. The small visual display beside the bed indicated that Patricia had had 7.5 hours of sleep with a sleep quality index of 75%. “Not too bad” she thinks. Non-contact sensors located under the mattress, recorded motion, respiration, and ECG data throughout the night. As Patricia had grown older a good night’s sleep had become a luxury. Patricia, like more than half of all adults over 65, suffers from a sleep complaint. However, some recent orientations suggested by her doctor seem to be helping improve her sleep quality.</p> <p>In addition to the sleep issues, Patricia has diabetes type 2 and due to her weight she has not travelled far from her home for 3 years. Patricia is prone to bouts of depression due to her health and life setting. Her GP and care providers’ are aware of the situation and her dwelling has been fitted with mechanisms and sensors which are aware of her cognitive and emotional states. When triggered they inform her family/carer’s and some form of intervention is initiated.</p> <p>Patricia motivates herself to get out of bed when a bell chimes, a pleasant sound reminding Patricia to measure the level of glucose and cholesterol on her blood. Fortunately, they were within the normal levels. After breakfast, Patricia decided to go to the living room to read. While she was moving from the kitchen to the living room she suddenly starts feeling an extremely sharp pain in her heart and the cognitive sensors assess what could be happening and determine that Patricia is having a heart attack. The monitoring system automatically instructs her to make a heart massage while the emergency doctors are on their way... [from source]</p> |

UC 009-02: Medication Assistance - Mobile Phone**General**

| Name of Use Case | | | | |
|--|---|--|--------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 009 | | | Medication Assistance - Mobile Phone | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #digestive:metabolism, #key_enabling_technology:mobile_devices, #self_care:looking_after_ones_health, #domestic_life:shopping, #key_enabling_technology:communication_functions, #purpose:safety:alert_detection, #purpose:safety:alert_communication, #key_enabling_technology:medication_dispenser | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| This Use Case introduces medication assistant based on a mobile phone. The system reminds to take drugs correctly but also reminds to refill the drug stock at a defined threshold. The mobile system also offers an (unspecified) mobile tracking function. |
| Complete Description |
| Jennifer is a 76 year's old retired nanny. In spite of feeling well, she had to stop working 6 years ago due to an aggravation of her diabetes condition. Jennifer lives with her husband Nicholas, who unfortunately suffers from osteoporoses, in a small house near downtown. As they are quite isolated from the rest of the population, they had a monitoring system installed, integrating among other devices special mobile phones with medication assistance functionality. Using this system, they feel more accompanied and assured that |

the right medication is taken at correct time. Jennifer and Nicolas are assured that their personal information held on these special mobiles is kept secure and private as they are CE rated and abide by a regulated standardization that has been passed across the EU.

During the morning they stay at home, but usually after lunch they go for a walk taking this opportunity to do some supermarket shopping. Before going out, Jennifer goes to the kitchen to grab her special mobile phone (that keeps them tracked while walking) to check the shopping list and notices a flashing hint reminding to buy a new batch of diabetes pills. This reminder has been automatically sent on her special mobile phone by the monitoring system. In fact when the pills in her dispenser are under a threshold, the dispenser sends an alarm to the system that reminds to the appropriate person, via the chosen device. Since Jennifer can buy the prescriptions by herself she receives the reminder on her mobile phone. Jennifer reflects on how useful this reminder is, especially because it informed her before she leaves home. [from source]

UC 010-02: Medication Assistance - Service Robot

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 010 | | | Medication Assistance - Service Robot | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:robotic, #key_enabling_technology:vital_parameters, #self_care:looking_after_ones_health, #digestive:metabolism | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case | | |
|---|--|--|
| This Use Case introduces a medication assistant based on a service robot. The robot measures the blood glucose through a small sensor pad where the inhabitant puts his finger on. The service robot also reminds the intake of medication. | | |
| Complete Description | | |
| <p>Jackie felt a soft nudge and looking up from her book saw CLARC's blue eyes shining at her. CLARC (Care and Living Assistive Robotic Companion) tilted her head pointedly looking at the mobile medical unit on the tray it was carrying. Jackie smiled and sighed placing her finger on the unit's sensor pad, while CLARC checked her blood glucose. CLARC's eyes changed to green, which represents the all clear situation. Jackie picked up her book again, but was interrupted by a soft chime. CLARC's eyes, blue again, were indicating towards the small pile of pills that had dropped onto a plate while a glass of cool water was being poured. Jackie didn't know what she would do without CLARC to remind her to monitor her blood glucose and take her medicine. All those pills, it used to be so confusing to remember what to take, how much, and when. Jackie was lucky that she could now control her Type 2 Diabetes through oral pills, diet, and exercise. [from source]</p> | | |
| | | |

UC 011-02: Healthy Lifestyle Interventions - Fitness Exercises

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 011 | | | Healthy Lifestyle Interventions - Fitness Exercises | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |

| |
|---|
| #relationships, #key_enabling_technology:vital_parameters, #mobility:walking, #self_care:looking_after_ones_health, #key_enabling_technology:home_automation, #key_enabling_technology:games, #domestic_life:shopping |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| This Use Case introduces a system for assisting in the execution of fitness exercises. The monitoring is based on smart clothes for monitoring for vital signs and following the correct movements. The exercises are adapted to the fitness level and vital signs. Assistance on nutrition is also implemented. |
| Complete Description |
| <p>Roberto suffers from high cholesterol and high triglycerides. Due to his health condition, he needs healthy lifestyle assistance otherwise can suffer consequences.</p> <p>Today his virtual caregiver, after the good morning regards, suggested an hour of exercise and for that Roberto has to wear a special t-shirt made of fabric sensors that allows the system to track his physiological data as well as follow his movements, recreating them on his bedroom big wall screen.</p> <p>The system begins the exercise program by projecting the routine onto the wall and played music through speakers. The sensors in the garment wirelessly transmit the data to the assistance system in which they are interpreted and mirrored on the projection of the exercises. To begin a game is played to warm up his joints and muscles. The game consists of trying to reach up to touch different shapes as they appear and once touched they disappear. Feeling nicely warm Roberto took his Pilates band and following the system's instruction worked on his muscles toning exercises. After stretching out, Roberto went for a quick shower. After his bath, Roberto remembered that he needs to buy some food; nevertheless he can only consume products that do not contain lactose because of his allergy. He moves to the touch screen on the kitchen and asks the system to help him with the shopping list. After a while his printer starts printing the suggested list and then he leaves for the supermarket.</p> <p>[from source]</p> |

UC 012-02: Healthy Lifestyle Interventions - Workout Gaming

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 012 | | | Healthy Lifestyle Interventions - Workout Gaming | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / | Link | | Conditions (limitations) of Use | |

| | | |
|--|---|--------|
| Literature | | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #self_care:looking_after_ones_health, #key_enabling_technology:games, #key_enabling_technology:vital_parameters, #vital:cardiovascular, #learning, #relationships, #key_enabling_technology:communication_functions, #stakeholder:secondary:non_medical_services, #key_enabling_technology:ambient, #neuromusculoskeletal:movement | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| <p>This Use Case introduces a system for workout gaming. The system offers a reminder function and monitoring of vital signs to protect from to overdo the workout. The system also has some domestic integrated sensors (scales in bed and bathroom floor mat, blood pressure measurement watchstrap, toilet with laboratory functions) to monitor the overall health status.</p> |
| Complete Description |
| <p>Manfred, 79, and although retired he likes to maintain some healthy activity, especially because he is overweight and he started to have some related health problems.</p> <p>Manfred, supported by a smart cane, walked into the kitchen later than usual, a monitor positioned in the kitchen with an interactive interface reminds him of the session with his remote coach. But Manfred did not start his coaching session yet – he was a little embarrassed since he has not committed to regularly doing his daily exercise routine. Instead, using a voice command, he started his exercise game routine. Being overweight most of his life, he had not been much of a jock, but this game-based system was actually fun! It was physically and mentally challenging, without embarrassment, within the privacy of his bedroom. He was totally amazed because he was clearly improving – imagine at his age! Today, he pushed himself particularly hard because he wanted to surpass his previous record. He knows he can push himself hard because Manfred is well aware that the system monitors his vital signs and does not let him overdo it. This close monitoring is particularly important because of his congestive heart condition diagnosed a couple of years ago.</p> <p>Manfred had the opportunity to further his knowledge of using the internet by taking an evening class, which was taught by local secondary school students. There he learned how to take part in the social aspect of the web by using internet forums and websites to discuss and investigate about his condition. He has found a new social outlet online, meeting people in similar circumstances with similar conditions. They discuss how they are coping and swap stories of their conditions and how they can alleviate some symptoms and improve their health generally.</p> <p>The results of his exercise were instantly communicated to his coach, and when Manfred actually initiated the session there was already a message praising him for his accomplishments. The coaching system had already incorporated today's weight measurements (automatically assessed by the load cells in the bed as well as a scale in the floor mat in the bathroom), blood pressure – measured by a sensor in his watchstrap,</p> |

and the sodium ion concentration in his urine through the chemical analysis performed by the toilet. The coaching system, as well as his coach, was pleased with his outside activities, socialization and diet. Even his balance had improved so much that his smart cane is no longer required as much when he gets up at night to go to the bathroom, rather than providing him with mobility support.
[from source]

UC 013-02: Healthcare Management - Professional Network

General

| Name of Use Case | | | | |
|--|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 013 | | | Healthcare Management - Professional Network | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-08-30 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #vital:cardiovascular, #stakeholder:secondary:professional_care, #key_enabling_technology:communication_functions, #key_enabling_technology:health_information, #self_care:looking_after_ones_health , #purpose:safety:alert_detection, #purpose:safety:alert_communication, #stakeholder:secondary:doctors#purpose:security:access_control | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| This Use Case introduces a professional network of all related professions (GP, radiology, consulting physicians). First contact person is a so-called virtual nurse which has access to all relevant data, contact to all experts and in addition provides knowledge in all health-related topics (nutrition, fitness, etc). The data |

management in the system is based on health records which are connected over a secure network. In case of emergencies all relevant patient information is available to the doctor in charge.

Complete Description

Marilyn is 75 years old, suffering from heart problems. As she lives alone and due to her health condition, she has acquired for her home a healthcare system that is connected to a healthcare center providing support and assistance in case of need.

Today, Marilyn got up as usually and after a refreshing bath she went to the kitchen to prepare breakfast. Meanwhile, the door bell rang; it was her granddaughter Anna that was passing by and took the opportunity to visit her grandma. Marilyn was really happy to see Anna and invited her to join in for breakfast. After a while, Anna noticed that her grandma was desperately looking to a set o pills' boxes and trying to remember which one she should take.

In the day before, Marilyn had gone to her heart medical doctor at the local health center to have a routine consultation. As her heart is getting weaker day by day the doctor passed a prescription with a new kind of pills.

Thanks to the installed healthcare system, Anna got the opportunity to contact her grandma's virtual nurse and ask for the right pill that Marilyn should take. This healthcare management system knows the person's status and needs and is on call at any time and in any place, to guide and support the person. This system acts as a knowledge source, a personal decision-support system, health and fitness coach, personal dietician, and much more, giving instantaneous feedback to the user, raising an alarm or informing professional or informal care givers when needed. This also includes the possibility for action related to behavior management by giving relevant education information and checking adherence to treatment programs (medication or exercise). \Unfortunately, Marilyn's virtual nurse was not sure about the right pills, so it forwarded the communication to Marilyn's heart physician that promptly accessed her treatment file and answered accordingly. Marilyn smiled again and told Anna that she was getting really old and with memory issues.

This system creates a communication channel with the Marilyn's network of medical professionals who are involved in her current treatment plans and link her to diagnostic and treatment services. All care providers and their supporting facilities like radiology, laboratories and pharmacies use electronic health-record systems that are connected to a secure health-information-exchange network which enables easy access to the relevant data using a role- and task-based access-control system that is in line with the consent rules controlled by Marilyn. In this way, they all have constant access to up-to-date Marilyn's information, which is of course important in case of emergencies.

[from source]

UC 014-02: Healthcare Management - Tele-consultation

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 014 | | | Healthcare Management - Tele-consultation | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
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| 02 | 2013-12-02 | Marco Eichelberg | | Draft |

| Basic Information to Use Case | | |
|--|---|---------------------------------|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:telemedicine, #key_enabling_technology:communication_functions, #key_enabling_technology:mobile_devices, #self_care:looking_after_ones_health | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| <p>This Use Case introduces a tele-consultation service which can be accessed via a mobile smart phone. The service gives advices in situation the end-user is unsure about his situation and what to do. Each registered user has a health record with (chronic) diseases, medication and more information. It is also possible to use the smart phone camera quick diagnosis purposes.</p> |
| Complete Description |
| <p>Rita is a senior nurse and has now started to work with a new system for teleconsultation. The system is suited for people with some disabilities or health problems that need continuous medical treatment. Whenever a situation arises and the patient is unsure about what to do, an expert can be consulted. Frank, 78, suffering from kidney failure is gardening at the Smith's house, a young couple that moved in to the neighborhood two years ago. As they are extremely occupied Frank offered his gardening services to them being in this way also occupied during the day. Frank never leaves his house without his new smart mobile phone integrating a teleconsultation system that is connected to the local care center.</p> <p>Rita receives a call from Frank; he is extremely nervous and she asks him to calm down otherwise she couldn't understand the emergency situation. Frank is showing his hand with blood all over and is begging for help. Rita calmly asks Frank to show her the wound through the smart phone camera and observes that it is quite ugly indeed, she also consults Frank's medical registry and notices that Frank suffers from kidney failure, so she cannot administrate a common treatment. After explaining to Frank what he should do and what kind of medicine he can take, she waits for the results. Frank is now taking care of his wound and much more calm...</p> <p>Frank is really happy with this service. The use of a tele-consultation centre ensures that an expert is immediately available – which will mostly be impossible when calling the patient's practitioner. Rita helped another patient and is now ready to assist another call.</p> <p>[from source]</p> |

UC 015-02: Rehabilitation & Disabilities Compensation - Neuro-cognitive Compensation

General

| Name of Use Case | | | | |
|--|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 015 | | | Rehabilitation & Disabilities Compensation - Neuro-cognitive Compensation | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental, #general_tasks:daily_routine, #key_enabling_technology:home_automation, #key_enabling_technology:ambient, #stakeholder:secondary:relatives, #stakeholder:secondary:professional_care#purpose:safety:alert_detection | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| This Use Case introduces a smart home system for monitoring and assistance of neuro-cognitive disabilities. The (unspecified) smart home knows about past activities of the inhabitant, detects current activities and is able to assist in case of any unwanted deviations. The system also informs about absences from the home and informs if the absences is too long. The system also informs about any emergencies occurring. |
| Complete Description |
| Jim is 87, and suffers from a relatively mild form of Alzheimer's disease. The effects of the dementia on his behavior are kept under control by drugs, and drugs also allow a fairly good functioning of amnesic functions. |

Nevertheless, quite often Jim is not able to correctly develop and fully carry out plans for his tasks, so his ability to successfully conclude many activities of his daily life would be seriously compromised without a good cognitive support system.

But his smart home knows what he is doing, at any moment in the day:

- The home knows Jim's world, his habits, his preferences, the way he usually does things; it has been learning this through observation and recording for years, even since before Jim developed Alzheimer's.
 - The home knows what Jim is doing right now: it knows where he is, if he's standing or sitting, if the TV - or any appliance - is on or off, if he's using it or not, what objects he is handling. By comparing observation and stored information, the home is able to recognize - with some likelihood - which activity Jim is performing, and subsequently the expected outcomes, the risk factors associated to that activity etc.
 - The home is thus also able to actively support the correct execution of the activity, by seamlessly comparing the execution flow with a "normal" one (a "model" stored as a result of past observation), and by guiding Jim through a safe and effective sequence of steps, by means of ubiquitous audiovisual support.
- Jim is usually alone during the day, while a care giver stays at his home for the night: his children don't live in the same area of the town, and they are at work almost all day long. But they worry about Jim's wellbeing and safety and are always ready to intervene in case of need.

They know that they can rely on Jim's AAL system, on its capability to keep the situation under control, and to inform them when something goes wrong. \Jim likes to go out for a walk in the neighborhood, to the park, to the main square, or to the nearby grocery to buy some food. When he does this, the system automatically sends a message to Jim's relatives and/or to the care giver. This message is nothing alarming; it is a normal event, but it is good that they know that he's gone out. The same kind of message is sent when Jim comes back home.

But two hours is probably a little too long. A new message, telling them that he hasn't come back, could help. Just to let them know, so that they can try and contact him to see if everything's OK...

[from source]

UC 016-02: Rehabilitation & Disabilities Compensation - Physical Compensation

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 016 | | | Rehabilitation & Disabilities Compensation - Physical Compensation | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-02 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in | | | | |

| |
|---|
| preparation, visionary ...) |
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #vital:respiratory, #mobility:walking, #key_enabling_technology:mobile_devices, #self_care:looking_after_ones_health |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| This Use Case introduces an intelligent wheelchair for physical disabled persons. The wheelchair has some driving and controlling assistance functions like obstacle detection and other unspecified sensors. Other features are robotic manipulators and controlling equipment for smart home technologies. |
| Complete Description |
| <p>Thomas is a 70 years old person that despite his age feels healthy and eager to remain active as long as possible. Unfortunately, ten years ago, Thomas suffered a car accident that besides immediate severe injuries also left him with permanent ones, namely the need of having daily oxygen breathing and the need to use a wheelchair for the rest of his life.</p> <p>Along with other sensors and equipments Thomas wheelchair makes use of sonar technology to detect obstacles and modify his driving commands to ensure that the platform does not collide with any obstacle. Also the smart wheelchair is equipped with robotic manipulators, which can be used to manipulate common household objects.</p> <p>With the aim of improving his quality of life, Thomas installed at his home a system that manages the quality and quantity of oxygen that is needed. Also, in order not to be dependent from others for transportation, Thomas managed to buy a car adapted to his health condition.</p> <p>When Thomas arrives at home, and as his car is equipped with an automated parking system, he manages to activate the system relieving him from many difficult maneuvers. When the car stops, it begins the procedures to un-dock the smart wheelchair and starts moving towards the house. Through the control panel of his smart wheel chair, Thomas can activate the oxygen system so that shortly after he can start to receive the necessary dosage of oxygen.</p> <p>[from source]</p> |

UC 017-02: Rehabilitation & Disabilities Compensation - Rehabilitation

General

| Name of Use Case | | | | |
|--------------------|-------------|----------|--|-----------------|
| ID | Domain Role | Function | Name of Use Case | |
| 017 | | | Rehabilitation & Disabilities Compensation - Rehabilitation | |
| Version Management | | | | |
| Changes / Version | Date | Name | | Approval Status |

| | | | | |
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| 01 | 2013-09-02 | Lars Rölker-Denker | | Initial |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #self_care:looking_after_ones_health, #mobility:walking, #stakeholder:secondary:professional_care, #key_enabling_technology:communication_functions, #purpose:safety:disease_rehabilitation | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| This Use Case introduces a tele-rehabilitation system which consists of a set of wearable sensors, a video communication module and an automated training component. It is possible to perform rehabilitation exercises autonomously or under supervision of an instructor connected via the video communication module. |
| Complete Description |
| <p>Seven o'clock in the morning, as every day, Anna is going to have her breakfast. Anna is 79 years old, and since 6 years ago, when she underwent a hip prosthetic, she usually tidy up the house before performing the rehabilitation exercises. Although the rehabilitation started many time ago she still regularly goes to her physiotherapist office to preserve as much as possible her motion abilities. Anna suffers of a serious form of arthrosis that is going to damage with a notable pain all her articulation, especially the hip and the hands. Even if her left hand is almost closed, it will not be this problem to prevent her from living her life as she wants, in fact Anna as all the women of her family, has a strong character and not admit to change her habits so simply.</p> <p>Given this fact, the family managed to install a system in Anna's house that besides monitoring her movements is also capable of remote tele-operation. This characteristic is of extreme importance for Anna's rehabilitation exercises.</p> <p>Today, just after finished to prepare the room for the rehabilitation activity, she receives the call from her physiotherapist, and his image appears on the projection screen beside her bed. After the regards, the therapist starts indicating where Anna has to put the patch on her body. Such patches are sensors that will allow the system to track physiological data and to track the motion of the joints. Anna knows that, with the help of her system, she can perform the exercises autonomously, but she prefer to work with the therapist, especially because he is a so courteous man and she loves to chat with him. It is not the first time that she</p> |

needs to change the time scheduled for the rehabilitation exercises. Sometimes the therapist isn't at disposal for the time Anna requires; just in that case Anna uses the automatic training.
[from source]

UC 018-02: Ageing at Work - Adjusted Working Space/ Craftsman

General

| Name of Use Case | | | | |
|--|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 018 | | | Ageing at Work - Adjusted Working Space/ Craftsman | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #key_enabling_technology:ambient; #key_enabling_technology:home_automation; #relationships; #key_enabling_technology:communication_functions; #work:sector:handicraft; #work:location:workplace; #work:system_scope:lighting; #work:system_scope:employees_health; #work:system_scope:communication; #work:system_scope:ergonomics | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| <p>This Use Case introduces a smart workplace for craftsmen consisting of an area for handicraft activities and an area for office work. Both workplaces are located side by side. The system adjusts automatically lighting and exhaust air by recognizing the used workplace and tools and also adjusts the height of the PC workplace to the users needs varying during the day.</p> |

| Complete Description |
|---|
| <p>Mario is 70 years old and is a skilled worker who works in wood and inlays objects. He is skilled at restoring old small wooden objects. He is restoring a wooden jewel box for a museum. He follows directions given to him by the director of the museum to complete his task.</p> <p>Mario has a smart workstation at which he carries out his activities. This workstation is made up of a desk with two sections: one with a PC (monitor, case, mouse, keyboard and webcam) and the other with tools to work in wood. Mario's workstation is able to recognize if he is working with the computer or in the other section:</p> <ul style="list-style-type: none"> - If Mario is at the PC, the lighting of the workstation is changed automatically to facilitate Mario's working; he is presbyopic. There is also a set of sensors that recognize the distance between Mario's and the desk (during the day Mario often changes the height of his chair) and the height of the monitor is automatically varied in order to give Mario the best visibility; - If Mario is working with instruments to inlay the wood, the smart environment recognizes which tool he is using and varies the light accordingly; the change of air is also automatically increased because he works with chemical agents and produces wood shavings and dust. <p>With this smart workstation, he can simultaneously work on the old wooden jewel box and follow the directions given to him by the director of the museum. Mario is also able to use his computer with special software and interfaces that facilitate access and control of the PC.</p> <p>Thanks to this special workstation and easy use of the computer, Mario is able to remain in touch with many international experts who contact him seeking his advice. He is also able to teach remotely some lessons about restoring wooden objects to students at an art school.</p> <p>[from source]</p> |

UC 019-02: Ageing at Work - Adjusted Working Space/ Office Worker

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 019 | | | Ageing at Work - Adjusted Working Space/ Office Worker | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |

| Generic, Regional or National Relation |
|--|
| Generic |
| Further Keywords for Classification |
| #neuromusculoskeletal:movement; #purpose:security:access_control; #life_areas:work; #key_enabling_technology:communication_functions; #work:sector:service_industry:general_office_work |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| This Use Case introduces a smart workplace for office workers. It includes different kinds of input (keyborad, mouse, pen, voice) to face all kinds of user needs. The system adjust working conditions after a unspecified biometrical login, access to databases and documents is also permitted through biometrical login. |
| Complete Description |
| <p>Helen is 63 years old and is a psychologist. She is a professional and works in her office. She actually works in the Human Resources department of a company and has been working there for twenty years. The managers of the firm asked her to create a database of employees' skills, aptitudes and ambitions. She has therefore organized a meeting with workers and she enters the information she obtains onto the database. She would have used a PC for this kind of work in the past but since a health decline in the last 18 months she now uses a special computer workstation for this task that has been adapted to her changing needs. The smart PC is able to recognize who is using it thanks to its biometrical system: access to the database on the employees is allowed only to Helen and some managers.</p> <p>When the workstation identifies Helen (who's employers have trained her to use the new biometric system), it adopts working conditions suited for Helen. She is unable to use a normal keyboard and suffers from arthritis in her finger joints; she also has carpal-tunnel syndrome. She therefore uses two different interfaces to use the PC: a tablet keyboard and a voice keyboard. When Helen uses the first system, she writes her notes using a special pen directly on the tablet keyboard: the tool recognizes Helen's calligraphy and compiles the words in text files. If Helen feels tired in her hands and she prefers not to grip the special pen, she uses the second system, a voice keyboard. This recognizes her voice and reports the words she pronounces onto text files in the database. The voice keyboard is smart because it recognizes and transcribes only the words spoken by Helen, not by other employees in the Human Resources office; it is also able to distinguish vocal commands from sentences dictated.</p> <p>[from source]</p> |

UC 020-02: Socializing - Virtual Communities

General

| Name of Use Case | | | | |
|--------------------|-------------|--|-----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 020 | | | Socializing - Virtual Communities | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |

| | | | | |
|--|---|--------------------|---------------------------------|---------|
| 01 | 2013-09-03 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #community:recreation, #relationships, #key_enabling_technology:communication_functions, #mobility:transportation, #key_enabling_technology:mobile_devices, #mobility:transportation | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| |
|--|
| Narrative of Use Case |
| — |
| Complete Description |
| <p>Having a lifelong taste for playing the guitar, Arthur of 75, has finally found a way to keep up to date and accompanied in the area. He found an online community (composed of members from all ages) with the same taste as his own for the guitar playing. Therefore, Arthur managed to become an online member of such community. This community uses video and social networking to play together online.</p> <p>Whenever Arthur desires to play accompanied with his community mates, he accesses the community platform and can immediately see the names and images of his regular session mates, who are also online, pop up on the screen one by one. Once they have all agreed upon the music they begin to play it. It is also possible for other community members, who enter online afterwards, to also join the group and play on.</p> <p>Besides playing, the online community platform also offers its members functionalities for sharing music and chat. For each item of information, users can express judgments, remarks and opinions by means of both a facilitated keyboard or voice-recognition software, and such judgments are sent directly to the main senior coaches that manage the information or event.</p> <p>Today, Arthur feels like going out. Therefore, he logs in the online community and invites members to join him at the local club tonight. After some time, he receives answers from some members saying that they would join him and that evening is going to be great because they will finally meet in person.</p> <p>After having dinner, Arthur through his PDA verifies what the next bus that will take him downtown is and leaves home.</p> <p>It is late night, and Arthur misses the bus back home... hopefully with the help of his PDA he accesses a community transport support group that after identifying through GPS the nearest member available, collects him and brings him home.</p> <p>[from source]</p> |

UC 021-02: Socializing - Social Events Management

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 021 | | | Socializing - Social Events Management | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Lars Rölker-Denker | | Initial |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #community:recreation, #mental, #key_enabling_technology:mobile_devices, #stakeholder:secondary:non_medical_services, | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| — |
| Complete Description |
| <p>Bill Graves, 70 years, is a healthy and happy, retired, person taking the best he can from his free time. He knows that life is short and that we need to live it well together. He is very social, engaging in civic activities of his town. He also likes to travel, run, walk, attend shows, go to the theatre, seeing movies, and most of all, giving flowers to his wife. Being so active, it is somehow difficult to handle such level of activity without assistance, given that his age his memory is not what it used to be.</p> <p>In fact, he relies on a program running in his tablet, which helps him manage the events he attends. This program is part of a platform connected to his town and integrating information from several sources and services, most of it social events, including leisure, sports and shows.</p> <p>The platform allows members to form small groups to jointly attend an event. Being configured and</p> |

personalized to Bill's preferences, the program tells him about what he can do interestingly each day, including a reminding to buy more flowers.
[from source]

UC 022-02: Entertainment - Gaming

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 022 | | | Entertainment - Gaming | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Lars Rölker-Denker | | Initial |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental, #self_care:looking_after_ones_health, #mobility:walking, #relationships, #key_enabling_technology:games, #key_enabling_technology:ambient, #community:recreation, #neuromusculoskeletal:movement, #key_enabling_technology:communication_functions | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| — |
| Complete Description |
| Some elderly people are looking for new ways to keep active and alert. They are responding to the advice to take care of their brain and are involved in special activities such as doing jigsaw puzzles, juggling, dancing and playing table tennis. Nowadays, games that have been specially designed to stimulate and train the brain are also available. Such games are now entertaining a new generation of computer users: elderly |

people who up to this time have not been interested in computer games.

One example is Elvira that has always been a fan of the bingo nights. As now she cannot anymore go to those events due to her mobility problems, she plays with her friends remotely using the bingo online forum. Nevertheless, she feels that is not the same as being out and in the company of her friends.

Fortunately the bingo institution has developed a system that allows remote playing with the feeling of being in the environment of the bingo night. The system basically integrates cameras, movement and emotion sensors and also holographic projections.

Although Elvira was not a fan of new gaming technologies and preferred real games, is now a complete fan of this system as it allows her to play as she was really in the bingo night room session.

Amanda is a 70 years old woman who used to attend the recreational centre of her residential area. Among several activities, one of her favorites was to play cards with her community friends.

In the last months, Amanda's state of health began to deteriorate and she was forced to stay at home resting in her bed. Nevertheless, and thanks to devices made available by the recreational center, her passion for playing cards with her friends who are in the in the community recreational center can continue to be fulfilled. To play they use a special platform made of touch screens and monitors embedding webcams that are remotely and wirelessly connected between them. In the recreational centre, each friend has their own touch screen showing their own cards and on the table stands a monitor that shows the cards at stake. At home, Amanda has a touch screen showing her cards and a monitor that displays both the cards at stake and her friends. Thanks to the real-time communication between the different components, the four friends can talk and discuss, see gestures of their companions and interact positively.

[from source]

UC 023-02: Entertainment - Cultural Activities

General

| Name of Use Case | | | | |
|---|---|--|-------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 023 | | | Entertainment - Cultural Activities | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Lars Rölker-Denker | | Initial |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |

| Further Keywords for Classification |
|--|
| #community:recreation, #mobility:walking, #key_enabling_technology:mobile_devices, #purpose:security:access_control, #key_enabling_technology:communication_functions, #life_areas:economic_life, #mobility:transportation, #purpose:safety:orientation, #key_enabling_technology:mobile_devices |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| — |
| Complete Description |
| <p>Bruce loves to go to the theatre and to the cinema. Unfortunately, five years ago he was diagnosed a motor disability that prevent him to go to such activities with the regularity that he desires. Hence, Bruce seeks to find a way to allow him to overcome the lack of going out so often to attend cultural activities.</p> <p>Fortunately, now there is a system suited for people who have motor deficiencies and cannot move so easily from their houses but can remotely access services or events by using digital television or a facilitated computer connected to biometrical recognition systems (fingerprints, voice, optical). With this system Bruce can be identified and gain remote access to specific services like a post office or a register office and talk with workers. Bruce can also buy tickets for particular events and watch them on the television or computer screen.</p> <p>Bruce usually, uses this virtual service to access most of the cultural activities. Nevertheless today Bruce is going out to the local art gallery because the exhibits are of great interest and he wishes to contemplate them in loco. For that, he accesses a supported and accessible special transport service that will bring him to the gallery. When he arrives, a route plan guides Bruce through the gallery room to find the exact exhibits that he was looking for. This route is optimized by avoiding barriers that match his motor disability.</p> <p>Bruce stays for hours admiring the exhibits while an online gallery curator provides additional detailed information of the art pieces on his PDA.</p> <p>[from source]</p> |

UC 024-02: Entertainment - Recreation Activities

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 024 | | | Entertainment - Recreation Activities | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
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| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|---|---|---------------------------------|
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #skin_and_hair, #relationships, #mental, #self_care:looking_after_ones_health, #purpose:safety:disease_rehabilitation, #key_enabling_technology:ambient, #key_enabling_technology:body_area, #localization:indoor, #key_enabling_technology:communication_functions | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| — |
| Complete Description |
| <p>Joanna is a 60 years old lady that used to work as public relations in one of the biggest art gallery of in the city center.</p> <p>She was forced to stop working due to a car accident followed by fire in which she was extremely injured especially in her face with a second degree burn. Since then, and taking into consideration her age, and her specific profession (where the image is fundamental), she does not feel yet the courage to go out and face all the people's observations about her face.</p> <p>Joanna's husband, John, is a very busy man running a financial consultancy company. In spite of travelling a lot, when he is at home he dedicates all his spare time to Joanna. Nevertheless, it is not sufficient for her, and most of the times she feels alone and isolated from the world.</p> <p>One of the things that make her feel isolated and depressed is the lack of human contact as well as her daily exercises at the gym. In order to overcome this, they installed an entertainment system integrating a services network where several entertainment packages are available.</p> <p>Therefore, all mornings Joanna checks out on her wall digital and touch screen, which Pilates classes are about to start. Once chosen the class to attend, Joanna selects her personal avatar (Joannatar) that will represent her in the virtual class room. On a side window she notices that her Pilate's friends, Annatar and Paulatar, are also attending the class and she feels really happy, because she will have someone known to share some thoughts while practicing the exercises.</p> <p>It is almost time to start, and Joanna is dressing her special training garment composed of several sensors that are connected to the system. In this way, while she is doing the exercises at home, Joannatar is receiving information about what she is doing and reproduces the same movements in the virtual class room. She "sees" herself in the class with all the other attendants and at the same time has an audio communication channel that permits everybody to listen to the coach and to speak with her colleagues as if she was in a real class room attending a Pilate's class.</p> <p>This system brought her a different life, because in one hand she does not have to show her face and on the other hand she can both exercise and socialize.</p> |

[from source]

UC 025-02: Learning - Remote Learning**General**

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 025 | | | Learning - Remote Learning | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:education, #learning, #key_enabling_technology:communication_functions, #key_enabling_technology:games | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| — |
| Complete Description |
| <p>Teresa is a Math teacher for secondary (high school) students, who retired a few months ago. She knows, as intelligent she is, that stopping right now, excusing to rest during retirement, is in fact not very healthy, and that the next logical step is to replace work for something else, indeed. As she also likes and is planning to travel a lot, she came to the conclusion she had better learn English before her husband retires too. She proposed herself to learn as much as possible of English and English culture. Teresa went to the English School of her town and, after an initial assessment; she enrolled in the third level of an elderly class. Enjoying the fact she is a student again she applied with vigor to learning the proposed subjects. Teresa</p> |

came across that the school has also facilities for remote learning, letting students complement their lessons at home and doing the homework. She even noticed that there was a championship between the classes of the several schools. The prize would be one week traveling to London for the winning class.

Teresa finds the site quite useful and a good complement for her lessons. The site is plenty of exercises, training sections for dictation and pronunciation, and games for increasing the knowledge of English. However, Teresa feels the whole concept of the site is a bit juvenile or even childish, and her colleagues aren't using this resource for the same reason and because the interfaces are a bit complicate for them. Nevertheless, Teresa decided to use the remote resources as there are still useful to complement their learning. The remote facilities are tailored for younger students, as the majority of the School's students are younger, she asserts. But she decided to propose the idea of starting to provide remote learning facilities more tailored for older students, as it was predicted a greater base of older students in the future...

[from source]

UC 026-02: Learning - Experiences Exchanging

General

| Name of Use Case | | | | |
|--|---|--|-----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 026 | | | Learning - Experiences Exchanging | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| BRAID – ICT & Ageing Scenarios | http://auseaccess.cis.utas.edu.au/sites/default/files/Ageing_scenarios.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:education, #human_communication, #mental, #localization:indoor, #key_enabling_technology:ambient, #key_enabling_technology:communication_functions, #purpose:safety:disease_prevention | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| — |
| Complete Description |
| <p>Hugh is a retired teacher of mathematics from the high school. Although he has 77 he feels extremely healthy and active.</p> <p>He really misses his students and the interactions with the newer generations. As he used to say: “there is nothing more refreshing than teaching mathematics to students and learning from them a set of other issues including new technologies, sports news, etc.”</p> <p>Hugh has a quite limited life due to his wife’s health condition. As she suffers from dementia he has to give daily support by taking care and paying special attention to what she is doing.</p> <p>During the day, the only time he has for himself is after lunch, when she is going for her daily nap. This is when Hugh goes to his home office where his newest “toy” is placed, a smart workstation at which he carries out his remote teaching activities. This work station comprises two sections: one with a PC and the other with an electronic black board where he writes down his lessons.</p> <p>With this smart workstation, he can simultaneously expose the subject on the electronic black board and follow the students’ expressions in the PC monitor when giving a remote mathematics class. These classes are part of a special programme introduced by the local high school to the students that are not correctly accompanying their classes.</p> <p>[from source]</p> |

UC 027-03: Virtual partner for supporting activities of daily living

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 027 | - | - | Virtual partner for supporting activities of daily living | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-06-17 | Lars Rölker-Denker | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Care Me for Life (CaMeLi) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |

| |
|--|
| Visionary |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #mental, #vital:cardiovascular, #vital:respiratory, #relationships, #key_enabling_technology:robotic, #general_tasks:daily_routine, #self_care:looking_after_ones_health, #purpose:safety:disease_rehabilitation, #domestic_life:household_tasks, #self_care:eating, #key_enabling_technology:mobile_devices, #key_enabling_technology:communication_functions |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| Complete Description |
| <p>Hans, age 75, lives alone in his apartment in Geneva. Even though he is showing light cognitive and physical impairments (e.g. forgetting where he left personal belongings, suffering from high blood pressure and a light form of respiration problems) he still feels fit and well enough to cope with his daily tasks. However, since his wife passed away six months ago he is lacking any motivation and is missing the interaction and support of his wife in carrying out his daily activities. Based on the suggestion of his best friend he therefore installed CaMeLi in his home.</p> <p>Hans's daily rhythm is more or less the same every day; being mostly in the living room and in the kitchen. Hans wakes up at 7:30 AM and goes to the living room. CaMeLi recognizes Hans and wishes him a 'good morning Hansi' like his beloved wife used to call him and reminds him 'do not forget to take your vitamins which can be found on the table in the living room'. Hans ignores the reminder and goes to the kitchen to make a coffee. After having finished his coffee he goes back to the living room and sits on the couch and switches on the TV. CaMeLi reminds him once more 'Hansi you must take your vitamins which are on the table' but Hans just ignores it again. Five minutes later CaMeLi, using an angry tone and face expression, says 'I know you do not like to listen to me, but it is for your own good'. Hans thought for a second that his wife was speaking but then realized that it was CaMeLi. He obeys and takes his vitamins.</p> <p>At around 9:00 AM Hans has the idea to prepare crepes for lunch, the same way he was used to do it with his wife. Hans goes to the refrigerator and realizes that he is missing several of the ingredients. However, he is not willing to go out since it is raining. He goes back to CaMeLi and tells it that he is missing eggs and broccoli. CaMeLi asks him 'you do not like to go shopping'; Hans replies 'no'. CaMeLi responds 'Normally your friend Peter is going to the supermarket today; I will send him the list'. Hans says 'great'. CaMeLi sends the list to Peter who is a member of Hans's collaborative care network. Peter gets an alert on his mobile about the shopping request and responds back to CaMeLi 'It is fine, in around one hour I will bring it. CaMeLi informs Hans about the respond. At about 10:00 AM Peter brings the missing ingredients and Hans starts preparing the crepes. He asks CaMeLi how he should prepare them and CaMeLi provides him with step by step instructions.</p> <p>At 5:00 PM CaMeLi notices Hans sitting bored on the couch and suggests 'go out for a walk Hansi; it is good for your health'. Hans does not react and simply stays on his couch. CaMeLi says in an insisting tone and unhappy expression 'your children will call you soon and they will ask if you have been active'. Hans knows CaMeLi is right, like his wife always was, and prepares to go out. CaMeLi reminds him 'do not forget</p> |

your hat and wallet and to put on a warm jacket; open also the bedroom window before leaving'. Hans smiles to CaMeLi and says 'thanks my partner for reminding me'. CaMeLi smiles back.

In the middle of the night, Hans wakes up and stumbles over a bag on the floor on his way to the bathroom. He lies on the floor. The CaMeLi cameras detect the shape of Hans on the floor. The system determines this as an emergency. CaMeLi asks "Hansi, do you need help?" But Hans is feeling alright, so he answers "no". In the case that Hans would have needed help, he would have answered "yes" (or nothing in case he would not have been able to). In that case a telephone call would have been launched with the first person on the emergency telephone list of Hans (predefined contacts, in a predefined order of priority). If the phone is not answered the next person on the emergency telephone list is called until somebody is reached.

To be sure that the person is able to give help, the called person has to confirm (or decline) that he/she is coming to help the user. This is done by the request to enter a number on his/her keypad on the phone to acknowledge the availability.

UC 028-02: Remote physical training of older adults at home by specialised coaches

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 028 | - | - | Remote physical training of older adults at home by specialised coaches | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Remote Home-Physical Training for Seniors (MOTION) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:muscle, #domestic_life:household_tasks, #stakeholder:secondary:relatives, | | | | |

| |
|---|
| #stakeholder:secondary:doctors, #purpose:safety:disease_rehabilitation, #key_enabling_technology:ambient, #key_enabling_technology:communication_functions, #purpose:safety:fall_prevention, #general_tasks:handling_stress, #vital:cardiovascular, #vital:respiratory, #localization:indoor |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Mary Smith, aged 75, lately felt that her muscles weaken and once has fallen when reaching for an object on the floor. This is making her less confident; some home activities at home have become unusually difficult and she has asked family member to assist her. At a visit to the doctor, she is recommended some regular physical exercise to strengthen muscles, prevent the decline in aerobic capacities and more generally increase her quality of life. The doctor has recently received a leaflet from Siel Bleu, an association providing physical training to seniors, which uses MOTION. Mary talks about it to a family member who helps her to enter into contact with Siel Bleu and register for the course matching her abilities and disabilities. A week later, a specific large touch screen with simple ergonomics is received at Mary's home and connected to the Internet by the family member. The ICT device is controlled remotely so no other manipulation is needed. When the session starts, the screen automatically switches on and Jim, the coach, and Mary can see and interact with each other. During the training session she communicates with Jim via the specific screen. Three other seniors with similar physical capacity problems as Mary are participating in the class at the same time. This allows Jim to give some personalised advice during the class on how to carry out the movements with regards to the physical capacity of participants. An individual file is created for each participant which allows following up their progress and adapting exercises accordingly.</p> <p>After participating for a few months in the remote training sessions, Mary starts to feel more self-confident and feels that her muscles have become stronger. She is no longer concerned about falling and is even participating again in activities of the local club for seniors. She does not have to ask family members for assistance as much as earlier. She continues participating in the MOTION sessions once a week and this has increased her overall well-being and motivation for an active life. In addition, through specific measures during the session, it has been established that her heart rate has become more stable and her oxygenation is higher. This has a positive impact on her health overall.</p> |

UC 029-02: Personal IADL Assistant

General

| Name of Use Case | | | | |
|--------------------|-------------|--|-------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 029 | - | - | Personal IADL Assistant | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |

| | | | | |
|--|------------|------------------|--|---------|
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Personal IADL Assistant (PIA) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #self_care:washing, #stakeholder:secondary:professional_care, #sensory:hearing, #key_enabling_technology:health_information, #key_enabling_technology:mobile_devices, #self_care:looking_after_ones_health, #stakeholder:secondary:relatives, #general_tasks:daily_routine, #localization:indoor | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Karl plans to have a bath and then do the laundry. When he prepares the bath he notices the pedicure instrument pack in the bathroom cupboard. It has been a while since the last time he had a pedicure with the assistance of a healthcare professional, and the 68-year old with partial hearing loss cannot remember the details how to do it. When he did the pedicure last time, the care professional downloaded a video clip from her healthcare centre, which provided a visual and oral description of the necessary steps of a home pedicure practice. This video clip has become a real “hit” on the PIA social network where it was made available to all members of the network a few weeks ago and has received positive reviews and feedback – it seems that many older persons have been found in need precisely of this support. Karl’s professional carer had previously placed an NFC tag on the pedicure instrument pack, and now the only thing Karl needs to do is to hold his tablet PC close to the pedicure instrument pack and confirm the video support request to PIA. The tablet PC now finds the appropriate video clip, adjusting the user interface to suit Karl’s previously stated profile preferences which in Karl’s case means playing back the video clip louder. Following the video instructions Karl is able to perform a pedicure by himself.</p> <p>After a bath and pedicure, Karl gathers the dirty clothes and prepares the laundry. Karl’s washing machine has a variety of programs for different materials and colours. The numerous buttons and indicators on the panel always confuse Karl and the long manual is not helpful at all. Karl’s daughter has made several video clips using the family video camera to demonstrate and explain the steps, the process and the usage of various buttons. For example, the video clips can show how to select clothes to be washed, check washing instructions, measure detergent and select the washing program and start the machine. She also placed</p> |

NFC tags to the laundry basket, detergent box and the washing machine last time she visited. Karl is not good at selecting clothes for different washing setups, so he holds the tablet PC close to the laundry basket. The assistance agent then finds and plays back the corresponding video clip and Karl follows his daughter's oral description to separate his clothes. After checking these personalised washing instructions and putting the clothes into the machine, Karl is not quite sure how much detergent he should use, so he holds the tablet PC close to the detergent box. A video clip with his daughter's voice is played back to explain how much detergent should be used and how to measure it. Karl completes the process and the washing machine is doing its job for Karl now. With the help of PIA's responsive, context sensitive tablet video instructions application, Karl no longer has to bother his family members as much as he did before. He is very pleased that he can now perform daily activities on his own.

UC 031-03: Online support for informal caregivers

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 031 | - | - | Online support for informal caregivers | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Juan-Pablo Lázaro-Ramos | | Original Author |
| 02 | 2013-09-03 | Marco Eichelberg | | Converted to SG5 use case template |
| 03 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Platform for self-assessment and efficient management for informal caregivers (BREATHE) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #stakeholder:secondary:relatives, #mental, #relationships, #general_tasks:daily_routine, | | | | |

| #general_tasks:handling_stress, #stakeholder:secondary:professional_care, #key_enabling_technology:communication_functions, #key_enabling_technology:ambient, #purpose:safety:alert_communication, #key_enabling_technology:health_information, #human_communication |
|---|
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Andrea is 58 years old and lives in a small village in Spain. She cares her mother Ramona, who is 85 and lives alone at 8 minutes walking from Andrea's house. Ramona is not as active and strong as she used to be. In addition, Ramona is starting to act aggressively towards her daughter. She just wants to get some more attention and she wants to believe that she is still a key person in the family. Andrea is more and more often angry with her mother due to her behaviour and perceives that the situation is not sustainable for either of them. Andrea is blocked because she does not know what to do to motivate her mother to be active again. Andrea feels isolated and alone because the public healthcare system does not provide support and private care seems very expensive and would not be very useful at this stage of care. She feels stressed and inadequate as a carer or as a daughter.</p> <p>While shopping in the grocery, she sees a poster at the door about a service for people who take care of elderly people. She is desperate. She decides to call to ask about such a service and it is explained to her that the service consists of an easy to use personalized website that guides the carer during the whole period that they are caring. "It will be a period of years, and people need support in their daily lives as well as strategic support. People are not trained for such a big responsibility". The service is based on a monthly fee that Andrea has to pay to a company that provides the service. Andrea can subscribe to the service with or without the support of a formal carer. Without it, the system works automatically offering what the carer needs to know when they need to know it. With a professional in care supporting her Andrea and her mother can have personalized care plans created that guide Andrea through the care process. There are also activities planned to improve Andrea's quality of life. "You have the right to feel good and to breathe" There is a modality of the service that works with an intelligent video-based monitoring system at home. It gathers information about the activity of the assisted person: "It will be like having eyes at your mother's home. The system will tell you about any unexpected change in her behaviour taking into account her right to privacy". Andrea feels really excited about the new perspective of a supporting system over the coming years. She thinks about her mother who probably will be in better mood and about herself who will probably have less anxiety. Once again the woman at the phone says something interesting: "this system will guide you by offering what you and your cared person need. It seems magic". The system will provide information and training about what to do in specific and known situations that will occur in time as part of the ageing process. It also provides a connection to other people in the same situation who might be able to help Andrea mitigate the feeling of loneliness, and seamlessly weave the caring activities into her family life. "So, social network in the end will be a useful thing for me." The woman at the phone to whom Andrea speaks mentions that this is a quite novel system, and that they expect a rapid growth and that it is anticipated that in the near future it will become so popular that a public provision of the service will be available.</p> |

General Remarks

- Further information: The BREATHE project has published a white paper on needs for informal caregivers for long term care. [Download](#)

UC 033-03: Care4Balance - Dashboard-based interaction between

caregivers and older adults**General**

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 033 | - | - | Care4Balance - Dashboard-based interaction between caregivers and older adults | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-06-20 | Lars Rölker-Denker | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Care 4 Balance: D1.4 Intermediate description of reciprocal care process Appendix on persona descriptions and pilot scenario's AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #general_tasks:daily_routine; #domestic_life:household_tasks; #relationships; #life_areas:work; #community:recreation; #stakeholder:secondary:relatives; #stakeholder:secondary:professional_care; #stakeholder:secondary:non_medical_services; #work:type:voluntary; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #key_enabling_technology:ambient; #key_enabling_technology:mobile_devices; #key_enabling_technology:home_automation | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|-----------------------|
|-----------------------|

| Complete Description |
|--|
| <p>Contextualisation and instalment of the C4B system</p> <p>0. Mary and Toon have recently moved to a service flat. They still tried to rely on the help of their daughter Joyce, but she couldn't cope all the care they need and the additional distance. As Joyce recently also had a job-□promotion and additional tasks at work, the burden of care of her parents, children and grandchildren was too high and she advised her parents, together with the nurse Eline, to ask for extra formal help and care coordination support.</p> <p>1. Sofie is now the new home care aide and Toon and Mary are via the service flat also able to use the C4B system to better organize the care they need. After an introductory talk, Toon and Mary decided for the instalment of the C4B system with a user-□friendly dashboard (terminal with RFID reader and adapted interface) in the living room, and a personalized sensor package, with some motion sensors, door sensors and an additional smoke detector. These sensors will give peace of mind for daughter Joyce, and also improve safety feelings for Toon & Mary. The system also allows improving care communication and coordination.</p> <p>The list of household tasks that needs to be done every visit are mainly prepared by Mary and Toon which they indicate on the always-on interactive dashboard via a set of RFID cards. Especially Mary wants to decide which tasks she does and which tasks Sofie needs to do.</p> <p>Monday 27th of January</p> <p>2. Since Mary and Toon like to take a nap or like to participate in activities offered by the nursing home in the afternoon, Sofie always visits them in the morning. Today she needs to do the laundry, the ironing, and make dinner. Mary helps Sofie during the cooking while Toon quietly reads the newspaper. At first Mary still wanted to do a lot herself and help Sofie all the time. This was rather to see if Sofie did everything correct. But after a few weeks now, Mary notices that she is pleased with the help and the friendly chat with Sofie. She now even has time to go out with her friends.</p> <p>3. When Sofie leaves, she tells Mary and Toon that the planning for the next month must be made. She asks them to take a look at their calendar on the C4B dashboard and to fill in their planned activities and care needs. Toon and Mary panic when Sofie is gone: the dashboard is very new to them and they don't dare to get started independently.</p> <p>Mary calls her daughter, Joyce. She decides to visit her parents in the afternoon and she will help them. Together they fill in the calendar and they get to know the use of the dashboard with the RFID tags. Now Mary has seen how Joyce uses the dashboard and is less scared to give it a try.</p> <p>4. Later on in the afternoon, Toon goes to his weekly game of petanque. His group of friends welcome a new visitor: Alfred. After a few games with Toon, Alfred tells him he recently lost his wife and is trying to do new activities because he feels alone now. Toon doesn't do that much of activities but he suggest to Alfred to accompany him on the walks he should do on the advice of his doctor. Alfred is glad with this offer and they agree to make a walk together the next day.</p> <p>Tuesday 28th of January 2014</p> <p>5. In the morning Alfred arrives at the home of Toon and Mary, become acquainted with Mary and leaves with Toon for a walk. They stroll through the city for an hour and talk mostly about memories of their youth. Toon is pleased to have a companion while walking and admits to Alfred he should walk 3 times a week but</p> |

often doesn't want to do it. They make a deal to try to walk together and choose 2 extra days for this week. When Toon comes home, he adds these activities to his agenda on the C4B dashboard.

6. At noon, Mary has an appointment with a good friend. They will eat together and Sofie came the day before so there is enough food for Toon. Just before Mary leaves, she quickly puts a meal, made by Sofie, in the microwave. She has difficulties in reading the display and enters accidentally a far too long heating time. She tells Toon the meal is almost ready and leaves. She has her mobile phone with her in case Toon wants to reach her.

7. Mary really enjoyed her afternoon with her friend and makes immediately a new appointment with her and indicates the date via her mobile phone on the C4B system. Mary gets home just in time to encounter Lize, the nurse of Toon. He tells them both about what happened to him: he fell asleep and the meal was burnt. Mary gets angry at first because Toon didn't call her, but he reassures her that he got help from the home care organisation. They called him after an alarm of the smoke detector and helped him find a substitute meal. He proudly shows Mary how he can arrange a delivered pizza now with the C4B dashboard.

8. When Lize leaves, Mary wants a quick chat with her in the hallway about the incident. Toon forgets a lot lately and Mary is worried. Lize promises her that she will discuss this with Sofie. If she feels the same way, they can arrange an appointment with the doctor.

Wednesday 29th of January 2014

9. On Wednesday, the neighbour Harry puts normally the garbage outside, this is indicated as a weakly repeating task in the C4B system. But today, daughter Joyce brings a visit to her parents together with her two grandchildren. So, as she is there, she can put the garbage outside. Therefore, Mary indicates in the system that the task of Harry is cancelled today. Toon and Mary are very happy to see their daughter Joyce and grandchildren. When they enter, Mary indicates in the system they have visitors.

10. Toon asks Joyce to bring him to the dentist the next day, but she can't do it: she promised her son to give him a ride to the city where he studies. She suggests asking it on the C4B dashboard and Toon sends the question to the group of informal caregivers in his network. Later on in the afternoon Nicole, their granddaughter lets them know she can bring Toon to the dentist. Joyce, the mother of Nicole, tells Toon and Mary she is surprised that Nicole has the time to give a ride because she has a busy week with the home renovations. Mary feels guilty and calls Nicole who still insists that she wants to help their grandparents too. Therefore, they agree that Mary will prepare lunch and some homemade cake in return for Nicole and her family the next day.

11. Mary tells Joyce that she is often bored at home, her friends don't always have the time to do something with her. Joyce proposes to have a look in the C4B system, there are a lot of volunteer activities offered by the local services centre. They indicate the time that they are free to do some activities and immediately some suggestions are offered to do. Apparently someone will soon be 100 years and they are looking for volunteers to fold paper roses as decoration. Mary really wants to do this and she accepts this task via the C4B system. The local services centre sends the necessary materials in a box to the home of Toon and Mary.

UC 035-02: Improving cooking skills and nutritional knowledge of older adults

General

| Name of Use Case |
|------------------|
|------------------|

| ID | Domain Role | Function | Name of Use Case | |
|--|-------------|--|--|---|
| 035 | - | - | Improving cooking skills and nutritional knowledge of older adults | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Assistance Solution for improving cooking skills and nutritional knowledge for Independent Elders (ChefMySelf) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #self_care:eating, #localization:indoor, #key_enabling_technology:health_information, #key_enabling_technology:ambient, #key_enabling_technology:mobile_devices, #human_communication, #domestic_life:shopping, #domestic_life:household_tasks, #digestive:metabolism, #neuromusculoskeletal:movement, #purpose:safety:disease_detection, #key_enabling_technology:communication_functions, #relationships | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| John is 75 years old and lives alone in his home since his wife died a year ago. Although he feels sad for his loss he appreciates his independence and wants to continue living independently at his home, but also he realizes that his eating habits are getting worse because he is not used to cook. Since he always enjoyed |

the traditional dishes his former wife has cooked, his culinary skills are limited to simple recipes. When John heard about the ChefMySelf solution he decided to try its benefits.

Once the solution, consisting out of a food processor and a set-top-box, is deployed at John's home, he only needs to choose a meal from the large and easy to use recipe library. To do so, John uses the TV interface, as it is easy to operate with his normal remote control. For each recipe John can see its nutritional value, the preparation time, the difficulty, the ingredients and a step by step explanation on how to do it. Moreover John can read other users comments and how they have rated the recipe. Once he has decided which meal to prepare, the ChefMySelf system transmits the recipe to the food processor, which adjusts all settings automatically to the selected recipe. Now John only has to follow the step-by-step instructions given by the device.

Through the time, his experience in cooking increases. John enjoys the preparation of the meals as he steady masters more recipes. At the beginning he only used the ChefMySelf food processor, but after some time he feels more confident and invests in a tablet to be able to cook "at the traditional way". Instead of the food processor, the preparation instructions are shown on the tablet. Sometimes when he prepares a recipe and the result looks great he feels proud and likes to share it in the social virtual network.

To his disappointment John finds out that the local dish he likes so much is not in the current recipe library. To change this, John uses his newly acquired tablet and creates a new recipe, which he shares within the virtual social network. Nutritional values are automatically calculated by the system according to the ingredients and their amounts. After some other users have tried out the recipe they suggest some slight modifications to John in order to make it healthier, which John happily includes.

Normally John does his shopping once a week. To know which ingredients to buy, he uses the tablet interface of the ChefMySelf system to plan the weekly meals. At the beginning, when his culinary skills were more limited, he let the system automatically suggest a plan for him. Now, John compiles his own plan, by choosing the meals from the recipes library. While choosing building the plan, the system takes the selected recipes into account, and suggested other recipes to John in order to balance the plan and guarantee a healthy diet. Moreover the system informs John with a simple coloured light indicator if the diet plan is convenient for him or not. Sometimes if John has chosen a quite unhealthy or unbalanced diet, the system will offer him to replace a certain recipe with another one to improve the diet. After John has compiled his diet plan, the system compiles a shopping list and prints it for John.

With an increased age John starts to suffer from a little overweight, as he moves less and didn't adapt his diet plan accordingly. Therefore he buys a certified scale which he can seamlessly integrate without any additional help into the ChefMySelf system. Every day before going to bed he measures his weight, which is immediately sent to the ChefMySelf cloud system where his user context is updated. With this additional information the suggested recipes and plan are automatically adjusted towards a slow, but steady loss of weight.

Thanks to the ChefMySelf solution John notices that he has significantly improved his eating habits, and also he realized that ChefMySelf is a great way to interact with people of his age and mitigate his feelings of loneliness.

UC 039-03: Support for informal carers of demented relatives

General

| Name of Use Case | | | | |
|--------------------|-------------|-----------------------------|---|-------------------------------|
| ID | Domain Role | Function | Name of Use Case | |
| 039 | - | - | Support for informal carers of demented relatives | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or | | Approval Status draft, for |

| | | | | |
|---|---|------------------|--|-----------------------------|
| | | Committee | | comments, for voting, final |
| 01 | 2013-09-03 | Marco Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-05-23 | Hilda Tellioglu | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| The Online Platform for Informal Caregivers (TOPIC) Project (AAL-JP Call 5) | http://www.topic-aal.eu/ | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental, #stakeholder:secondary:relatives, #relationships, #domestic_life:shopping, #life_areas:economic_life, #key_enabling_technology:mobile_devices, #key_enabling_technology:health_information, #human_communication, #key_enabling_technology:communication_functions, #purpose:safety:alert_detection, #stakeholder:secondary:professional_care, #self_care:looking_after_ones_health, #learning, #stakeholder:secondary:doctors, #relationships, #community:recreation, #purpose:comfort:lighting, #key_enabling_technology:body_area | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Mary Smith is an informal family carer to her demented husband Ben. Both are 76 years old, they have a daughter who lives with her daughter far away. Mary and Ben used to have a network of friends, which due to the illness and Mary's burden more and more decreased. Also, the two are bounded to their near environment as Ben cannot drive the car anymore and Mary never had a driving license. By this Mary is dependent on help by other people to do errands for her, e.g., to fill a prescription at the pharmacy. Her personal situation improved when she – by help of a local seniors' organisation – got access to the CarePortfolio internet services: especially regarding the fact that her informational and emotional support needs are being satisfied via tablet and smartphone, and in that she has gained more personal freedom for herself despite her demanding situation of giving care to her husband. In terms of tangible support her easy-to-use monitoring device for her disoriented husband allows her to ask the community for help in this very demanding task. She asks one of her online family caregivers friends to shortly watch out for him via the</p> |

community network provided in CarePortfolio. In exchange, she will watch out for their relatives when needed. All she has to do is to assign the friend with monitoring rights and the access to her cameras at home will be unlocked for the monitoring friend.

She has different options to satisfy her informational needs in the context of her husband's and his illnesses: Searching for news and tips, she can access dedicated information on dementia and she can follow specific lessons on how to give a bath to her husband without hurting her back. When she cannot find answers in these documents, she can browse existing Questions & Answers and ask a question to a professional caregiver. She likes the idea of choosing the way of interacting (orally or textually), e.g., as her husband often gets angry when certain questions are discussed concerning his disease, she likes the option of text messaging. When she has the need for a more intense chat, she can easily manage an appointment with a doctor or a professional dementia consultant via the CarePortfolio whenever she needs it.

Emotional support: As she was extremely isolated she loves the online support group with other elder family carers who all face similar heavy problems. It helps her so much for her own practice to discuss different perspectives of the handling of a certain care-giving problem. They can really discuss about their difficulties and exchange experience. In the evening she also often chats with her peers who meanwhile have become friends to her. Choosing the tool (mobile or tablet) according to the situated need is easy for her and allows her to adapt the tools to her demands. When she is too much engaged in the every-day demands and by this often too tired to chat, she loves to change her mind by attending a Laughter Yoga or eYoga session, which really helps her to feel better. By accessing the Fun Corner through her TV (she can use her TV as a huge monitor by controlling it with her tablet), she can also look at funny sketches which make the difficult situation a laughing stock. What also contributes to recreational moments is to look at TV shows together with her remotely living friends – by this she can enjoy a relaxing activity and at the same time she feels strongly connected with her loved ones. Sometimes she is just enjoying a quiet moment in her sofa with her very relaxing scarf which was provided to her with the other devices. This scarf provides some light, and is changing colour. It is very relaxing. When the green colour arrives, it means that one of her friends is online, and she could then, if she wants start chatting or watch TV with her/him. During these rare quiet moments, she likes also seating with her tablet and writing down funny stories that happen with her husband, for example when last week he thought she was a famous actress that he loved. Making fun about these situations helps her to reflect and it is nice to be able to share these funny moments with her friends and family. Her smart phone is also a help in critical situations with her husband: As in the couples' every-day life many critical situations arise which for her often are exasperating, she writes a short sentence of the problem situation on the device. Most of the time some online friends are then online and write back some helpful and encouraging notes to her, which help her very much to cope with these critical situations.

UC 043-02: Digital health coach for older adults

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 043 | - | - | Digital health coach for older adults | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|---|------|--|
| A digital coach to increase healthiness of older adults (INSPIRATION) Project Proposal (AAL-JP Call 5) | - | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #sensory:pain, #neuromusculoskeletal:joints_and_bones, #vital:respiratory, #digestive:metabolism, #stakeholder:secondary:doctors, #vital:cardiovascular, #stakeholder:secondary:relatives, #life_areas:economic_life, #key_enabling_technology:mobile_devices, #general_tasks:daily_routine, #self_care:looking_after_ones_health, #key_enabling_technology:communication_functions, #domestic_life:shopping, #self_care:eating, #general_tasks:handling_stress, #human_communication | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Anna V., an 80 year old woman, still lives independently in her own home. Despite her advanced age she remained exempted from serious diseases up to now. From time to time she's affected by joint pains and shortness of breath. The family doctor sees the causes in Anna's overweight. He repeatedly recommended her to reduce the weight to prevent potential cardiovascular diseases. Anna lives gladly at home and would like to keep her independence as long as possible.</p> <p>Daughter Silvia (58 y.) regularly visits her mother and helps her with administrative work. She is happy about Anna's independent housekeeping. However she is concerned about the healthiness of her mother. That's why she recommends Anna the use of a digital health coach for older adults, which may help her leading an independent and active life.</p> <p>The installation of INSPIRATION was very simple. On Silvia's laptop they opened one account each. Besides Silvia helped her mother installing the accompanying smartphone application – Anna has received an iPhone from Silvia on her 80th birthday.</p> <p>From now on, Anna is inspired daily with new ideas. Every morning she's awaiting the "Tip of the Day" – a ritual that she would not like to miss any longer. The daily planner reminds her of the recurring movement exercises. Actually Anna is a "couch potato", but she loves clicking the "done"-button on her smartphone after having completed the suggested tip. And she knows well, that Silvia is happy too (from the very first beginning Anna has granted her daughter free access to her health agenda).</p> <p>Today Anna wakes up late. She feels tired and thinks about falling sick. As usual, she drinks her coffee and reads the offered daily health tip; this time on stabilizing the immune system and which herbs and vegetable contains the essential minerals and vitamins. Besides that, these vital substances strengthen the production</p> |

of serotonin, the so-called “happy hormones” which are mood enhancing and responsible for a good sleep. With one click Anna takes over the tip to her day planner and as a reminder on the shopping list. After performing the morning housework, Anna sits down to prepare the daily shopping. She opens the shopping list in her digital health coach. Within the standard positions she marks the milk as “done” with one click. The products of the today's health tip are listed too. After a quick check of the available food Anna is sure that today's shopping list is already complete. Arrived at the local supermarket, the smartphone – Anna's faithful companion – shows her the list of items to buy so that nothing would be forgotten. Silvia, she works as a specialist in an insurance company, checks during a short work break the messages on her smartphone. Because Anna's mobile phone measures the movements, Silvia knows that Anna left her house. In addition she notes how many of today's activities Anna has already fulfilled. This is really calming her.

Later on Anna prepares a very healthy meal. She feels good. On her smartphone she clicks the “like”-button, and wasn't the first to do that. Besides she marks the highest level of well being. The depressing mood has definitely gone. Anna decides to create a new health tip for tomorrow to inspire her friends and other older adults. She already has an idea!

UC 046-02: Service robot for tele-presence and support

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 046 | - | - | Service robot for tele-presence and support | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Victorya – a robot for integrated care@home and peace of mind of carers (VictoryaHome) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Realised in R&D | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |

| Further Keywords for Classification |
|---|
| #mental, #self_care:looking_after_ones_health, #key_enabling_technology:robotic , #purpose:safety:alert_communication, #key_enabling_technology:body_area, #key_enabling_technology:mobile_devices, #stakeholder:secondary:relatives, #key_enabling_technology:communication_functions, #human_communication, #localization:indoor, #key_enabling_technology:medication_dispenser |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Helen is 75 and has mild dementia. She is sitting at home watching her favourite program on TV. She forgets to take her medicine. At this point the Victorya robot changes the screen to show the notice of the missed medication. Helen is focused on the TV, so she does not notice the reminder. After a short time Victorya sounds a soft alarm to remind Helen of her medication. She hears it and then “calls” Victorya by pressing a button on her wrist device. Integrated on Victorya, there is a medication dispenser, so Helen can easily get her medication.</p> <p>Had not she heard the alarm, Victorya would have changed the state of the “serenity button” on the carers phones to yellow. If this had happened, the carer – her husband for example - could initiate a tele-presence session at Helen’s home, by travelling remotely to her and asking if she is OK. And if all is fine, he could then tell her to take the medication, which she can pick herself directly from Victorya’s dispenser.</p> |

UC 056-03: Tablet based self-management and interaction with informal carers

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 056 | - | - | Tablet based self-management and interaction with informal carers | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Marco Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-05-27 | Thorhallur Gudmundsson | | Completely revised text |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|---|--|--|
| eCare@home - daily life management and monitoring system for elderly with mental disorders (eCH) Project (AAL-JP Call 5) | | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #mental, #relationships, #key_enabling_technology:mobile_devices, #key_enabling_technology:communication_functions, #human_communication, #mental, #stakeholder:secondary:professional_care, #stakeholder:secondary:relatives, #stakeholder:secondary:doctors, #self_care:looking_after_ones_health | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Anne-Marie has a master's degree in history and taught GCSE and A-levels at a community college before she got married. She experienced a great deal of insecurity and distress in her job but labelled it as normal difficulties adjusting to the stress of a strenuous teaching job. She was diagnosed with a postpartum depression with psychotic symptoms after her daughter was born in her late 20s. She was convinced during this time that the baby was a mistake and that she and her husband would be better off without it. She showed no affection towards her child and eventually had to be hospitalized because she threatened to hurt her baby. After 6 weeks of hospitalization and medical treatment her mood stabilized and she was able to start forming a bond with her new born daughter. In the years that followed periods of relative stability, manic and depressive episodes alternated. She had various treatments on and off and was diagnosed with bipolar I disorder after a second psychiatric admission. She began treatment and generally reduced the severity of her episodes but had occasional relapses due to medication changes or external stresses. She has no comorbid mental health problems or any chronic physical conditions - just a bit of arthritis. Social situations can be stressful and have led Anne-Marie to be quite withdrawn most of the time. Work and personal relationships have often suffered during extreme episodes in the past.</p> <p>Recently Anne-Marie's husband took her to see her psychiatric specialist after she became increasingly anxious and agitated. She had been taking less lithium after reading about it causing renal problems in later life. She is determined to stick to her new course of medication and to trust her specialist.</p> <p>Since Anne Marie has been using the ecare@home system, she has learned more about her condition and the fact that other patients struggle with the same feelings and doubts. She started keeping track of her mood, sleep patterns, and activity levels and found that several factors trigger or precede a change in her mood. She finds that trouble sleeping for more than a few nights is a sure sign that she is becoming less stable. Furthermore, she found out that her mood improves if she is distracted by something that she enjoys. Through the use of the tablet, she has recently found out about a painting club that she can join</p> |

near to her house. Anne-Marie discusses her ideas and insights with her social worker and her psychiatrist. Lately she has been alternating face-to-face contacts with video calling sessions, which save her the trips to the mental health center. She and her husband thoroughly enjoy video-calling with their daughter and grandchildren, who live 200 km away. This gives them the chance to see them more often. Her husband feels that since Anne-Marie has been using the system, she has taken more responsibility for keeping tabs on her mood and activities. Before, he would often try to talk her into trying new things and Anne-Marie would become irritated and would not take his advice. Anne-Marie's daughter finds that this way, she can stay in touch when she is unable to visit and she can keep an extra eye on her mom as well. Through video-calling at the friends and family portal, she has recently joined in at a family conference about Anne-Marie's condition and treatment with her psychiatrist at the clinic. This has answered a lot of questions and has reassured her that her mom is receiving the proper care.

UC 057-02: Online support for informal caregivers with stress level recognition and behaviour monitoring

General

| Name of Use Case | | | | |
|---|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 057 | - | - | Online support for informal caregivers with stress level recognition and behaviour monitoring | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Intelligent Care Guidance and Learning Services Platform for Informal Carers of the Elderly (iCarer) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |

| |
|--|
| #mental, #general_tasks:daily_routine, #self_care:dressing, #self_care:washing, #general_tasks:handling_stress, #stakeholder:secondary:relatives, #key_enabling_technology:ambient, #key_enabling_technology:health_information, #learning, #purpose:safety:alert_detection, #self_care:looking_after_ones_health, #purpose:safety:alert_communication, #purpose:security:access_control |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Complete Description |
| <p>Mr. Stark is a middle-aged entrepreneur with very little spare time. His parents live together in their lifelong home, but his father was recently diagnosed with cognitive impairment. Mr. Stark is concerned about his mother's ability to help his father with the little things in his daily life (changing his clothes, taking care of his personal hygiene, etc.). He believes that with a bit of help she should be able to ensure his wellbeing, but he worries about the burden that this extra effort will place upon her.</p> <p>The iCarer platform supports Mrs. Stark by providing her with assistance in order to relieve her stress load. It also allows Mr. Stark to be involved in the process, improving the overall quality of care that his father receives.</p> <p>Whenever Mrs. Stark is at home with her husband, iCarer recognizes her as the "Informal Carer", tracking her actions and creating behavioural patterns, which are then used to estimate her psychological state and infer her stress levels. It also monitors her interaction with her husband in a non-intrusive manner via presence sensors located throughout the home. At all times, she is free to take care of her husband as she wishes. However, when iCarer detects that her stress levels are rising, it steps in, giving her advice via visual and audio cues in order to reduce her stress and ensure her husband's needs are being addressed appropriately. This greatly reduces the need for her to remember every little thing, allowing the platform to worry about that in her place. iCarer also includes an "e-Learning" feature: the behavioural patterns generated by the platform, specifically tailored to her, are used to recommend personalized tutorials in order to help her improve her skills as a caregiver.</p> <p>On the other hand, when Mrs. Stark is not at home, iCarer monitors her husband's actions and provides basic guidance in natural language when he attempts to perform ADL by himself. It may remind him to turn the stove off, or change his clothes when he wakes up. All this based on his actions, and only when a need for support is detected. The platform also reports back to Mrs. Stark, conveying useful information about her husband's needs and offering recommendations on how to address them. These recommendations may range from specific actions to one of the many tutorials available within the e-Learning program described above.</p> <p>Mr. Stark also visits his parents to help when he can. As a secondary informal carer, the platform offers him information about his father's needs and suggestions on how he can support his mother. Mr. Stark receives regular updates on his father's state as well as his mother's performance as his carer. He also has full access to the content library of the e-Learning program.</p> <p>iCarer provides Mr. Stark and his mother with a long-term solution, evolving and adopting a more active role as his father's condition progressively worsens through the remainder of his life. The combination of the iCarer platform and the informal care provided by both Mr. Stark and his mother improves the overall quality of care that his father receives, and greatly reduces the personal burden placed upon his family.</p> |

UC 062-03: Exoskeleton legs**General**

| Name of Use Case | | | | |
|--|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 062 | - | - | Exoskeleton legs | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-06-09 | Gurvinder Virk | | Revised text |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Exoskeleton legs for elderly persons (EXO-LEGS) (AAL- JP Call 4 project) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #relationships, #domestic_life:household_tasks, #self_care:washing, #domestic_life:shopping, #mobility:transportation, #community:recreation, #general_tasks:daily_routine, #vital:cardiovascular, #neuromusculoskeletal:muscle, #neuromusculoskeletal:movement, #mental, #general_tasks:handling_stress, #localization:indoor, #localization:outdoor, #mobility:walking, #mobility:body_position_and_carrying, #purpose:safety:orientation, #purpose:safety:alert_communication, #stakeholder:secondary:professional_care, #stakeholder:secondary:emergency_call_services, #stakeholder:secondary:relatives, #key_enabling_technology:communication_functions, #human_communication, #purpose:safety:alert_detection, #key_enabling_technology:environmental_parameters, #key_enabling_technology:body_area | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |

Complete Description

Erik Anderson is an active seventy-five year old ex-civil servant living on his own in a two bedroom second floor apartment in Gävle city centre. All his life, Erik has been well-connected to and integrated with his community, and is a pillar of society. He has been active in community-related projects and supporting worthwhile causes (neighbourhood watch, neighbourly help, school crossing support, etc.). Because of this he has many friends of his own age, also older and younger than him, with whom he regularly socialises; Erik is keen to continue these activities which include the following:

- 1) Home-related indoor activities: Moving around generally in tight confined spaces for cleaning, cooking, personal hygiene tasks, etc;
- 2) Home-related outdoor activities: Moving in complex environments (ground can be uneven, soft, grassy, with ledges, holes, also stairs, etc) for shopping for himself and his bed-ridden friends (which is a growing list), gardening, and taking public transport;
- 3) Leisure activities: hobbies and visiting friends (playing golf, fishing, going to the pub, going to the park) which involves walking considerable distances in natural environments.

The mobility tasks that Erik needs to perform for the above daily activities include: sit-to-stand, stand-to-sit, bending/crouching down, straight walking, turning, quiet standing, climbing/descending stairs, and stepping on/over obstacles.

Recently, Erik had a mild stroke which has affected his left side meaning this has become weaker than his right. He has started to have increasing difficulties in doing various physical mobility tasks, as well as some mild cognitive problems of remembering things, and his friends have commented that he is not visiting them as often. In his efforts to do more he has had some minor falls, and these have led to him losing confidence. Erik is becoming desperate and wants to find a solution that can help him move around freely, reliably and securely so that he can (a) maintain his independence, and (b) continue to be active in the community.

EXO-LEGS will identify half-, full- and “tunable” left-right legged exoskeleton requirements, with the following starting points:

- 1) Basic exoskeleton: to provide indoor mobility assistance for performing sit-to-stand, stand-to-sit, tasks, straight walking and quiet standing indoors;
- 2) Standard exoskeleton: for turning, movement in various environments (indoor/outdoor), ramps, bending/crouching down;
- 3) Deluxe exoskeleton: stair climbing/descending, stepping on/over objects, uneven and unstructured ground, long distances.

The project will aim to develop commercially exploitable results for the Basic exoskeleton and hence focus its workplan on realizing and validating experimental prototypes of this model and testing it in the target countries (Germany, Spain, Sweden, Switzerland, and UK). The Standard and Deluxe models will be investigated to explore concepts for assessing the full potential of assistive exoskeletons to meet the needs of the elderly for normal daily living. The scenario described next considers the likely situation to be addressed by assistive exoskeletons in the future and the EXO-LEGS project will initiate the process of meeting these end aims by focusing on the functionalities provided for by the Basic exoskeleton. Imagine Erik is sitting in his lounge and gets a telephone call from his friend Anita to meet up for a picnic in a local park and take her dog for a walk, a total return distance in the region of 3km. The details of the tasks that will be investigated (and which exoskeleton models are relevant) are the following:

1. Put on exoskeleton (half- or full- depending on how able he feels): done while seated (task relevant for all exoskeleton models namely Basic, Standard, and Deluxe (B, S and D))
2. Stand up: ensure stability during sit-to-stand motions and maintain stability during standing (B, S and D)
3. Walking task: Allow normal walking at reasonable speed in a natural way with 30% physical support (B, S and D)
4. Motion tasks: enhanced stability during turning and/or travelling movements indoors (S and D)
5. Assistance for bending to pick up objects from the floor (S and D)
6. Uneven terrain: automatic stability during movements outdoors on natural unstructured environments and

on soft ground such as grass (D)

7. Fast walking: ensure stability during fast travelling for exercising pet and self (D)

8. Localisation and navigation support: for Erik who, due to his mild cognitive impairment, sometimes gets confused/disorientated outdoors, the exoskeleton system will provide information on his current position and directions to return home by deploying the “homing function” via a secure and viable route (D)

9. Communication support: in case of emergency, communication capabilities will be included to raise alarms automatically with care agencies and/or ability to call relatives/friends for help (S and D)

10. Status monitoring: ability to monitor charge status to inform if battery low, and specific bio-sensors for monitoring of the person (eg, heart rate, blood sugar level if necessary) for raising alarms in emergency. (D)

UC 065-02: Mobility and safeguarding assistance services for people with dementia

General

| Name of Use Case | | | | |
|---|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 065 | - | - | Mobility and safeguarding assistance services for people with dementia | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Mobility Safeguarding Assistance Service with Community Functionality for People With Dementia (CONFIDENCE) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental, #key_enabling_technology:mobile_devices, #purpose:safety:orientation, | | | | |

| |
|--|
| #stakeholder:secondary:relatives, #stakeholder:secondary:doctors, #general_tasks:handling_stress, #relationships, #stakeholder:secondary:professional_care, #key_enabling_technology:communication_functions, #human_communication, #key_enabling_technology:body_area, #key_enabling_technology:ambient, #purpose:safety:alert_detection, #purpose:safety:fall_detection, |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|--|
| Narrative of Use Case |
| Complete Description |
| <p>Agnes H. (82) was confused. She was sure that there used to be a bus stop for the bus back to her home village, right at that corner! But now, she could not find it. In fact, nothing around her looked familiar. Agnes got nervous and a bit scared, and not knowing what to do, she picked up her mobile phone. Thank God, she always had her phone with her, as her daughter, Michaela (51) had urged her repeatedly to never leave the house without her mobile. She called her daughter who finally picked her up by car from a nearby café. Worried that it was something more serious, as her mother has shown repeated signs of memory loss over the past few weeks, Michaela took Agnes to their family doctor. There, she was diagnosed with dementia, nothing too serious yet, but enough for Michaela to worry that such an incidence might happen again while she was at work. Also Agnes herself felt insecure on whether to leave the house and as she was ashamed that she needed to bother her daughter again in case she got lost, she just stayed at home for the next couple of weeks. But neither Agnes nor Michaela, were happy with this situation. Agnes was missing her regular contacts with her friends, and Michaela worried about the once so active Agnes sitting at home all the time. So, they both decided to seek professional help and contacted the Hilfswerk, a local home care organisation in Salzburg.</p> <p>There Marianne (37), an employee at the Hilfswerk, informed Michaela about their new mobility safeguarding service CONFIDENCE: "You can view this as a security network that is only activated when a critical situation emerges. For cognitively impaired persons, CONFIDENCE provides different levels of assistance depending on the degree of orientation loss and the situational need." As Michaela immediately realised the advantages, i.e. offering security without restraining her mother in her daily activities, she signed up for the service. Now, if Agnes gets disoriented she only needs to click on a large symbol on the screen of her mobile phone, and will be immediately connected to a care person at the Hilfswerk, or if Michaela has time, she can also take over this task of helping Agnes via the mobile CONFIDENCE community server. In some cases when Michaela is at work and Agnes has a medical appointment in the city, Agnes can use the CONFIDENCE tracking service. Then, a responsible person from the community can follow Agnes on her way via an electronic map. In combination with the voice or video channel, the person can guide Agnes with voice instructions. One thing Agnes really appreciates is the possibility to plan her trip to less familiar places in advance, at home. She now knows, that somebody always knows where she is, at any point in time. This makes Agnes feel secure and makes her more confident to leave the house regularly, for daily errands or to meet her friends as she used to, in the past. Michaela, on the other hand, knows that she can expand the service as her mother's condition worsens with progressive dementia. In the future, her mother might use sensor equipment in her clothes or integrated in everyday appliances while continuously monitoring her location and automatically detecting risk situations (such as leaving a defined area or suffering a fall).</p> |

UC 067-02: Multimodal social journey planning with real time guidance

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 067 | - | - | Multimodal social journey planning with real time guidance | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Travel & Transport solutions through emotional-social NETworking (T&Tnet) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:mobile_devices, #purpose:safety:orientation, #mobility:transportation, #key_enabling_technology:questionnaires, #community:recreation, #relationships, #key_enabling_technology:communication_functions, #general_tasks:handling_stress, #localization:outdoor | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| Paul (who has 70 years old) from Norway is at home and wants to go to see his grandson playing a football |

match in another town. Paul wants to do it independently and trying the just acquired T&Tnet system, so he pushes the T&Tnet icon on his smartphone.

The first time T&Tnet application is used, it asks for user's preferences, so Paul chooses: max 30 min walking, no cycling, and use of train instead of bus or subway (where it is possible), avoid crowded transport means, no need to avoid architectural barriers, cannot use stairs, can use escalators and lifts, walking speed average, max 20 min waiting, route with the fewest changes, telephone number of caretakers and/or family, direction of navigation given only by demand or 1 minute before in a stretch change, navigation by voice... These preferences are saved in the system, but Paul has an option to change these through the smartphone application.

Afterwards, Paul has to enter the information related to the travel he plans. He can choose the origin and destination by an address, a favourite address or a place of interest, so he chooses travel from home (place of interest) to the stadium (place of interest) and he needs to arrive tomorrow at 11:00 with a leeway of 30 min, meet with friends on the route if it makes not to delay more than 15 min, not to inform careers or family (because he wants to give them a surprise) ... Then the system shows him the proposed route and let him know about the possibility of make a stretch walking with is friend Matthias, he accepts the route and the smartphone programs an alarm at time of departure (9:30).

Then someone has inserted an advice in the collaborative platform because a pavement is close for works, so the system calculates a new route avoiding this contingency and let Pauls know asking him to accept or deny the new proposed route.

A new day begins and the alarm sounds at 9:30, Paul grabs the smartphone and accepts to start with the travel. The system following his preferences gives him directions by voice in each stretch guiding him to the train station (this train station has lifts) in order to take the train 4 that arrives in platform 5th at 10:00. On his way to the train station the system changes a bit the route to make his meet with Matthias and walk together for 15 minutes. When Paul arrives to the train station, the system asks Paul about his felling to know if is advisable or not use this route for him, in that way the system and routes proposed will adapt Paul's feeling over time.

Then when Paul is at the station platform and the train arrives, the system indicates by voice to Paul about the event checking that he goes into the right train. The train is a bit crowded and when the application asks him about his feelings, he says that he is uncomfortable and when the application asks why, Pauls chooses crowded. If more people in different days have saying the same, the system knows that train 4 at 10:00 is usually crowded so this train will be avoided to users don't want to travel in crowed trains. When the train is about to arrives Paul's destination, the application informs Paul to allowing him to go to the train exit, and when detects the train is stopped at the train station informs Paul to leave the train.

Paul arrives to the neighbour town train station at 10:20, and the system detect that the train he has to take is delay more than 30 minutes, so it presents two option to Paul, walk for 10 min and take a bus (arriving at 10:55) or walk for 30 minutes (arriving at 10:50) (the system will select by default the second options due to Paul's preferences but give him the chance to decide). Paul chooses to walk for 30 min, so the system gives him the indications to arrive by voice each stretch.

Finally Paul arrives to the stadium without disturbing anyone and giving a surprise to his grandson. The system will collect all the information processed during the travel to make more optimum routes each time Paul uses the system.

UC 070-02: Travel planning and support tool for older adults

General

| Name of Use Case | | | |
|--------------------|-------------|----------|---|
| ID | Domain Role | Function | Name of Use Case |
| 070 | - | - | Travel planning and support tool for older adults |
| Version Management | | | |

| Changes / Version | Date | Name Author/Editor(s) or Committee | Approval Status draft, for comments, for voting, final |
|--|------------|--|---|
| 01 | 2013-09-03 | Eichelberg | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | Draft |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use |
| Aiding SuSustainable Independent Senior TrAvellers to Navigate in Towns (ASSISTANT) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| In preparation | | | |
| Generic, Regional or National Relation | | | |
| - | | | |
| Further Keywords for Classification | | | |
| #stakeholder:secondary:relatives, #key_enabling_technology:mobile_devices, #purpose:safety:orientation, #community:recreation, #purpose:safety:alert_communication, #mobility:transportation, #localization:outdoor, #key_enabling_technology:communication_functions, #key_enabling_technology:ambient | | | |
| Scope and Objectives of Use Case | | | |
| - | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Learning: Amy (76) has just received the ASSISTANT system as a gift from her daughter, Anne (34). Anne and Amy went to the ASSISTANT website and followed the step-by-step instructions for installing ASSISTANT to her PC and smartphone. The website coached her through setting up ASSISTANT on her smartphone, allowing her to use it as a Personal Navigation Device (PND). Amy was apprehensive about the new smartphone, with all its unfamiliar controls and tiny screen; however, the website showed her how ASSISTANT took all the confusing menus and icons off the screen and replaced them with large, easy-to-read, pushbutton controls. It advised her that she could try ASSISTANT out before filling in any of the special user preferences, like how to help if she were to get lost, or how to configure the controls and prompts, which she could do later.</p> <p>Planning: Amy decided her first trip would be to the botanical garden. She starts up her PC and calls the ASSISTANT route editor web site for her city. She only needs a web browser and the address of the ASSISTANT route editor application. The application offers her an interface similar to that of Google or Bing</p> |

Maps, where she can enter the date of the journey, her start address and the destination, her preferences (Amy does not like to walk long distances at transfer points) and other information for her profile, (Anne's phone number as the emergency number), which only had to be entered once. So, using the route editor, she typed in the botanical garden's name, and ASSISTANT showed her a map of the city, centred on the garden, which she accepted. Amy put her PND near the PC when she was prompted to, and ASSISTANT loaded the guidance for the chosen route, as well as for routes supporting returning home from any waypoint. Later, further route loading to the PND would update route information for most frequently used destinations, which she could access at any time in her travels, giving her flexibility and the ability to change or add destinations whilst on the move, without needing to use the PC.

Usage in transit: Later that morning, just before the time she told ASSISTANT she wanted to leave, her phone vibrated and played the ASSISTANT alert tones to let her know that she needed to be at the bus stop soon, to catch the bus. Amy got on her bus, checking to make sure the bus matched the one on her PND. When she got close to the bus stop at which she needed to transfer, she was so engrossed in her reading that she missed its initial vibrating alert, but it caught her attention when it played its ASSISTANT 'off track' melody. She looked at the PND screen and pushed the 'get me back on track' button – and the PND told her to get off at the next stop and walk back to her correct transfer bus stop. She walked back, and when she got within five metres of the correct bus stop, the PND played the ASSISTANT 'back on track' song while showing on the screen a 'you are back on track' logo, and information about when the next transfer bus would be due. Amy successfully got to the garden and, when she selected the return route on her PND, it got her home safely.

UC 071-03: Assistive systems for people with mild hearing loss

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 071 | - | - | Assistive systems for people with mild hearing loss | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Marco Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-05-25 | Sylvie Sevestre Ghalila | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Age Sensitive ICT Systems for Intelligible City For All (I'CityForAll) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in | | | | |

| preparation, visionary ...) |
|---|
| Visionary |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #sensory:hearing, #purpose:safety:orientation, #general_tasks:daily_routine, #mobility:transportation, #general_tasks:handling_stress, #relationships, #community:recreation, #key_enabling_technology:communication_functions, #key_enabling_technology:ambient, #localization:outdoor |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>My next-door neighbor, Michèle, 68, who lives alone, told me of her misadventures. Yesterday, as usual she went by car to her physiotherapist who is 5 minutes from home. She did not hear on time an ambulance siren coming behind her, she believed that it was coming in front so she took time to react. She was afraid and fell back sharply to the right. The car's wing was badly damaged and it was towed for repair.</p> <p>She is frustrated because she has to pick up her grandchildren at the station at noon, her insurance would not bring her an alternate car until 3pm. In fact, my doctor explained to me that with age, the progressive loss of high frequency changes the speech intelligibility but also my appreciation of distance and location of sound sources such as an alarm. This explains the mobility-related security issues that affect presbycusis peoples. I shared this with my friend Michèle who teased me because men are more affected than women by this hearing impairment.</p> <p>Michele and I, like 75% of people of our age are suffering from mild presbycusis, and do not wear hearing impairment aids. This affects our everyday lives; indeed, taking the subway, the train, or orienting ourselves in the hubbub of a station or a supermarket, gradually becomes a source of stress, oftentimes unsafe for us and others, which can end up in a misadventure. In short, daily tasks progressively challenge our audio cognitive capabilities.</p> <p>She decided to take metro. She has one transfer to make at the station "Place of January 14." Michèle counts the metro stops before getting to this station. For almost 10 years now, she no longer pays attention to the announcements delivered by the loudspeakers because they are absolutely unintelligible to her. At that time of day, the train wagon is packed, the alarm signaling the door closing is barely audible, and she gets out just in time. Michèle has always felt the need for the Department of Transportation to change and adapt its ringtones and alarms for the elderly persons. She will have to speak again of these issues to the Association "Intelligible City for All" to which she belongs. A re-adjustment and new labeling are needed given that more and more people are affected. Michèle finally arrived at the station where she felt most fearful. In the hall, she tried to understand the messages of the station's loudspeakers that seem to announce a delay of her next train, now she is not sure given the noisy environment.</p> <p>Finally, she found her grandchildren after having reached the right platform. Since they still had time before going home, she took her grandchildren to the nearby city museum where there was an Exhibition on the "gold diggers in AALY" which ends that day.</p> <p>It is 6 pm, Michèle ears a ringing in the distance. She gets annoyed because she didn't realize that it is her own portable ringing. She found out it too late ... but nothing serious ... Michèle's daughter was checking on her and her children reminding them of picking her up at the airport on Sunday...</p> |

It was ridiculous to get upset during the day : “we are not old at 70 ... but just presbyacusics”. Technical solutions which will “open” the city as intelligible for all, should exist.

UC 072-02: Physical mobility assistance platforms

General

| Name of Use Case | | | | |
|---|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 072 | - | - | Physical mobility assistance platforms | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Marco Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Assistants for Safe Mobility (ASSAM) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental, #purpose:safety:orientation, #neuromusculoskeletal:movement, #mobility:walking, #key_enabling_technology:mobile_devices, #purpose:safety:fall_detection, #purpose:safety:alert_communication, #stakeholder:secondary:professional_care, #key_enabling_technology:robotic, #key_enabling_technology:questionnaires, #key_enabling_technology:health_information, #relationships, #domestic_life:shopping, #self_care:looking_after_ones_health, #neuromusculoskeletal:joints_and_bones, #sensory:seeing, #general_tasks:handling_stress, #community:recreation, #key_enabling_technology:communication_functions, #stakeholder:secondary:emergency_call_services | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|-----------------------|
| |

| Complete Description | |
|---|--|
| <p>Mr. Miller (79) forgets things from time to time! The other day, after visiting his friend Ms. Brown at the Retirement Residence where both of their apartments are located, he could not find his way back to his own apartment and had to ask Mr. Smith for directions; imagine what rumours might start spreading about how Mr. Miller is getting old! From time to time, Mr. Miller also has days where his strength fails him and he is in danger of stumbling and falling. It therefore felt like a small miracle when, the other day, the head of the Residence presented him with an intelligent walker for his own personal use. It does not just help him walk safely, but is also able to guide him along his preferred routes to any place of his choosing in the Residence (and take him back afterwards), even outdoors in the park where the trees have that worrying tendency to all look the same. The walker always knows where they are, meaning he can never actually get lost. It was only the other day, when he had been taking a nice walk, that his daughter's call interrupted his train of thought, meaning that afterwards he could not remember exactly where he was. The walker will even connect him to the nice people at the call centre if he needs directions or (hopefully never!) actually falls down.</p> <p>Mr. Miller has decided to call his new little helper "Max." Max is almost like a friend to him, as he can talk to him and he will answer, giving advice, asking questions to clarify what he actually wants, or even occasionally taking the initiative and reminding him to visit Ms. Brown at 5 o'clock as promised. And when his preferred path through the park was blocked by a fallen tree last week, Max showed him a new path he had never used before in order to avoid the obstruction and still reach the nice pavilion near the lake he was heading for. Max is also very helpful in the shopping mall next to the Residence. It is very confusing there, as the shops seem to come and go every few months, it seems. Max guides him to the correct items and even goes to the trouble of computing a nice itinerary for him based on the shopping list they compiled before-hand, so he does not have to walk around unnecessarily (especially as his knee is playing up again today!). Max also reminds him not to forget anything; perhaps he will be able to guide to the correct items (all packs rather look alike, and he forgot his glasses today).</p> <p>Mr. Miller is definitely going to recommend Max to Ms. Brown. She can see less and less every day now, and as she had a bad fall already, she needs a walker anyway. As it is now, she does not visit him any more since she is afraid of knocking things over in his apartment; in fact she almost always stays at home. Wouldn't it be nice to share excursions in the park, with Max and Moritz as guides?</p> | |

UC 075-02: Recognition of Depressive Episodes

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 075 | - | - | Recognition of Depressive Episodes | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Helmer | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ALADDIN D2.1 User | - | | Public (permission to publish the use case | |

| | | |
|--|--|-------------------------------------|
| Requirements (D2.1_User Requirements_v1.0_ FINAL.pdf) (AAL-JP Call 1) | | received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #mental, #key_enabling_technology:ambient, #general_tasks:daily_routine, #purpose:safety:alert_detection, #purpose:safety:alert_communication, #stakeholder:secondary:doctors, #stakeholder:secondary:professional_care, #purpose:safety:disease_detection, #purpose:safety:disease_prevention | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| Szenario does not include a functional description of the AAL-System. |
| Complete Description |
| Alzheimer disease patient at the early phase of the illness. A relatively autonomous level is still present. He is under pharmacologic treatment with donepezil. The daily monitoring system reveals an increase in mood cluster items above the signal threshold. The clinician receives an alarm and calls the caregiver for a consultation. During the consultation a depressive syndrome is present and the clinician prescribes sertraline 50 mg at bedtime. The following days and weeks the mood cluster slowly returns to normality and the treatment is discontinued after 2 months. The early intervention most probably avoided the occurrence of a full blown depressive state with medical complications of dehydration, weight loss and the need of hospitalization for treatment. |

UC 076-02: Recognition of early cognitive deterioration (2013-09-04)

General

| Name of Use Case | | | | |
|--------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 076 | - | - | Recognition of early cognitive deterioration | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Helmer | | Initial |

| | | | | |
|---|------------|------------------|--|-------|
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ALADDIN D2.1 User Requirements (D2.1_User Requirements_v1.0_FINAL.pdf) (AAL-JP Call 1) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental, #stakeholder:secondary:doctors, #stakeholder:secondary:professional_care, #key_enabling_technology:questionnaires, #purpose:safety:disease_prevention, #purpose:safety:disease_detection | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Szenario does not include a functional description of the AAL-System. |
| Complete Description |
| <p>A mild Alzheimer Disease patient with almost complete functioning (MMSE=22) and no treatment presents a rapid decline in cognitive cluster items alerting the clinician. At the consultation requested by the clinician, deterioration from previous status is observed. The clinician suggests donepezil treatment explaining to the caregiver to write in the free text area any abnormal aspect that could be observed in the following days. Cognitive status is then stable in the following months but a loss of weight and reduction of blood pressure is observed despite no other communication from the caregiver. The clinician observes the electronic record and notes that the patient is taking also propranolol 40 mg x 2 a day for hypertension, he suspects a depressogenic effect of propranolol and calls them. At the consultation a mild depressive episode is observed. Propranolol is modified to pindolol 5 mg twice a day and Citalopram 10 mg is prescribed with stable improvement of the depressive and vegetative status.</p> <p>In this case vignette, early cognitive deterioration has been observed and the early intervention prevented a wider deterioration with possible patient and caregiver burden. Following, an initial, partially iatrogenic, depression has been treated early also avoiding further complications.</p> |

UC 077-03: Travel planning and support tool for older adults

General

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|-------------------------|
| Name of Use Case |
|-------------------------|

| ID | Domain Role | Function | Name of Use Case | |
|--|-------------|--|--|---|
| 077 | - | - | Travel planning and support tool for older adults | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Marco Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-05-28 | Isabel Karlhuber | | Revised text |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Residential & outdoor services advancing the mobility of older persons (MOBILE.OLD) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #relationships, #mobility:transportation, #key_enabling_technology:ambient, #key_enabling_technology:mobile_devices, #purpose:safety:orientation, #key_enabling_technology:games, #self_care:looking_after_ones_health, #self_care:eating, #stakeholder:secondary:relatives, #key_enabling_technology:communication_functions, #human_communication, #localization:indoor, #localization:outdoor | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| The older person wants to plan his/her travel to Madrid in Spain. S/he is launching the "MOBILE.INSIGHT" application on the Tablet in order to cruise interactively through the city, its famous sights and cultural goods. The "MOBILE.CHECKLIST" application helps the elder in order to pack his/her suitcase. Afterwards |

s/he is assessing the “MOBILE.NEWS” through the TV-set and gets informed about potential strikes in public transportation, trains, airports etc. or constructions works that could possibly cause problems to relevant transportation means. Later s/he uses the “MOBILE.TRIP” service through the TV-set and gets guidelines about his/her travel plan. These guidelines are automatically submitted to his/her Smartphone when being mobile. If for instance the place to visit requires significant transportation on foot, s/he can use the “MOBILE.TRAINING” service over the TV-set in order to get some physical exercises to increase his/her physical status. When being mobile, using the “MOBILE.ACTIVITY” service over his/her Smartphone, s/he can track his/her route, distance and speed. When the “MOBILE.SECURITY” service is active over his/her Smartphone, his/her family members could provide remote assistance and support in cases of being lost. Using the “MOBILE.COMPASS” service through the Smartphone, s/he gets specific orientation and guidance assistance based on his/her current position. Within the help of the “MOBILE.QUIZ” application the senior can discover interesting POIs, which are composed automatically depending on his/her GPS position. When coming back from his/her travel, s/he can use the “MOBILE.ACTIVITY” service through the TV-set in order to look at the covered route on a map and share his/her experience with other people.

UC 078-02: Personalized assistant for public transport and navigation for older adults with or without cognitive impairment

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 078 | - | - | Personalized assistant for public transport and navigation for older adults with or without cognitive impairment | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Platform for Stimulation of Physical and Mental Activity of Older Adults (HappyWalker) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| In preparation | | | | |
| Generic, Regional or National Relation | | | | |

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|---|
| - |
| Further Keywords for Classification |
| #general_tasks:handling_stress, #mobility:transportation, #purpose:safety:orientation, #digestive:metabolism, #key_enabling_technology:health_information, #self_care:looking_after_ones_health, #general_tasks:daily_routine, #stakeholder:secondary:professional_care, #key_enabling_technology:communication_functions, #human_communication, #mental, #key_enabling_technology:body_area, #purpose:safety:alert_communication, #stakeholder:secondary:relatives, #key_enabling_technology:mobile_devices, #purpose:safety:fall_detection, #mobility:walking, #key_enabling_technology:environmental_parameters, #stakeholder:secondary:emergency_call_services, #relationships, #community:recreation |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
| Complete Description |
| <p>Mrs Watson is 73 years old. She experiences some mild physical problems, but she is still an active woman and she lives by herself. Mrs Watson likes to go out using public transport, but in the last years she feels insecure about it. It is complicated for her to find the right bus or train in time, especially when a train is delayed and her travel plan has to be changed. Recently Mrs Watson bought the “Happy Walker” system. On this system she can install services that help her to be mobile. It works very easy and intuitive, and can be adapted to Mrs Watson’s situation, even if her situation changes over the years. The first service Mrs Watson has installed on her “Happy Walker” is the Personal Assistant for Public Transport. This assistant helps Mrs Watson when she is using public transport and provides her with context aware information. For example the best travel options, the best route to walk to the bus stop and the alternative routes when a train is delayed, all in a very simple and intuitive way.</p> <p>As the years progress, Mrs Watson gets more physical problems and also suffers from diabetes. The specialist that is treating Mrs Watson helped her to install the HealthCoach service on her “Happy Walker” device. This service helps Mrs Watson to improve her lifestyle. For this, the system provides Mrs Watson with context aware advice on a healthy lifestyle and self-management, it provides her with a personalized training schedule (for example walking routes) and gives her feedback on her daily (physical) activity level. It is also possible to open a video connection with a care professional for real-time support.</p> <p>A few years later, Mrs Watson notices some cognitive problems. She gets confused and disoriented more easily when something unexpected happens. This makes her feel insecure when going out. The homecare organization helps her to install the Navigator service on the “Happy Walker”. For this purpose she uses a special stylish wristwatch. The service is location-aware and allows leaving markers with personal information and directions at specific locations. It helps her to find her way home (by a map and by voice instructions). When she needs help or in emergency situations, she can press the alarm button. Immediately her son David is alerted and a map on his mobile phone shows Mrs Watson’s position. This also happens automatically when the system detects that Mrs Watson makes a fall. For David it is a reassuring idea that the system guards over his mother and Mrs Watson is happy that this system enables her to go out safely.</p> <p>Other services Mrs Watson could consider to use:</p> <ul style="list-style-type: none"> - The Smart Route service helps to find an accessible and friendly walking route for people with mobility |

problems.

- The Scooter Guardian service, helps users of mobility scooters to plan the safest route according to the characteristic of the scooter. Besides that, the system integrates emergency call functionality with position tracking, next to the contextual information about battery power, the weather and the condition of the road.
- The Community Calendar service provides information about activities and workshops in the neighborhood to stimulate users to get out of their houses and meet new people.

UC 079-03: Fall prevention and rehabilitation with excercises through serious games

General

| Name of Use Case | | | | |
|--|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 079 | - | - | Fall prevention and rehabilitation with excercises through serious games | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Marco Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-05-02 | Antonio Remartinez | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Game-based mobility training and motivation of senior citizens (GameUp) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| In preparation | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:joints_and_bones, #general_tasks:handling_stress, #mobility:walking, #neuromusculoskeletal:movement, #stakeholder:secondary:doctors, #stakeholder:secondary:professional_care, #key_enabling_technology:health_information, #self_care:looking_after_ones_health, #relationships, #stakeholder:secondary:relatives, #purpose:safety:disease_rehabilitation, #key_enabling_technology:ambient, #key_enabling_technology:body_area, #key_enabling_technology:games, | | | | |

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|--|
| #key_enabling_technology:communication_functions, #human_communication, #key_enabling_technology:mobile_devices |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
| Complete Description |
| <p>One year ago Anna (65) tripped over a curb, as she wanted to cross a street and broke her right hip. She was then operated and was hospitalized for two weeks until she was able to walk with crutches. The fall made her much more afraid of walking and moving around, which in turn has made her physical strength deteriorate rapidly, and she developed serious mobility problems. Nowadays, she can walk around in her flat but is very much afraid of leaving the home alone because she is afraid of falling again and not having anybody to help her. She realized that she had to do something in order to improve her situation. Her doctor told her to exercise at home to strengthen her legs and improve her balance. She had finished postoperative physiotherapy and had been given a leaflet instructing strengthening and balance exercises. However, these exercises were pretty boring and she lacked the motivation to train alone at home. She also became ashamed about her fear of falling and wanted to talk to others about her fears. She knew from her doctor that her municipality offered balance classes three times per week for one hour. However, due to her mobility problems it was really difficult for her to attend these classes and to meet others with the same problems. She finally found a relative who could bring her to the training centre every second week and she joined a balance class.</p> <p>The training centre was a member of the GameUp project. They offered Anna a fun and social GameUp training program that she could do from home. The training instructor did a Mini Mental test and a Berg Balance test on Anna, and then he used the professional portal to register Anna as a new user. He set up a training program with exercise exergames in sequence tailored for Anna's needs. He also put her in a group with similar balance problems and registered that she wanted to use the social functions in the GameUp system.</p> <p>Anna is running the GameUp program on her own TV (that is attached to a small PC and a Kinect motion sensor). She just starts a PC connected to the TV that was installed by one of the project participants. The program is based on serious games so they are fun to perform, but has the exercises that she is recommended by her physiotherapist. Using the Kinect motion sensor she has to do some personalized exercise exergames, designed to strengthen her legs and challenging her balance while controlling the exergame. She uses to play the apple picking exergame as her own reward after the exercise exergames. Each of the exergames gives her motivational feedback, and when she reaches her personal goals she gets game rewards. In addition to the indoor Kinect exergames, she also has the outdoor walking exergame where a Fitbit step counter is used. During Anna's day, the Fitbit automatically and autonomously records how many steps she walks and how many stairs she climbs (height meters). The recorded data is automatically uploaded when the Fitbit is near the PC or when it is placed in its charger. Using a tablet, or Smartphone, she can see how well she is performing in relation with her own personal exercise goals. The training instructor at the training centre can also show her the progress. What she likes the most is the social walking exergame, where she, together with her new group friends, has to reach a group goal of moving outside their homes. Their current social goal is to walk from their hometown to a neighbouring city, which is about 100km away. On her own, the goal is too ambitious for Anna, but since she is in a group, all steps from all group members contribute to reaching the goal. This way, everyone in the group contributes, independent on whether they only walk in their home, or can go for long walks. The group also has a goal of virtually climbing a nearby mountain, by collaboratively climbing an amount of stairs correspondent with the height of the mountain. Anna receives motivational messages and tips from the game, when checking her</p> |

walking exergame progress on the tablet. She could choose to let her peers see positive test results and cheer for the group, which in turn would motivate them. It is the training instructor via the professional portal who has put her in a social group and defined their common social goal. Luckily, the GameUp program provides not only exercises but also automatic testing where she can check her progress, and she always gets positive feedback when reaching her personal goals. She found this very encouraging.

Anna meets the training instructor at the training centre every second week, to follow up her progress. He uses the professional portal and shows her results. She was always looking forward to the next overview to see her progress. She noticed that she now was able to perform more exercises without holding on as she became much less afraid of falling. After 3 months the training instructor told her that she could upgrade to a new physical training level, she agreed and he registered this in the professional portal. Anna is very glad that she agreed to join the fun and social training program. Now she looks forward to all the scheduled home exercise session and to train together with her new group friends. She even has started to walk outside with two new friends she met in the training program.

UC 081-02: Travel planning and support tool for blind users

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 081 | - | - | Travel planning and support tool for blind users | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Assistance for Better Mobility and Improved Cognition of Elderly Blind and Visually Impaired (ALICE) Project Proposal (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |

| Further Keywords for Classification |
|---|
| #sensory:seeing, #key_enabling_technology:mobile_devices, #purpose:safety:orientation, #stakeholder:secondary:professional_care, #relationships, #key_enabling_technology:communication_functions, #mobility:transportation, #purpose:safety:alert_detection, #purpose:safety:alert_communication |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
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| Complete Description |
| <p>Jim, who is blind, wears an Alice device which is specifically designed and well-suited to blind people. He has a smart phone equipped with additional sensors and a processing unit in his back-pack. Alice can lead him along the paths which were recorded by his carers, so he can go for a walk in the park, visit his friend John etc.. One day Jim got lost because the bus driver forgot to tell him when he had to get off the bus. He did not know where he was and how to return home. He spoke to Alice and said "lead me home". Alice determined his location through the GPS signal and on the map of the city found the closest bus station for return. Then it led Jim to the bus station by notifying him with synthesised voice where he had to turn and alerting him before the cross-roads, Alice also alerted Jim when a car was approaching or a cyclist, where obstacles were on the road etc. On his way back Jim got tired when passing the park in the neighbourhood of his home. Alice notified him that there was a bench with one person sitting there. Jim approached the bench and asked the person if he could sit, too. At the very moment when he was close to this person Alice said to Jim "this is John", since it can recognise people that were previously introduced to Alice. Jim and John were happy to meet each other and had great chat about their adventures. Jim told John that next time when taking the bus he would rather switch on Alice to notify him where he has to get off instead of relying on the bus driver.</p> |

UC 084-03: Navigation support tool for older adults with cognitive impairment

General

| Name of Use Case | | | | |
|--------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 084 | - | - | Navigation support tool for older adults with cognitive impairment | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-05-22 | Wilko Heuten | | Update |

| Basic Information to Use Case | | |
|---|------|--|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| Navigation Support for Older Travellers with Memory Decline (NavMem) Project Proposal (AAL-JP Call 4) | - | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #vital:cardiovascular, #stakeholder:secondary:doctors, #mental, #purpose:safety:orientation, #stakeholder:secondary:relatives, #general_tasks:handling_stress, #relationships, #mobility:transportation, #key_enabling_technology:mobile_devices, #key_enabling_technology:communication_functions, #localization:outdoor, #human_communication | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Michael has just celebrated his 67 birthday. A few weeks ago he suffered from a stroke, but now has returned from hospital. Physically he is perfectly in shape and is still able to live an independent life. However, since his stroke he repeatedly experienced disorientation events, where he was not able to remember where he was and what he was doing. For most situations he developed little tools, such as adding pictures to his address book or telling his wife what he is going to do, so that he could ask her when needed. However, becoming disoriented outside when being alone is a severe problem. The fear to get lost particularly when visiting an environment, which he does not know or which he visits only occasionally is too present and he decides more frequently to stay at home or visit places nearby and well known. He also tried to use different off-the-shelf navigation systems, hoping that the navigation instructions would resolve the disorientation; however these are not working well for him. The maps and continuous turning instructions turned out to be too obtrusive and annoying, as he is still able to navigate by himself most of the time. Further, he is afraid that in an event of disorientation the map will not be clear enough for him to recover. The NavMem navigation system has been specifically designed to overcome these limitations. Receiving an invitation for dinner at his daughter's new house, Michael decides to use NavMem to get there. Having left the bus, the system starts indicating the direction of his daughter's house. While keeping the device in the pocket the system continuously provides this information unobtrusively and invisibly to others via vibro-tactile cues. Michael particularly likes that no other traffic participant has a clue that he is using a smartphone application at all. Suddenly he experiences a disorientation event. He wonders whether he is still on the right track. Being heavily stressed by the situation he uses the device to try to orient himself again. In addition to a map presenting his route and current location, the NavMem system provides Michael</p> |

with visual cues to landmarks in the environment along the route and an indication how to reach these step by step. The landmarks help him to remember where he is on the route and increase the feeling of safety and comfort. This time Michael was able to resolve the orientation challenge, but he knows there might be situation, when he will need more personal help. Thanks to the integrated help function in the NavMem system, he will be able to easily call for help. The called person will receive a map showing where Michael is located and will be supported to either guide Michael to a secure location by providing verbal instructions over the phone or to pick him up where he currently stands.

UC 086-02: Recognition of Aggressive Episodes

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 086 | - | - | Recognition of Aggressive Episodes | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Helmer | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ALADDIN D2.1 User Requirements (D2.1_User Requirements_v1.0_FINAL.pdf) (AAL-JP Call 1) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental, #stakeholder:secondary:professional_care, #vital:cardiovascular, #stakeholder:secondary:doctors, #stakeholder:secondary:relatives, #purpose:safety:disease_prevention, #purpose:safety:disease_detection | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| Szenario does not include a functional description of the AAL-System. |
| Complete Description |
| <p>Mixed dementia patient in a moderately severe clinical status. Autonomy is compromised and the patient is followed by caregivers and a professional figure. The patient is treated with risperidone 0.5 mg for previous episodes of aggressiveness on a delusional basis. The prescription has been made with informed consent about the risk of stroke. A rapid further increase above threshold of aggressive cluster gives signal to the clinician that calls the caregiver for a consultation. At the consultation an increase in delusional thoughts is observed. The dose of risperidone is increased to 2 mg day. The following weeks show an amelioration of the psychotic aspects but an increase in falls above threshold. Again the clinician calls the caregiver for a consultation and in the evaluation at the clinician office he reduces the dose of risperidone to 1 mg. The follow up does not report other abnormalities.</p> <p>The procedure prevented a possible worsening of the psychotic symptomatology with behaviourally dangerous consequences, and then the prompt reduction of the dose avoided the risk of multiple falls increasing the risk of fractures.</p> |

UC 089-02: Multimedia system for people with dementia

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 089 | - | - | Multimedia system for people with dementia | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Multimedia technology for independence and participation for people with dementia (MYLIFE) Project Proposal (AAL-JP Call 3) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |

| Further Keywords for Classification |
|--|
| #stakeholder:secondary:emergency_call_services, #stakeholder:secondary:relatives, #key_enabling_technology:communication_functions, #sensory:seeing, #general_tasks:daily_routine |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Wolfgang prepared coffee and biscuits for the weekly visit by a volunteer friend, from the Red Cross. This was easy to “remember”, thanks to MYLIFE. Afterwards, he wanted to see a John Wayne film, readily available in MYLIFE. Wolfgang can easily switch between different modes of entertainment. One of his favourites is the photo-album showing pictures from his working-life during the 60's. Wolfgang's son-in-law fed the pictures into MYLIFE via the Internet-service Picasa. Wolfgang suffers from loss of sight. Therefore, all text items are read aloud. Wolfgang's daughter turned this feature on for a month ago, together with a high-contrast option. Sometimes, Wolfgang needs a bit of help. Three family members receive an SMS when he pushes the Help-button, and it usually takes just some minutes before at least one of them gives him a call. |

UC 091-02: Behaviour monitoring and emergency detection through vision sensor

General

| Name of Use Case | | | | |
|--|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 091 | - | - | Behaviour monitoring and emergency detection through vision sensor | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fear Elimination As Resolution for Loosing Elderly's Substantial Sorrows (FEARLESS) Project Proposal (AAL-JP | - | | Public (permission to publish the use case received from the original authors) | |

| | | |
|--|--|--|
| Call 3) | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Realized in demonstration project | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #relationships, #self_care:eating, #mental, #stakeholder:secondary:relatives, #stakeholder:secondary:professional_care, #general_tasks:handling_stress, #self_care:toileting, #key_enabling_technology:ambient, #localization:indoor, #purpose:safety:fall_detection, #purpose:safety:alert_detection, #purpose:safety:alert_communication | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Inez Fernandez (74) lives in Ugena, a small town about 40 minutes by car from Madrid. Since her husband Roberto died due to prostate cancer at the age of 82 about two years ago, she misses the talks to him very much. Formerly she loved to cook for Roberto at least once a day, but since his death she does not like to cook anymore as she has to eat on her own. At least, that's the story, she tells her son Alejandro. But between ourselves, her fear of burning down her house because of a forgotten hotplate is the real issue why she tries to avoid cooking – but she would never tell this Alejandro. It does not matter if she is just looking for her glasses or if she forgets to turn off the hotplate: on some days she is able to remember everything easily, on others it's much harder. As she cared for her husband many years, she got aware of all the smaller and bigger problems aging can cause. Her husband usually fell about once a month and often was not able to get up again on his own. Since his death, she always hoped that she will never fall as she is afraid of not being able to get up again. So she spends most of the time watching TV and gets her food by a local care giver organization – which, honestly spoken, tastes awful. Sometimes she feels a little bit queasy even while going to the toilet. But she does not want to admit these facts and tries to hide them as well as possible, as she is afraid of being sent to a home for the elderly by her son.</p> <p>Last Thursday, Mrs. Fernandez' dishwasher broke down. So she called Mr. Sánchez who also lives in Ugena and has been working as electrician for about 30 years. The following day he came to fix it and afterwards, both drank a cup of tea and talked about getting older and forgetful. Mr. Sánchez told her about a new system called FEARLESS, he has heard from the countryside network of electricians. As he told her all the benefits of this system she was very interested but got a little bit sad because she does not have a lot of savings. She spent most of her savings for her husband's funeral because she wanted to have a special funeral for the man she spent most of her life with.</p> <p>But Mr. Sánchez told her, that this system does not cost that much nor does it require big structural alteration works. So she decided to ask Mr. Sánchez to install this new system in her house. He was finished within only one hour and she only noticed a few small inconsiderable boxes distributed in her house. These boxes were placed in her house to ensure her safety at the whole house.</p> <p>But these small inconsiderable boxes had a big impact on her life: now she spends more time in the kitchen than ever before. Sometimes she still forgets to turn off the plate, but if it is getting dangerous, FEARLESS will take all necessary actions to protect her. She is not afraid of going to the toilet anymore, as these small boxes would send immediate help if she falls – just in case. After a few weeks she experienced that she</p> |

feels much better and she has much more energy and joy. And tomorrow her son will visit her. Therefore she will go the grocery store around the corner to buy some rice and then she will cook her famous Paella – just like in the olden days!

UC 092-03: Medication management, social integration and emergency detection

General

| Name of Use Case | | | | |
|--|-------------|------------------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 092 | - | - | Medication management, social integration and emergency detection | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Marco Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2014-05-09 | Jesús Fernández | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Secure Active Aging: Participation and Health for the Old People (SAAPHO) Project Proposal (AAL-JP Call 3) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #stakeholder:secondary:doctors, #stakeholder:secondary:relatives, #mobility:walking, #self_care:looking_after_ones_health, #key_enabling_technology:communication_functions, #key_enabling_technology:body_area, #key_enabling_technology:health_information, #key_enabling_technology:communication_functions, #human_communication, #key_enabling_technology:games, #purpose:safety:alert_detection, #purpose:safety:alert_communication, #general_tasks:handling_stress, #general_tasks:daily_routine | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case | |
|---|--|
| | |
| Complete Description | |
| <p>Mrs Smith is over 65 years old and lives in her own since the death of her husband 4 years ago. She has two daughters, Sally and Catherine, but they are not living with Mrs. Smith. Although they visit her frequently, Mrs. Smith would like to be as autonomous and secure as possible and, what is more important for her as she grows older, make sure that she is provided with the best healthcare. Her doctor always advises about her high blood pressure and weight. He recommends her to move and be as physically active as possible to keep her healthy. She spends most of her time at home in her own because she is not able to walk long distances. In case of a fire or intrusion, Mrs Smith may have difficulties to contact quickly the emergency services.</p> <p>From the moment when Mrs Smith started to use SAAPHO for the first time her life changed completely. She does not forget to take care of her health thanks to a simple to use and proactive services of SAAPHO. She can autonomously and from her place take her blood pressure or measure her weight. Also she gets advised wether to attend to doctor when some of the measurements were not appropriated thanks to the real feedback and recommendations raised by the SAAPHO health services. Or she manually can check the historical evolution of her measurements thanks to the visual graphs.</p> <p>At the same time, Mrs Smith also carries a small autonomous step counter that measures his physical activity. Mrs Smith can follow up her activity levels by her own and show them to his relatives and doctors; She can train herself according to the health habits advices she receives from SAAPHO. In addition, she is able to talk to and see her daughters who live far through a simple and easy user experience. She takes advantage of the webcams and picture sharing tools which shows her how her grandchildren are growing. She even read her mails or check the news of the day and feels more mentally active. Moreover she feels safe and protected thanks to the embedded Ambient Intelligence functionalities in SAAPHO that will alert her in case of a 'real' gas escape, will not bother her in case of a false alarm, will adapt to the digital appliances she has and the specific context environment she lives in.</p> | |

UC 109-02: Behavior monitoring, assistance and communication using a Smart TV platform

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 109 | - | - | Behavior monitoring, assistance and communication using a Smart TV platform | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-04 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|---|---|---|
| CARE services advancing the social interaction, health wellness and wellbeing of elderly people AT HOME (CARE@HOME) Project Proposal (AAL-JP Call 3) | - | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #sensory:pain, #key_enabling_technology:ambient, #localization:indoor, #stakeholder:secondary:doctors, #purpose:comfort:lighting, #purpose:safety:orientation, #self_care:drinking, #domestic_life:shopping, #key_enabling_technology:home_automation, #key_enabling_technology:communication_functions, #relationships, #human_communication, #key_enabling_technology:body_area, #stakeholder:secondary:relatives, #purpose:security:access_control, #key_enabling_technology:telemedicine, #self_care:eating, #key_enabling_technology:health_information, #key_enabling_technology:mobile_devices | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>It is 2:00 o'clock in the morning. Suddenly Ms. Smith wakes up with a pain in the shoulder. Since the death of her husband she has been sleeping restlessly. The sensors in the bed have reported this disturbed sleep pattern and Ms. Smith's doctor has given her a prescription for a new drug that should improve the quality of her night rest. Although the CARE@HOME system has confirmed that Ms. Smith is compliant in taking the drug, the sleeping patterns identified by the bed have alarmed the doctor that the drug might not be working well for Ms. Smith. In the mean time, the bed has detected that Ms. Smith needs some intake of water. The CARE@HOME system has illuminated the floor lights in the room and corridor so that Ms. Smith can safely find her way to the kitchen. Using blue light in the corridor, Ms. Smith can walk towards the kitchen without waking up completely. In the kitchen focused lights mark the way towards the cups and fridge. As she takes the last bottle of water out of the fridge, the CARE@HOME system marks that this was the last bottle of water in the house. Since Ms. Smith has had some problems with shopping, the CARE@HOME system automatically adds some new bottles of water to the supply list (service on the NetTV). After having a drink, Ms. Smith returns to her bedroom. As she walks through the living room she notices that a small picture frame of her youngest grandchild is emitting some glowing light. Looks like at least the little Andrew is having a good night sleep! In the morning Ms. Smith eventually went into deep sleep. The wake-up system notices and checks Ms. Smith appointments for this morning, which concerns a video visit to her doctor. Therefore, the wake-up system (service NetTV) decides to leave her asleep and starts gently waking her up with her favorite music from her NetTV radiostation 'nostalgia' The system (NetTV) apologizes for awaking a</p> |

little later, explains why, and asks whether Ms. Smith is happy for that. Ms. Smith confirms, feeling better - recalling the times of the ruthless ringing alarms. Today is an important day for Ms. Smith: she will get the results from some medical tests that were done last week and via her wearable sensors. Good thing is that she does not need to leave the home for this. At 11:00 o'clock her doctor will make a video connection to her home. Based on the analysis of Ms. Smith's behavioral patterns, the results of the medical analysis will provide her with concrete advice on how to improve her lifestyle. Ms. Smith's son, Jared, will have lunch with her to discuss on the medical results. Jared, who has been keeping an eye on the sleeping patterns of his mother, was getting worried about his mother's condition. Although Ms. Smith has had plenty of social contacts during the last week, Jared considered it desirable to go over and visit his mother to discuss the medical results. Jared's children could not join since they have a full day at school. Nevertheless, they will quickly say hello to their grandmother using their mobile communicator (Smartphone \Leftrightarrow NetTV (via service)). After the video communication with her doctor, it becomes clear to Ms. Smith that she will have to change some of her dietary habits. The CARE@HOME system has also understood this and will from now on guide Ms. Smith in respecting the dietary prescriptions.

UC 129-02: Physical Activity Monitoring And Tele-Support

General

| Name of Use Case | | | | |
|---|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 129 | | | Physical Activity Monitoring And Tele-Support | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-05 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Physical Activity Monitoring for Ageing People (PAMAP) D2.4 – Revised User Requirements Report (AAL-JP Call 1) | | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |

| Further Keywords for Classification |
|--|
| #vital:cardiovascular, #stakeholder:secondary:professional_care, #key_enabling_technology:telemedicine, #key_enabling_technology:communication_functions, #localization:indoor, #key_enabling_technology:ambient, #human_communication, #self_care:eating, #self_care:looking_after_ones_health, #key_enabling_technology:questionnaires, #key_enabling_technology:vital_parameters, #key_enabling_technology:health_information, #stakeholder:secondary:doctors, #purpose:safety:disease_rehabilitation, #mobility:walking, #neuromusculoskeletal:muscle, #mobility:body_position_and_carrying, #purpose:safety:fall_prevention |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| — |
| Complete Description |
| <p>Thomas is an early retired man in his 60s with a chronic heart disease. He lives at home but is in need of frequent medical care. Marie is Thomas's contact nurse at the hospital. Marie is usually responsible for 10-15 patients in Thomas's situation. In order to avoid frequent hospital visits for the patients, especially for those who live far from the hospital like Thomas, the hospital is using an e-care system.</p> <p>This morning, Marie arrives at the hospital. She opens her PC and accesses a web based EHR application. Each patient has his/her own dedicated EHR containing his/her medical history; a label shows the time-stamp of last measurements.</p> <p>At this time Thomas is at home reading his newspaper while eating his breakfast. He hears a knocking sound from the e-Collaboration station in the living room. Marie's photo is shown on his TV screen. A videoconference is set up between Thomas and Marie. They have a short chat and Marie brings up the measurements visualization window by touching an icon. Together, they review Thomas' last health record and the data collected from the physical activity monitoring sensor.</p> <p>Because of his cardiac disease it has been recommended to Thomas to keep a good diet and to perform certain exercises regularly. These exercises are typical exercises recommended to improve health but because of his condition, the practice of these exercises becomes vital for Thomas. At the beginning of the program Thomas noted his height and weight in the EHR. Each week, Thomas must specify his weight and his waist circumference.</p> <p>Before each physical activity session, he must also specify his resting heart rate, his resting blood pressure, the time he took his drugs and other information.</p> <p>His 6 weeks exercise program was planned by the hospital staff. This program that Mary has to supervise contains:</p> <ul style="list-style-type: none"> - Aerobics exercises with 3 x 40 minutes sessions a week, 2 sessions of walking and one of cycling. In each case, he must maintain a heart rate between 110-130 beats per minute during walking and 120-140 beats per minute during cycling. In any case, he must not exceed the heart rate of 145 beats per minute. Each session must begin with 10 minutes of warm up with a progressive increase of heart rate (less than 110 bpm), 20 minutes of "work" with the target heart rate previously specified and with the possibility to have an accepted talk if needed (talk test), and a cool-down period (10 minutes) with a progressive decrease of the exercise intensity. At the end of each session Thomas must specify the intensity level perceived with visual scales (from 0-10) one for dyspnea and one for perceived exertion. |

- Strength exercises with 2 x 35 minutes sessions a week. During each session Thomas must perform a 10 min warm-up with 5 min walking then stretching and low-level of calisthenic movements, arms and legs for 5 minutes; then 20 minutes of resistance exercise with a 40% of maximal voluntary force for arms and 50% of maximal voluntary force for legs. A total of 10 exercises must be performed during the working part of the session. During the first session, each exercise consists of one set of 8 repetitions. Two minutes of rest should be respected between each exercise. During exercise, movement of extension and flexion must be permanent without any static phase. Thomas must breathe normally without any breath-holding (i.e. a Valsalva manoeuvre) phase, inhaling and exhaling in respect with the indications of the guiding software. Then Thomas ends his session with 5 min of cool-down, with walking and gentle stretching. At the end of each session, the time duration of the session, the mean heart rate with the peak of heart rate must be known. In addition, Thomas must specify the intensity level perceived with visual scales (from 0-10) one for perceived exertion and one for dyspnea.

Each four weeks, the modalities of aerobic exercise (duration and intensity), and of strength exercises (series and repetitions numbers, various movements) will be adapted with the results of daily recorded Borg values by Marie in accordance with the physician and sport teacher.

After this rehabilitation program, Thomas will be recommended to maintain physical activity with at least:

- a minimum of 30 min of physical activity by day (can be done in bouts of 10 to 15 min if necessary) of activities such as walking, climbing stairs, washing the car, cleaning windows, gardening, or cycling
- 45 to 60 min 2 or 3 times a week of aerobic activity
- 45 to 60 min 2 or 3 times a week of muscle strength training
- including in each session 10 to 15 min of warm-up and 5 to 10 min of cool-down

Because the tutorial mode is an important specificity of the PAMAP system, following is a scenario of a strength training session. This tutorial mode should help the patient when performing his physical activity program, in particular when performing unusual exercises (such as for the balance or strength training part of the rehabilitation program).

Thomas can have access to the tutorials explaining the different exercises he has to perform at this stage of the physical activity program.

1. Thomas selects the session number he has to perform. The content of the session appears on the I-TV, underscoring its main topic (aerobic, strength, balance, stretching...), listing the warm-up, the various exercises, with their duration, intensity, number of repetitions and sets etc., and the cool down.

2. Thomas selects then the topic of exercise session he is going to perform (aerobic, strength, balance or stretching). The I-TV screen changes and a tutorial shows him how he should do it by providing:

- the potential benefits of a regular practice
- general recommendations about safety/clothes and shoes/meteo/hydration etc.
- general recommendations about warm-up, cool down
- recommendations about inhalation and exhalation during exercise, using abdominal breathing
- risks if the session is not well performed
- information about adverse symptoms and what to do (stop the current exercise, continue at a lower intensity, call the physician etc.)
- what to do if the patient does not perform the session for health or personal reasons
- the return to the previous screen that details the content of the session

3. Thomas selects the warm-up. He follows the accurate indications given by the user interface. When he has completed the warm-up, he goes to the next user interface screen, the work content. He can also go back to the first screen and choose directly any other exercise within those noted on the screen.

4. Thomas selects the first exercise he is going to perform (he can directly access this tutorial if he had previously looked at the topic one). He can choose between two possibilities: go directly and perform the exercise, or first benefits from the tutorial. If Thomas chooses the tutorial, the user interface screen changes and a tutorial shows him how he should do it by providing:

- the potential benefits of a regular practice (what does this exercise provide to the user)
- a representation (video) of the movement to perform
- recommendations about posture with the most frequent bad postures
- a link to a new user interface screen in order to perform the first exercise according to the prescription
- the weights to take
- the movement velocity
- the number of repetitions and sets
- Thomas performs this movement, then he enters on the I-TV his sensations and symptoms on Borg or visual analogical scales, and the user
- Thomas performs this movement, then he enters on the I-TV his sensations and symptoms on Borg or visual analogical scales, and the user interface displays feedback about the adequacy between the movement performed and the one that had to be done (number of repetitions, sets, movement amplitude etc.). Then the patient can continue and go to the next I-TV screen or return back to the first screen describing the session content. If he continues, he can choose between performing directly the next exercise, or have first a tutorial.

5. When Thomas ends the session after his cool-down, he goes on the next screen that should show him the time scale concerning his rehabilitation program and the number of points he has reached, with an encouragement to continue. He can also go to see his daily report or go to a health education session, or send the report to his care contact. If the session is particularly linked to health education content, the patient can access this content directly from the last screen of his exercise session (e.g. a balance session could be linked to a health education session based on the prevention of fall and the functioning of body balance control)

[from source]

UC 138-02: 3rD-LIFE virtual world for communication and socialization

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 138 | - | - | 3rD-LIFE virtual world for communication and socialization | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-17 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|--|---|--------|
| D2.4: End-User Input and Validation (3rD-LIFE_D2.4.pdf) (AAL JP Call 2) | - | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #community:recreation, #key_enabling_technology:communication_functions, #human_communication, #relationships, #key_enabling_technology:mobile_devices, #key_enabling_technology:games, #learning, #life_areas:education | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>PART 1: MY ROOM</p> <p>Laura, a 66 year old woman, receives an e-mail on her e-mail software (e.g. Outlook, Thunderbird, etc.) or webmail (e.g. Hotmail, Yahoo, etc.) from 3rD-LIFE telling her bout an event happening today in the <i>3rD-LIFE Library</i>. The email contains the direct link to enter the 3rD-LIFE environment. Laura uses that link and logs in: her avatar appears in <i>My Room</i>.</p> <p>First, Laura checks her <i>Inbox</i> and reads the details about the event in the <i>3rD-LIFE Library</i> that was mentioned in the email. Laura reads the schedule, the topic of the event (a concert) and confirms her attendance at the event, which will take place one hour later.</p> <p>Laura lives in a small town and has many friends living in other cities. She has not logged into 3rD-LIFE for a while and wants to know if someone had visited her "<i>Room</i>" in the meantime. She also wants to have a look at the messages sent to her. Therefore, Laura goes to the <i>Communication Area</i> and sees some letters in her <i>Inbox</i> – messages left for her. She reads the message from Antonio, a 65 year old friend living in another city, who visited her 15 minutes ago and asked if she planned to attend the event at the <i>3rD-LIFE Library</i> today. Laura decides to communicate with Antonio over 3rD-LIFE. Laura will do it in one of the following ways. The final scenarios will be decided in the future, based on the development of the platform and on the decision of the consortium partners.</p> <p>In the first way, Laura's avatar stands in front of her <i>Communication Wall</i> and writes on a sheet of paper to communicate with Antonio. Both of them want to attend the event at the <i>3rD-LIFE Library</i>, so they will meet there in an hour.</p> <p>Then the avatar takes an envelope (next pile) and writes the name of the user. Then the paper is inserted in the envelope and thrown into a nearby mailbox. The message then automatically arrives to the <i>Inbox</i> in Antonio's room. In case Antonio's message settings include message delivery to his real-world e-mail and mobile phone (SMS), the message will also be sent there.</p> <p>An alternative scenario for this aspect could be that Laura's avatar use a virtual telephone in her room, and call to Antonio in the 3rD-LIFE environment. Antonio's telephone rings in his room. He picks up the phona and talks with Laura using their headsets/microphone and speakers with their own voice.</p> <p>As Laura has already almost an hour before the event, she decides to play some cognitive games</p> |

(Lumosity) by clicking the corresponding 3D object on her *Desktop*.

After playing for a while, Laura decides to change her appearance and looks for alternative clothes in the Closet. Once ready, she leaves *My Room* to go to the event at the *3rD-LIFE Library*.

PART 2: THE LIBRARY

There are two ways so Laura can get into the *3rD-LIFE Library*: either by teleporting or by walking. Today she wants to walk to the *Library*. During the walk, she meets other users and greets those she already knows.

Laura arrives at the *Library*, walks to the Notifications Board where she checks the details of the event she wants to attend (hour, location, type of event, people attending) and goes to the location where the event is going to take place. She can do this either by teleporting or just by walking. This time she chooses teleporting.

Once there, she sees that other users are also waiting to watch the event: this week it is a concert.

After talking with some other attendants for a few minutes, she meets her friend, Antonio, and they sit together and talk before the event starts.

As they have enjoyed the concert, they decide to go to the Café after the concert and see who else is there.

Before going to *The Café*, Laura notices that there is a German/Spanish course scheduled at the *Library*.

She decides to attend the course; therefore she sends the date of start to her 3rD-LIFE calendar as a reminder. When she is back at her *Room*, she will have a look at the details about the language course.

PART 3: AT THE CAFÉ

Laura and Antonio arrive at *The Café*, where there are more friends that did not attend the concert.

They talk together for a while and they decide to go to the *Corner of Games* at *The Café* and play a game together. One of them decides to join a group that is watching a very challenging chess play taking place right now.

As the group of friends and Laura arrive at the Corner of Games, she remarks that an important chess competition begins soon. She wants to participate and follows the instructions given: "Put your name in the members list if you want to participate. You will find the list near the rest of activities in the Corner of Games".

UC 139-02: 3rD-LIFE exhibition photos and offer

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 139 | - | - | 3rD-LIFE exhibition photos and offer | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-18 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D2.4: End-User | - | | Public | |

| | | |
|--|--|--|
| Input and Validation (3rD-LIFE_D2.4.pdf) (AAL JP Call 2) | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #relationships, #community:recreation, #key_enabling_technology:communication_functions, #human_communication | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>EXHIBITION AT THE CAFÉ</p> <p>Laura sees that there's a photo exhibition at <i>The Café</i>, on the <i>Exhibition Walls</i>, put up by a 3rD-LIFE user, who wants to organize a trip to the mountains shown on the photos. This person is not a friend of Laura and is looking for people to go with her.</p> <p>Laura attends the exhibition together with Antonio. They write comments for some of the photos by taking blank sheets of paper from the pile near the <i>Exhibition Wall</i> and putting them on the wall under respective pictures. Laura also wants to show her preference for a photo by rating it by clicking in the "I like it" or "Start" button. The owner of the photos receives a notification in his/her <i>Inbox</i> each time there's a new comment or a rating of one of the pictures.</p> <p>There is also a list in the <i>Café Wall</i>, for the exhibition visitors who are interested in the trip to the mountains so that they can put their names there. Laura and Antonio put their names on the list.</p> <p>After a couple of days, when the exhibition is over, the owner of the exhibition, Amanda, arranges a meeting at her room with the interested people to discuss the details of the trip. Laura, Antonio and others who listed their names receive a notification with the details of the meeting in their <i>Inbox</i>.</p> |

UC 140-02: 3rD-LIFE language course in virtual world

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|--|
| ID | Domain Role | Function | Name of Use Case | |
| 140 | - | - | 3rD-LIFE language course in virtual world | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for |

| | | | | |
|--|-------------|------------------|--|----------------------|
| | | | | voting, final |
| 01 | 2013-09-18 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D2.4: End-User Input and Validation (3rD-LIFE_D2.4.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #human_communication, #key_enabling_technology:communication_functions, #learning, #life_areas:education, #relationships | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>LANGUAGE COURSE</p> <p>Laura checks her calendar in her Room at the <i>Communication Area</i> and sees the reminder for the German/Spanish language course, she was curious about. She reads the details about the course and has a look at the profile of the 3rD-LIFE user, Markus, who is organising it.</p> <p>The class is divided into 2 parts:</p> <ul style="list-style-type: none"> - Usual class meeting regularly at the same place with a teacher. - Mobile class visiting virtual spaces in 3rD-LIFE, where they can practice the language (i.e. a virtual greengrocer for practising fruits' names). <p>Laura decides first to attend the usual class for some basic information and then she wants to participate in the mobile class visiting virtual places to practice the language. She writes Markus a message over 3rD-LIFE mail that she will be attending the classes. Markus creates a language course group in his contact list and adds Laura to that group.</p> <p>At the starting date, Laura and other interested 3rD-LIFE Users come to the Library. Markus is standing near the sign "Language Course today at 14 o'clock" and greets everybody, who had written him that they would be attending.</p> <p>After 2 weeks of class meetings, they meet for a mobile class meeting and visit a grocery store together. In the first part of the class, Laura learns some German or Spanish words about fruits, vegetables, as well as quantities and numbers. The words will appear written next to a real photograph of the product. In order to learn properly the pronunciation of the words, Laura clicks on the word and she listens in her headphones</p> |

how to pronounce the word. Finally, Laura has to pronounce the word in front of a microphone and she will know if she is properly pronouncing the different words by a speech-recognition system or by sending the recording of her pronunciation task to another 3rD-LIFE user, Markus, who speak properly the language she is learning. Markus will listen the recording and he will correct Laura pronunciation.

After learning the words, Laura receives a written shopping list with different products and quantities. Then she goes to the virtual grocery store. Once there, she sees virtual representations of several products, without the names written. Her task is to select the product in the requested amount according to the shopping list; or she might be also asked to read the shop list and if Laura properly pronounces the words she will successfully finish the task.

UC 141-02: ALIAS robot phone call function

General

| Name of Use Case | | | | |
|---|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 141 | - | - | ALIAS robot phone call function | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-18 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ALIAS-D1.2-final.pdf (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:communication_functions, #human_communication, #relationships, #key_enabling_technology:robotic | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |

| Complete Description |
|---|
| <p>The user Hans wants to call his grandson Bob. So ALIAS gets a speech input from the user: "Call my grandson Bob ". The speaker recognition module of ALIAS identifies the user and understands the request. Alias dials the phone number of the member, but Bob does not want to answer within normal ringing time. Only his phone responder is on. Alias leaves a message on the responder: "Hans was calling. He would try again later". Alias tells the user that nobody picks up the telephone after the call. He asks if he should try to call Bob later "No one's picking up. Should I call later?" Hans says "Yes". Then Alias moves back and the user sits down in his chair.</p> <p>Alias tries to call Bob again half an hour later. But the phone is busy now. Alias hangs up and tells the user that Bob is busy on his phone: "Bob is busy. Should I tell you when he has time?" The user says: "Yes". After ten minutes, the robot moves to the user and let the image of the member lights up with his phone number. The robot let now the user knows that the telephone of the member is no longer busy: "Bob is ready to phone" The user wants the robot to call again: "Call Bob" Alias dials the phone number, the image is blinking up and Bob is on the phone. Bob: "Bob is here, hi!"</p> <p>(prepared by TUM-GSing)</p> |

UC 142-02: ALIAS robot's single and multi-user game possibilities

General

| Name of Use Case | | | | |
|--|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 142 | - | - | ALIAS robot's single and multi-user game possibilities | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-19 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ALIAS-D1.2-final.pdf (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:communication_functions, #key_enabling_technology:games, #relationships, #human_communication, #key_enabling_technology:robotic | | | | |
| Scope and Objectives of Use Case | | | | |

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| - |
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Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>The robot named „Cesar“ lives with his owner Werner in a small flat. Usually the robot stands on his charging station in the living room and awaits orders while the owner watches TV, reads a book or does other things inside the other rooms of the flat. Occasionally the owner wants to play a game with the help of the robot. Either he wants to play with other people or he wants to play alone. On these occasions he calls Cesar: “Come to me, Cesar!”. The robot travels near Werner and he has now the option to select between his favorite browser games or to put a game of his choice inside the playing console, mounted on the robot. So he can choose between a single player game and a multi-user game. Today Werner would love to play against his friend Franz online.</p> <p>He starts the application by touching the screen and takes the so called “nunchuck” – which is attached to Cesar as well – to control the game (which is not possible via the touchscreen yet).</p> <p>The game interface appears in full screen on the robots display. To detect the correct position of the Wii’s nunchuck controller, Werner once has to calibrate the system, since the position LED’s of the Wii are mounted on top of the screen. If he would have played a browser game, a calibration would not have to be done. Unfortunately, Franz seems to have left the game before they could really start – how weird.</p> <p>Like the Wii, most games on Werners robot support their own connectivity platforms, so he can choose against whom he wants to play. He decides for a browser based round of chess against another person, which is online by chance. Other choices would be playing cards, play Mahjong or a round of Sudoku alone. His favo-rite Wii game is „Raving-Rabbits“, but this is only fun when his daughter is visiting him. Suddenly a phone call of his daughter arrives. He has to pause the round of chess and tells the robot that he is now ready to answer the phone call. After finishing the call, he continues the round of chess (his opponent is still willing to do so, which is not always the case when playing against other people and the game was paused).</p> <p>When the game is finished (and unluckily he lost!) the robot notices that he is not needed at the moment and travels back to his usual resting position at the charging station.</p> <p>(elaborated by TUI)</p> |

UC 145-02: ALIAS robot - information on culture and leisure

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 145 | - | - | ALIAS robot - culture and leisure information supply | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-19 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|--|------|---------------------------------|
| ALIAS-D1.2-final.pdf (AAL JP Call 2) | - | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:communication_functions, #community:recreation, #relationships, #purpose:safety:orientation, #key_enabling_technology:robotic | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| There is a new exhibition about the Maya culture in town. Hans (78) loves old cultures. ALIAS knows this and sends him dates and selected information about the exciting exhibition. Hans (78) wants to know if there are like-minded people in his age who are interesting in the Maya culture too. ALIAS finds in the area a senior club offering a trip the exhibition. |

UC 146-02: ALIAS robot's reading, letter writing and ground lighting support

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 146 | - | - | ALIAS robot's reading, letter writing and ground lighting support | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-19 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|---|---|--------|
| ALIAS-D1.2-final.pdf - (AAL JP Call 2) | - | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:robotic, #key_enabling_technology:communication_functions, #stakeholder:secondary:relatives, #sensory:seeing, #human_communication, #relationships, #neuromusculoskeletal:movement, #self_care:drinking, #purpose:comfort:lighting | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Maria (75) has problems with her eyes and cannot read as long as she wants. Her eyes hurt after a while. This morning her grandson sent her a digital book, named "Harry Potter". ALIAS now tells her the story. Peters (71) son sent him an interesting article about the political situation in Egypt. Peter cannot read the lowercase letters and uses the support function to magnify these.</p> <p>[...]</p> <p>Hans (78) wants to write his old friend Jim in UK. Jim is able to speak German, but Hans wants to do his best in telling Jim everything what happened in the last year. Hans' hands are shaking since he is seventy years old and so he is happy to have ALIAS helping him out.</p> <p>[...]</p> <p>Peter (71) stands up at night to drink some milk since he was a little boy. ALIAS recognizes him and turn on the light, so that Peter will see ALIAS standing in the edge of the room.</p> |

UC 147-02: ALIAS robot - ground lighting

General

| Name of Use Case | | | | |
|--------------------|-------------|--|-------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 147 | - | - | ALIAS robot - ground lighting | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-19 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |

| Basic Information to Use Case | | |
|--|------|---------------------------------|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| ALIAS-D1.5-final.pdf (AAL JP Call 2) | - | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:robotic, #digestive:metabolism, #sensory:seeing, #stakeholder:secondary:relatives, #purpose:comfort:lighting, #general_tasks:handling_stress, #general_tasks:daily_routine, #purpose:comfort:lighting, #key_enabling_technology:ambient, #key_enabling_technology:home_automation, #localization:indoor, #key_enabling_technology:communication_functions | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Even though Hans H. is 75 years old, he is in the thick of life. Only his bladder weakness at night associated with his night blindness is difficult to cope with. In the meantime he has to use the bathroom several times at night. Thereby he always gropes his way ahead carefully.</p> <p>He had fallen down heavily last year, however, while doing so because he did not cleaned up the laundry basket in the evening as he promised his wife. Thus he bounced his left haunch heavily which was the reason why he took advice about technology opportunities that simplifies life.</p> <p>By now ALIAS a mobile robot platform has helped Hans H. for three months. Since then Gertrude H. his wife is sleeping better. As soon as Hans H. recognizes at night that he has to visit the toilet he calls ALIAS softly: "ALIAS, please attend me to the bathroom". ALIAS answers immediately via light signals and omes over. Following a six-week test phase the couple has decided that ALIAS should reply just by a short light signal at night. So Gertrude H. can continue to sleep when her husband has to go to the bathroom. Gertrude H. comments enthusiastically: "Since I know that ALIAS takes care of Hans, I can sleep better!"</p> <p>As soon as ALIAS arrives at Hans H.'s bed it switches on the follow-me illumination on the back. Hans H. puts on his slippers standing beside the bed and gives ALIAS the command: "You can start now".</p> <p>ALIAS drives slowly to the bathroom while it is illuminating the floor. In particular this kind of illuminating Hans H. feels comfortable: "The lighting is not too bright, my eyes can adapt to the illumination in the bathroom very well. Perfect!"</p> <p>Since Hans H. has installed motion detectors the light switches on automatically when ALIAS is on the way to the bathroom. In the meantime the eyes of Hans H.s get used to the brighter environment his eyes have any problems with the changing light.</p> <p>ALIAS waits for the senior in front of the bathroom. after the robot platform has brought him safely back to bed, ALIAS drives to its charging station waiting for its next usage.</p> |

UC 148-02: ALIAS robot - monitoring system, emergency detection and remote control

General

| Name of Use Case | | | | |
|---|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 148 | - | - | ALIAS robot - monitoring system, emergency detection and remote control | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-19 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ALIAS-D1.5-final.pdf (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:robotic, #vital:cardiovascular, #stakeholder:secondary:doctors, #purpose:safety:alert_detection, #purpose:safety:alert_communication, #stakeholder:secondary:emergency_call_services, #general_tasks:handling_stress, #key_enabling_technology:body_area, #stakeholder:secondary:relatives, #mobility:walking, #key_enabling_technology:communication_functions, #human_communication, #key_enabling_technology:telemedicine, #neuromusculoskeletal:joints_and_bones | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Wolfgang Z., living alone, is suffering from hypertension for years and had recently his second heart attack. Since then the heart of the 74 years old patient is monitored by particular software of ALIAS. The software has been adapted to Wolfgang by his cardiologist, Dr. Claudia W. It alerts the emergency |

service if his blood pressure is exceeding or falling below a critical value or if he gets a heart attack. Wolfgang Z. feels safe again and enjoys his autonomy at home since he is accompanied by the robot platform ALIAS. He has to carry only a small sensor with him around the clock that monitors the heart data. But that is not a problem for him. So he said recently to his technophile friend Jürgen M.: "It is really cool, in ALIAS is more techniques insight than in your new smartphone."

Also his daughter Ingrid T. lives with her family 500 Miles away is less concerned about his father since ALIAS is with him. She sees that he blossoms again. During Wolfgang Z. takes care of his cactus collection – his favourite hobby – he suddenly feels that he gets dizzy. A few seconds later he sinks down on the floor of his hobby room.

At the same time ALIAS, staying in the living room and waiting for the next command of its user, registers the case of emergency. It starts immediately the installed security program and alerts loudly: "I will alert help in ten seconds" and it counts "10, 9, 8, ..." – interrupted by the message: "PLEASE SAY STOP TO STOP THE COUNTDOWN" – "3, 2, 1".

Wolfgang Z. doesn't answer, so that ALIAS makes an emergency call. The person on duty takes full responsibility for ALIAS – after he alerts the action force – and navigates ALIAS via remote control in order to properly assess the situation. He navigates the robot platform through the apartment of Wolfgang Z. Suddenly he recognizes the patient lying on the floor. Carefully he controls ALIAS towards the place. In the meantime Wolfgang Z. regains his consciousness. The administrator talks friendly to the patient: "Stay calm, I have informed the emergency team already and help is on the way." The patient still lying on the floor replies: "What happens to me?" The administrator answers: "ALIAS reported a case of emergency, stay calm please."

Minutes later the doorbell rings shortly. Immediately afterwards Wolfgang Z. hears a noise, such as turning a key in the lock. "I think the ambulance men are already here," he says wearily to the clerk. He answers: "Well, I'm still waiting for a moment, until I know you are in good hands."

At that time, the officer in charge answers already in order to take the case.

Gertrude H. living alone is 73 years old. Last December, she fell hard on the way to the letterbox because of black ice and has cheated her left hip. Since then, she feels unsafe walking and rarely leaves her apartment. From her orthopaedic Heinz L. she has been prescribed a walker, but she only uses it outside the apartment. At home she prefers to take their cane. That's why her son, Ralf H., is very concerned whether his mother is in good hands living alone at home.

However, he knows his mother's negative attitude toward nursing homes and assisted living. He would never place her in such an institution against her will. So Ralf H. has given her the robot platform ALIAS three months ago. Since then his mother feels safely again staying alone in her apartment.

Today it happened on the way to the bathroom: Gertrude H. was just careless for a moment and she slips out. Thereby she falls again on the pre-damaged side. Curled up in pain lying on the ground she whines: "Ouch, ouch. Help me, ALIAS, I need help". ALIAS comes to the senior and replies immediately: "I will alert help in ten seconds" and counts per second reverse "10, 9, 8, ..." - interrupted by the message "SAY STOP TO INTERRUPT THE COUNTDOWN" - "3, 2, 1". Gertrude H. laments goes on.

Seconds later, Gertrude H. is connected to the operations centre of the local emergency service. The dispatcher gets the emergency message from ALIAS at the same time. He can read message on the screen: case of emergency by Mrs. Gertrude H., Dinkelgasse X, XXXXX P. He switched on the live stream in order to assess the situation with the lady better.

Then Gertrude H. appears on the live stream sitting on the floor while she is busy with her cane. Facilitated the dispatcher speaks reassuringly to the patient: "Help is already en route, for your best you should remain sitting on the floor that relieves your cardiovascular system". Gertrude H. still whimpers: "Ouch, my hip hurts so much." The dispatcher tells her: "I just get the message that the team is on your doorstep, so every moment help is coming, never fear."

The bell rang briefly, then immediately the emergency team unlocks the front door of Gertrude H. and enters the apartment. The officer in charge, Rainer F., says comfortingly, "Mrs H., here's help" and contacts his officer in the headquarters: "We are here now and take over, thank you," the dispatcher briefly says goodbye: "Well, see you later".

UC 150-02: ELDER-SPACES - composing professional groups (part 1)

General

| Name of Use Case | | | | |
|---|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 150 | - | - | ELDER-SPACES - composing professional groups (part 1) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-20 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #relationships, #human_communication, #key_enabling_technology:communication_functions, #life_areas:economic_life, #stakeholder:secondary:relatives, #stakeholder:work:colleagues, #life_areas:work; #work:sector:handicraft; #work:system_scope:communication; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|-----------------------|
| Complete Description |

UC ROLES**Giannis (Florist, Platform Moderator):**

Giannis (58) is a florist who lives with his wife in Larissa, Greece. His two children work and live in Athens, Greece. He is technologically illiterate and considers this to be a huge disadvantage for his occupation. As he cannot be regularly helped by his children, he explores the potential benefits of being involved in the Elder-Spaces initiative.

Matina (Florist):

Matina (63) is a florist who lives and runs a family business in Agrinio, Greece, for the last forty years. All her three children are also working with her. Her oldest child, Philip (39), is quite fond with computers and has developed a website for their business.

Philip (Florist):

Philip (39) is Matina's son. The website displays the total of the flowers their shop offers, gives information on their proper gardening and the ability for on-line buy. His mother, Matina, and he find it prosperous to participate in a group for professional florists via Elder-Spaces, as they consider it may end up to business collaboration.

Polyxeni (Decorator):

Polyxeni (56) is a professional decorator and lives in Larissa, Greece. She had been cooperating professionally with a flower shop in Larissa for the last 20 years, until its owner got retired. She is now in seek for new collaboration, as flowers are a very important field in her job, whilst decorating reception halls for events (marriages, conferences, parties etc.). Thus, she turns to Elder-Spaces, where she believes to find new partnership close to her age, knowing that she is also close to her retirement.

UC DESCRIPTION

Giannis logs in the Elder-Spaces platform and decides to create a Florist professional group. He explains that he would like other partners to help him adopt their know-how on implementing a website for his shop and specifically in ordering rare flowers from abroad directly through internet.

Philip finds out the existence of Elder-Spaces from one query he initiated for ordering a flower from abroad. He immediately recognized the potential of this platform and he proposed to his mother Matina, who is the head of the business, to monitor it and participate. Consequently, Matina logs in the platform and exchanges views with other fellow florists.

Polyxeni located Elder-Spaces in her search for partnership throughout an internet search engine. She was amazed to acknowledge that Giannis was in search for partnership, as they both live in the same city and had heard of him in the past. Thus, she proposes to cooperate for the next few years, until they both get retired.

UC 151-02: ELDER-SPACES - composing professional groups (part 2)

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 151 | - | - | ELDER-SPACES - composing professional groups (part 2) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-23 | Doma | | Initial |

| | | | | |
|---|------------|------------------|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #stakeholder:work:colleagues; ##work:system_scope:stress_handling; #purpose:safety:orientation; #key_enabling_technology:communication_functions; #human_communication; #learning; #general_tasks:handling_stress; #work:system_scope:mentoring; #localization:outdoor; #work:system_scope:communication; #life_areas:work; #work:sector:handicraft | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| Complete Description |
| <p>UC ROLES</p> <p>Chris (Truck driver): Chris (57) is a professional truck driver from Kavala, Greece, who transfers fruit on behalf of a large company. Most of his routes include the Balkan peninsula, but there are times when he reaches even in Scandinavia. He seems to be more relaxed when travelling in the first area, while feels insecure when travelling in relatively 'unknown' routes. Considering that only a GPS is not providing all 'practical' information for a totally safe and relaxed route, he decides to take advantage of the Elder-Spaces platform and creates a "truck driver" professional group, so as to provide tips for any forthcoming potential colleague to make the same route.</p> <p>Silvio (Truck driver): Silvio (59) is a professional truck driver from Perugia, Italy, who shares the same speculation with Chris. He most of the times transfers industrial medical hardware to Greece and the Balkans in general. There had been two times in the past when his vehicle had been blocked in the highway, due to protest against the local government from the local truck drivers, being immobilized for over 16 hours. As such information could not be provided by any GPS, he becomes a supporter of the "truck driver" group throughout the Elder-Spaces platform.</p> |

Eleni (Long distance courier driver):

Eleni (56) is a long distance courier driver from Volos, Greece. Although she had acquired her professional license twenty years ago, she has been driving professionally for only the last three months, as prior to this she was working as a secretary to a recently bankrupt company. Due to the fact that she still does not feel confident when traveling to small towns and villages more than 500 kilometres away from her hometown, she finds exciting the idea of having access on practical information sourced from other colleagues throughout the Elder-Spaces platform.

Mitsos (Commuting taxi driver):

Mitsos (62) has been a professional taxi driver for the last forty years. He is from Thessaloniki, Greece, where he worked all these years. The current financial recession crisis made him alter his professional habits, as he has turned himself to a long distance commuting taxi driver. That is, he transfers mostly elderly people with mobility problems interregional to almost all over Greece. He also seems to be quite interested in the idea of participating in such a group, where he could explore practical information on routes which might have been used by other colleagues.

UC DESCRIPTION

Chris logs in the Elder-Spaces platform and decides to create a Truck driver professional group. He explains that he would like to share his travelling experiences on each recent route he has been into, providing information like the best places to park and spend time for a night stop, which hours to avoid traffic or if there are any planned festivals or events which could alter the route, without having this information available via GPS. Thus, he has started mapping the recent four routes he has conducted from Kavala to Belgrade, Serbia, proposing three alternatives for a safe night stop and warning other fellow drivers for four quite dangerous turns of the route, as they seem to have an opposite slope. He envisages via this group to create a dedicated forum with all kind of information necessary for the conduction of a professional trip.

Silvio this time is planned to make a route from Italy to Athens and from there directly to Belgrade. He is not used to this route, thus he logs and advises from Elder-Spaces via his smart phone, where he can follow the valuable information Chris had provided two months ago. Two days after his return home, he logs in to the platform and comments on the group, providing two more alternative stops and indicating three spots where one should be cautious. As he knows that the same route is to be repeated at least by two of his colleagues from his company, he decides to invite them to the platform and join the group.

Eleni is assigned to travel to a small village in Kavala, where she has not been there before. She is equipped with the proper GPS to trace the route, but she would still like to have more information on her final destination. Her employer is a friend of Chris and decides to bring them in contact. Chris on his turn explains to her the difficulties of the trip and proposes her on using the Elder-Spaces platform and the truck driver group, where she could extract information on her journey. Eleni logs in the platform and realizes that there is few data for her route. Although disappointed at first, she seems determined to use this tool and one week after her return decides to fill in her travel experiences, so as to help anyone who could be in her place.

Mitsos is also assigned to transfer two elderly people to a mountainous village in Kavala. He finds out the existence of Elder-Spaces platform while trying to find the village on a search engine through internet in combination to directions. He logs in the platform and is surprised by the fact that although his route was planned for early June, he discovers through a past post in the platform that the village is accessible only by car snow chains even this time of year. He feels grateful to this information, as he had removed them from his car since April.

UC 152-02: ELDER-SPACES - promoting intergenerational activities (part 1)

General

| Name of Use Case |
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| ID | Domain Role | Function | Name of Use Case | |
|--|-------------|--|--|---|
| 152 | - | - | ELDER-SPACES - promoting intergenerational activities (part 1) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-20 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #relationships; #human_communication; #key_enabling_technology:communication_functions; #learning; #work:type:retired; #work:system_scope:communication; #life_areas:education; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>UC ROLES</p> <p>Pericles (Retired politician): Pericles (73) is a retired politician who lives in Chania, Greece. He is a live spirit and worries about Greece's current status. He strongly believes that young politicians and youngsters in general have been severely misled by the state the last decades. He uses the Elder-Spaces platform in order to organize intergenerational events in schools and have active dialogue both with students and inexperienced</p> |

politicians.

Margaret (Newly elected minister):

Margaret (32) is a newly elected minister in the area of Chania. It is her first time to be elected to the Greek Parliament and still is not experienced in dealing with her voters. Although she has a blog of her own, she finds attractive the idea of gathering the whole age spectrum of her voters through the Elder-Spaces project.

Christine (High school director):

Christine (58) is a high school director in Chania. From her adolescence, she was quite politicized and took part in the movement against dictatorship in Greece during the late sixties – early seventies, when she had been studying Greek Literature in the University of Athens. Since then, she stays updated regarding the political news and fully supports any ideas of involving young students in the political decision making process.

Bill (Student):

Bill (15) is a high school student who lives in Chania, Greece. He is an open minded student who likes sports and studying Mathematics. Up to the moment he had no relation to politics.

Melina (Student):

Melina (16) is a high school student who lives in a village outside Chania. She is the president of the student committee in her school and interested in the local government decision making, as her father is a member of the Local Board.

UC DESCRIPTION

First alternative (elderly initiated scenario)

Pericles logs in the Elder-Spaces platform and creates an intergenerational activity called Involving Youngsters with Politics. His motivation is to use his fifty year experience and teach youngsters how to think and judge properly information they acquire from politicians. For this cause, he visits the high school of his neighbourhood, discusses with the director and proposes her to have the students use the Elder-Spaces platform, so as to arrange a two-hour talk to the students, where he will analyse the political situation in Greece and listen to the students' ideas. Christine who is quite fond with such an idea, immediately joins that group herself and proposes her students to join that group. She makes a notice on the subject in the official school's notice table and is pleased to see that half of the students not only have joined that group already, but after a month of creation most of them have commented on the subject. Finally, after two months of active intergenerational dialogue via Elder-Spaces, Pericles is officially invited to speak to the students and their parents in a day meeting regarding Politics.

During the meeting, Pericles prefers not to set any discussion rules, prioritizing on the dialogue model of answers and questions. Melina and Bill seem to be the most active participants in the discussion. In particular, Bill has dramatically changed his view on politics after the conduction of the meeting. The two students are enthusiast with the event and this is visible on their glorious comments on the Elder-Spaces platform.

On the outcomes of the event, they decide to write an article in the school newspaper describing their experiences. Christine rewards this qualitative initiative and forwards the article to all local newspapers of the prefecture. Then, Margaret is informed on the existence of the platform and decides to take part in the group. After six months of use, Elder-Spaces is considered for her as a means for acquiring the whole age spectrum of the voters, approach them directly and listen to the current trend of the local society.

Second alternative (youngsters initiated scenario)

Christine assigns to her students homework for interviewing a citizen. Melina and Bill pose one group which has been assigned to interview a retired professional. At first they decide to search through internet on a relative issue, when they find out of the Elder-Spaces project. After creating an account in the platform and start navigating, they join the group "Involving Youngsters with Politics" created by Pericles. They exchange a lot of ideas, when they propose to Pericles visit their school and perform the requested interview live in front of all their schoolmates.

Prior to their invitation, the two students invited Christine in the group as well and asked for her permission

to conduct this live interview. Christine was thrilled with that idea and encouraged her students to continue taking such initiatives. Moving one step further, she decides to establish this process and inserts 'Elder-Spaces' platform in her learning methodology, by assigning to her students monthly visits of elderly to their school via the platform, in order to share their valuable experience with younger citizens.

UC 153-02: ELDER-SPACES - promoting intergenerational activities (part 2)

General

| Name of Use Case | | | | |
|--|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 153 | - | - | ELDER-SPACES - promoting intergenerational activities (part 2) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-20 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #human_communication; #key_enabling_technology:communication_functions; #work:type:retired; #learning; #self_care:eating; #community:recreation; #general_tasks:daily_routine; #life_areas:work; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>UC ROLES</p> <p>Martha (Elderly housewife): Martha (62) is a housewife who lives in the island of Siros, Greece. She is renowned for her traditional sweets, which she loves cooking since her early youth. She always tries to explore recipes from other places, and finds it interested to use Elder-Spaces platform as a means towards this direction.</p> <p>Anna (Retired engineer): Anna (64) is a retired engineer who lives in Kalamata, Greece. She loves cooking and always tries to create different rare recipes. Throughout Elder-Spaces, she can both show to younger people how to cook quickly and effectively and even learn new recipes and techniques from others.</p> <p>David (University student): David (19) is studying Physics in the University of Patras, Greece, where he is renting a house. As it is his first time living alone apart from his family, he admits that so far he had little contribution in everyday cooking all these years. Thus, he finds Elder-Spaces a good opportunity in exploring ways of dealing with everyday cooking.</p> <p>Jonas (Retired lawyer): Jonas (66) is a retired lawyer who lives in Budapest, Hungary. He tries to find ways to occupy his free time through internet, when he found out the existence of Elder-Spaces project, in a query for collecting old coins from all over the globe.</p> <p>Cinzia (University student): Cinzia (21) lives and studies in the University of Budapest, Hungary. At the same time she participates in a volunteer activity, aiming at the social inclusion of elderly people. Thus, she becomes an energetic supporter of Elder-Spaces initiative.</p> <p>Lothar (Retired post office employee): Lothar (72) is a recently retired post office employee who lives in Bonn, Germany. He had started collecting stamps since the beginning of his professional carrier, reaching over 20,000 pieces. Now he wants to occupy his time with his favourite hobby. For sure he would like to find more stamp collectors, proceed to stamp exchange and even organize an exhibition of his stamp collection. Prior to Elder-Spaces, he assumes that he would have few chances to fulfil his desire.</p> <p>Lutz (Private employee): Lutz (27) is a bank clerk who lives in Bonn, Germany. He keeps himself updated on technology issues and is fond of using gadgets. His hobbies include sports, music, cinema and collecting stamps. Throughout Elder-Spaces he can expand his hobbies.</p> <p>UC DESCRIPTION</p> <p>First alternative (elderly initiated scenario) Lothar has recently found out the existence of Elder-Spaces and has become a regular registered user. He has created a group called "Stamp Collection" and discusses with others about their passion. After five months, the users of the group have surpassed the threshold of 300 users. Lothar decides to go one step further, digitizing his entire stamp collection.</p> <p>Lutz, who is a member of the group since its early creation, is willing to help him fulfil this idea. Thus, throughout the platform they exchange messages and they decide to have a meeting in Lutz's home, where Lothar can see how stamps can be digitized through a scanner and uploaded on the platform. Lutz trains Lothar in how to perform these tasks. Lothar is so excited that he decides to buy a scanner and perform the digitalization of the collection from his home. All stages of this flow have been reported on Elder-Spaces</p> |

platform from both of them, while many other members comment on it.

One other such member is Jonas. He mostly likes to collect coins instead of stamps, so he creates a new similar group, named —Coin CollectionII. He possesses many duple coins and is willing to exchange them from other hobbyists. Through the platform, Cinzia advises him to take photographs of the coins and shows him how to upload them, so as to initiate a potential exchange.

Second alternative (youngsters initiated scenario)

Martha loves cooking sweets, especially traditional ones. She would like to explore her knowledge and find out how each location's traditional sweets are cooked. For this reason she decides to create a group in Elder-Spaces called "Cook Traditional Sweets". Anna shares the same interests and is the first member to join that group.

David searches desperately to find practical advice on how to cook. He has managed to find many recipes, but is inexperienced and finds it difficult to follow them, leading to unsuccessful meals which are not eatable. He finds out the "Cook Traditional Sweets" group in Elder-Spaces and asks for help from its members. After a week, he decides to create a new group called "Help New Cooks", sending invitations on Martha and Anna. They both accept and join that group, explaining through the platform in plain words how exactly to proceed in cooking a successful meal.

UC 154-02: ELDER-SPACES - grouping to organize events

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 154 | - | - | ELDER-SPACES - grouping to organize events | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-20 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |

| |
|--|
| Visionary |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #community:religion; #human_communication; #key_enabling_technology:communication_functions; #work:type:retired; #community:recreation; #relationships; #learning; #life_areas:education; #life_areas:work |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>UC ROLES</p> <p>Ermioni (Housewife): Ermioni (61) is a religious housewife who lives in Lamia, Greece. She has visited many orthodox monasteries with the KAPI, but she would like to broaden her activities, like visiting a religious landmark from abroad. She envisages to organise 'religious' tours by finding interested people and sharing the costs for one-week excursions by bus. Thus, she decides to initiate a discussion in the Elder-Spaces platform concerning the organization of 'religious' trips all around Europe.</p> <p>Mustafa (Constructor): Mustafa (56) is an immigrant from Iran, living in Athens, Greece, for the last 30 years. He is working in the construction field and is a religious person. He is interested in knowing people and different religions. Elder-Spaces platform is a means for him to explore his horizons.</p> <p>Johanna (Theologian): Johanna (57) is a Theologian in High School and lives in Athens, Greece. She has also been interested in visiting all places mentioned in her lessons. Thus, she becomes supporter of the idea of organizing and participating in a potential trip around Europe.</p> <p>UC DESCRIPTION Ermioni has visited most of the major Orthodox Monasteries in Greece, but still needs to enrich her experience. She decides to use Elder-Spaces platform so as to organize 'religious' trips all around Europe. She logs in the platform and creates a group called "Organize Religious Tour". To her surprise, over fifty people join that group since its first week of creation. They all talk about religion issues and she proposes three potential places to visit by bus for a one-week tour; Italy, Romania and Hungary. Mustafa is one of the first members to join the "Organize Religious Tour" group. He chooses Italy, as he would like to visit once in his life the Vatican City and St Peter. On the other hand, Johanna votes for Romania, where she would like to visit a set of three famous monasteries up in the mainland's mountains. They all participate in a discussion where all members express their opinion. After three weeks of discussions, it is decided to travel to Italy. Thus, Ermioni gets offers from travel agencies for a mid-Spring week excursion to Italy, for a total of 34 participants, mostly retired elderly.</p> <p>UC ROLES</p> <p>Stamatia (Teacher): Stamatia (56) is a teacher in Komotini, Greece. She considers herself as a travel addict person, and she is</p> |

always organizing the educational excursions of her school. It is a fact that she chooses qualitative excursions for the students. She finds interested to expand this role for personal excursions, engaging other willing people throughout the creation of a group “Excursions” in Elder-Spaces platform.

Giorgio (Musician):

Giorgio (62) is a musician living in Xanthi, Greece. In the past he had travelled all over the Balkans with his band, but now he would like to visit other parts of Europe. He finds Elder-Spaces as the means to fulfil his desire and organize music events as well.

Michelle (Hair dresser):

Michelle (57) is a hair dresser working in Drama, Greece. She has found out about Elder-Spaces from her clientele, and she decided to join the “Excursions” group. Although she is an active member of KAPI, she gets disappointed with the fact that no excursions are organized during the late autumn and winter months.

UC DESCRIPTION

Stamatia logs in the Elder-Spaces platform and searches for a group regarding excursions. As she cannot find anything similar, she creates a group “Excursions”. On the primitive comments she explains that her ultimate goal is to visit at least one country from all five continents in the next decade. She hopes to find mimics in her ambitious plan, so she starts inviting people she knows in person through the platform, so as they invite others in turn and create a social group with remarkable number of interested members.

One such invitation is sent to Giorgio, who is Stamatia's friend. Two years ago she had arranged a music event in her school and Giorgio's band performed successfully. They had initiated a discussion on their personal travel experience and they both seemed to share the dream of traveling abroad. With the help of Elder-Spaces platform, Giorgio takes active part in the discussions and proposes potential touristic destinations to visit in the next three months.

Two months after the group's creation, a new member, Michelle, suggests making their first excursion abroad to Berlin, Germany. She has even got offers and starts enumerating the pros and cons for such a trip with all the members of the group. Finally, Stamatia creates a calendar entry in the platform as the final dates for the excursion.

UC ROLES

Aristotle (Retired teacher):

Aristotle (67) is a retired teacher who lives in Athens, Greece. Since his early youth he was fond of writing poems. He has recently explored Elder-Spaces and initiated a group called “Poetry”. He envisages attracting other poetry-lovers and ultimately organizing poetry evenings.

Sofoklis (Civil servant):

Sofoklis (59) is a civil servant who works and lives in Athens, Greece. He likes reading poetry, both ancient and modern. He seems enthusiastic with his participation on the group and fully supports the organization of poetry evenings.

William (Doctor):

William (62) is a doctor who lives in London, UK. He likes poetry and reads poems from all over the world, translated in English. He has found out Elder-Spaces when he queried a poem which had already been discussed in the “Poetry” group. Thus, he joins the group and takes part in the discussions. Throughout his work and the conduction of medical meetings, he has been visiting Greece quite often during the year. He decides to create calendar entries in the platform where he suggests creating a poetry evening during his forthcoming visit in Greece, so as to meet his new friends and discuss on poetry.

UC DESCRIPTION

Aristotle logs in the Elder-Spaces platform and searches for a group regarding poetry. As he cannot find anything similar, he creates a group “Poetry”. His goal is to discuss about poetry of any kind with other members and organize poetry evenings, where they can meet each other and talk in person as well.

Sofoklis, who has poetry as his main hobby, is one of the first members to actively participate in the discussions. He proposes specific subjects and trends to talk about poetry in international level.

William, who has discovered interesting comments on his favourite poem through the platform, suggests

arranging the forthcoming poetry evening with his next visit in Greece, proposing two separate dates in the calendar.

UC 155-02: ELDER-SPACES - group forming for common activities (part 1)

General

| Name of Use Case | | | | |
|--|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 155 | - | - | ELDER-SPACES - group forming for common activities (part 1) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-20 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #learning; #human_communication; #key_enabling_technology:communication_functions; #work:type:retired; #work:system_scope:communication; #relationships; #life_areas:education; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>UC ROLES</p> <p>Katerina (Retired Philologist, Platform Moderator): Katerina (62) is a retired philologist who lives with her son in Trikala, Greece. She is passionate with Greek Mythology. She would like to share her passion with other people who have the same interest. She would also like to enrich her knowledge about Greek Mythology through electronic libraries. Thus she uses the facilities of the ELDER-SPACES platform.</p> <p>George (Computer Engineer, Platform Administrator): George (32) is the ELDER-SPACES platform's administrator. He is able to create users and groups, grant access to users for conducting a series of activities, turn a simple user to moderator and he is also responsible for the proper functionality of the platform.</p> <p>Alexander (Retired clerk): Alexander (73) is a retired clerk and lives in Athens, Greece. He is also passionate with Greek Mythology, but finds it difficult to talk with others about Mythology. Thus, he advises the ELDER-SPACES platform and shares his hobby.</p> <p>Paul (Farmer): Paul (68) is a farmer who lives in Serres, Greece. He knows quite a few about Greek Mythology, but shows interest to know more through the ELDER-SPACES platform.</p> <p>Claudio (Teacher): Claudio (59) is a teacher who lives in Rome and teaches Roman History and Ancient Greek in High School. He has discovered the ELDER-SPACES platform by chance through a search-engine, when he was looking for information regarding a 'mythological' lemma.</p> <p>Maria (Student): Maria (22) is studying History in Rome, being a student of Claudio. Her origin is from Kalamata, Greece, and as she is living abroad and feels homesick, she considers that it would be great to participate to the ELDER-SPACES platform as a guest, where she could exchange ideas mostly with Greek citizens. Her engagement with the platform emerged after Claudio mentioned and proposed it in one of his lectures.</p> <p>UC DESCRIPTION</p> <p>Katerina logs in the ELDER-SPACES platform searching for a "Greek Mythology" subject. After a few unsuccessful attempts, she realizes that there is not such an activity created so she tries to create one instead. As she has not the privilege to create the event, she asks George to create the activity. George turns Katerina to a site's moderator, thus Katerina has now the ability and creates an activity by herself, entitled "Greek Mythology". As a first comment, she writes that she is interested in exchanging views and commenting on the ancient Greek mythology.</p> <p>Two days after the creation of the activity, Alexander who is an existing ELDER-SPACES user, locates this topic which attracts his interest, by navigating throughout the platform's subjects. He decides to join that group and exchanges the first ideas with Katerina. After a week, he finds out that his cousin Paul has been registered to the ELDER-SPACES platform and decides to invite him in the group. Paul, although not familiar with Greek Mythology, finds attractive the idea and takes part in the discussions.</p> <p>In the meantime, Claudio tries to extract more information on a mythological lemma, so as to be better prepared for his forthcoming lecture. At first he tries an internet search engine, where he accidentally runs into Elder-Space's platform. He immediately recognizes the subject for mythology and decides to register and join that group. From his first visit to the platform he finds out that the level of the discussions is high, and that he indeed learns new aspects of Mythology. Thus, he decides to propose this website to his students in History Class, where Maria seems to be the most active mimic.</p> |

UC 156-02: ELDER-SPACES - group forming for common activities (part 2)

General

| Name of Use Case | | | | |
|---|-------------|------------------------------------|---|--|
| ID | Domain Role | Function | Name of Use Case | |
| 156 | - | - | ELDER-SPACES - group forming for common activities (part 2) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-23 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:communication_functions; #human_communication; #relationships; #work:type:retired; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| UC ROLES |

Kostas (Farmer, Platform Moderator):

Kostas (60) is a farmer who lives with his wife in the suburbs of Trikala, Greece. He loves animals and is quite affectionate to his two pet dogs. He and his wife Alexandra are members of Animal Welfare Organizations, and meet with other members once per year national wide. At the time being he tries to find hobbies and interests through local newspaper advertisements, when he takes into consideration the Elder-Spaces platform and realizes that it could be used as a tool for organizing the members of the Animal Welfare.

Alexandra (Housewife):

Alexandra (58) is a housewife and spouse of Kostas. As they do not have children of their own, they both have developed remarkable affection towards animals. She fully supports Kostas in his effort of organizing the other members of the Animal Welfare.

Tom (Retired private employee):

Tom (68) is a retired private employee widower who lives isolated in an apartment in the centre of Athens, Greece, along with his cat. He is an ex-president of an Animal Welfare Organization, but finds it difficult to visit and participate in its events as it is located in the city's suburbs and he deals with mobility issues. Thus, he finds Elder-Spaces platform as an extremely helpful opportunity to express himself.

Sophia (Student):

Sophia (14) is a student, lives in Munich, Germany, with her parents and her cat and is Tom's granddaughter. She has recently been invited by Tom to participate in the Elder-Spaces platform. She is thrilled with this idea, as she will have the chance to communicate regularly with her beloved grandfather.

UC DESCRIPTION

Kostas logs in the Elder-Spaces platform and decides to create an Animal Welfare group. He introduces his wife Alexandra and himself to the group's comment fields, explaining that they both are existing members of an Animal Welfare Organization. Although most of the times they are connected to internet together by home, they decide to have one separate account each.

Alexandra decides to send electronic invitations to join the group a number of members they knew as a couple from the past. The first one to accept the invitation is proved to be Tom, who is excited with the idea. Tom starts sending invitations on his turn, to as many of the members he could remember throughout the years of his presidency. After a month of its creation, the group reaches 100 members, most of them Tom's retired known.

Sophia is a side-effect member of the group, but really enjoys both talking about animals and also learning the latest news from Tom.

UC 157-02: ELDER-SPACES - group forming for common activities (part 3)

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 157 | - | - | ELDER-SPACES - group forming for common activities (part 3) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-23 | Doma | | Initial |

| | | | |
|--|------------|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | Draft |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| Visionary | | | |
| Generic, Regional or National Relation | | | |
| - | | | |
| Further Keywords for Classification | | | |
| #work:type:retired; #stakeholder:secondary:relatives; #human_communication; #key_enabling_technology:communication_functions; #work:system_scope:mentoring; #learning; #purpose:security:access_control; #community:recreation; #life_areas:work | | | |
| Scope and Objectives of Use Case | | | |
| - | | | |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| Complete Description |
| <p>UC ROLES</p> <p>Mr Takács (moderator/ elderly/ Travel Memory network idea holder): Active iWiW subscriber, he is 57 years old. He is retired, but he was a teacher of mathematics and he uses actively the internet in his free time since the last 5 years. He moderates the Memory Travel thematic network for elderly at iWiW.</p> <p>Mr Kovacs (elderly/ memory shareholder): Active iWiW subscriber, he is member of several clubs and he likes so much art. He is visiting at least once Budapest Art Gallery.</p> <p>Zsolt (ICT facilitator/ youngster at iWiW): IT professional, youngster, iWiW and Facebook subscriber.</p> <p>Mrs Karola (elderly /memory shareholder): Active iWiW subscriber, she is 58 years old, living there with her husband.</p> <p>Mrs Zsuzsanna (elderly/memory shareholder): Active iWiW subscriber, she is 77 years old, she lives alone in the Seniorhouse, and she is using Facebook also every day.</p> <p>UC DESCRIPTION</p> |

The Participant is living at St Gellert Seniorhouse in Budapest, District XI. In this senior house the average age of the elderly are +55 till 92 years of age. Both are active in several activities. Some of them are the members of Budapest Art Brut Gallery, some of them are using the Internet corner within the Seniorhouse almost every day. Some of them are going for art therapy actively (once or more per week) to the SOTE Clinics of Physiatry and Physiotherapy to Balassi street 6, in Budapest. Their children live in different countries, mainly in USA, but also in France, Belgium and Sweden. Mr Takacs is organising a Travel Memory club once per week, in each Monday evening, where the club members are in the Library room with permanent access to Internet. This is a special occasion to digitalise the old photos into different photo format, into bmp, jpeg and png, with the help of one young IT professional. His name is Zsolt and he is helping to create the personal digital photo album of everyone, who are only starters. He takes a short „how to do“ session about the necessary steps;

Step 1: Creating a Travel Memory in a selected country on iWiW

Step 2: Automatically creating an event in the social platforms, based on the Travel Memory (iWiW Event API must be implemented)

Step 3: Sharing Travel Memories with friends and family

Step 4: Listing friends' Travel Memories in a selected country

When some of the club members asking Zsolt about other social functions on iWiW, he explains three more options and he shows to the interested elderly what they have to do;

Option 1: Other social functions, such as commenting and uploading photos or videos are available in the social platform.

Option 2: Moodies will be integrated into the platform as well, as new functionality. Funlcon applications collect social interaction data via the Internet to provide emotion researchers with a better understanding of how people interact. The purpose is to create a more intuitive social interface. The privacy is completely protected. Transaction data is logged in an anonymous manner and is analysed using statistical tools.

Option 3: Facial Samples. Create your personalized Funlcon from your very own photographs. The process is simple and fast. You record a number of photographs as shown in the example below. First you create a **NEUTRAL** image, then make different snapshots of your different **EMOTIONS** (Happy, Sad, Anger, Disgust, Fear, Surprise) and **EXPRESSIONS** such as funny faces (Kiss, Blow, etc.). You may also take several sets, this will make your Funlcon more versatile. Finally, you specify in what order on the **DISC CONTROLLER** you want them to appear and any **SPECIAL INSTRUCTIONS** before you upload your images. We will take care of the rest and you will shortly receive your personalized Funlcon to be used on FaceBook, Skype / Instant Messaging, On-line 3D Worlds & Games, Mobile Phones and many more places.

UC 158-02: ELDER-SPACES - organizing events by social service provider

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 158 | - | - | ELDER-SPACES - organizing events by social service provider | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-23 | Doma | | Initial |

| | | | |
|--|------------|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | Draft |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| Visionary | | | |
| Generic, Regional or National Relation | | | |
| - | | | |
| Further Keywords for Classification | | | |
| #mental, #stakeholder:secondary:professional_care, #stakeholder:secondary:relatives, #key_enabling_technology:communication_functions, #human_communication, #community:recreation | | | |
| Scope and Objectives of Use Case | | | |
| - | | | |

Narrative of Use Case

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| Narrative of Use Case |
| Complete Description |
| <p>UC ROLES</p> <p>Michaela (Manager): Michaela (43) is the team manager at the residential home “House Bethesda”. She manages the personnel and the finances of the institution.</p> <p>Peter (Occupational therapist): Peter (56) is the occupational therapist of “House Bethesda”. He does the ergo therapeutic therapies, but also manages activities like excursions or celebrations for the residents.</p> <p>Rosi (Resident): Rosi (80) is a resident at “House Bethesda”. She has lifelong been a housewife. She has 2 daughters and a son, is widowed since 5 years and suffers from mild dementia.</p> <p>Petra (Relative): Petra is a saleswoman in a bakery and lives in the city, where “House Bethesda” is. She is the daughter of Rosi, visiting her twice a week.</p> <p>UC DESCRIPTION Peter makes the proposal to Michaela, to make a barbecue for the residents, their relatives and the team of “House Bethesda” as this year’s main summer event. Michaela has the objection that the financial situation is not good enough to finance a barbecue for so many people. Peter proposes to search sponsors. Michaela</p> |

decides to use the Elder-Spaces platform to organize the event and the acquisition of needed things for the barbecue.

She creates a discussion announcing the barbecue and explaining the situation. She also notifies all group members about that discussion and creates an event on the platform, where users may confirm their participation. Peter made a list of the needed things. Michaela creates a poll of it, where group members may enter, which things of the list they will donate.

Petra talks to her boss after reading the discussion, which will donor all the bread needed. She enters that to the list. She also confirms her participation. Even Rosi and Peter confirm their participation.

UC 159-02: ELDER-SPACES - lifelong learning and structured training

General

| Name of Use Case | | | | |
|--|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 159 | - | - | ELDER-SPACES - lifelong learning and structured training | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-23 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER-SPACES_e-Trikala_WP1_D1-3_v1.4_for_Review.pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #work:type:retired; #learning; #key_enabling_technology:communication_functions; #human_communication; #stakeholder:secondary:relatives; #community:recreation; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |

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Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>UC ROLES</p> <p>Odisseas (Retired farmer): Odisseas (56) is a retired farmer who lives in Trikala, Greece. His son has recently succeeded in the last exams and is studying in the University of Athens, Greece. Prior to their journey to Athens by their car, he is equipped with a GPS in order to drive feasibly in the unknown to him streets of Athens. The problem is that he needs help on how to properly use the device. So, he poses this issue on Elder-Spaces platform.</p> <p>Melpomeni (Taxi driver): Melpomeni (57) is a taxi driver who lives in Athens Greece. She tries to catch up on new technology, already possessing GPS on her professional vehicle. She finds Odisseas' quest quite easy to explain, as she uses such a device for the last 10 years. She decides to use Elder-Spaces platform and create a thorough step-by-step guide, analysing with simple wording the functionality of the device.</p> <p>Erato (Housewife): Erato (59) is a housewife who lives in Arta, Greece. Her children found out of Elder-Spaces through internet, and suggested that she could register and ask herself whatever she does not understand from "new technology". After being member for a month, she creates a query on how to create documents via a PC, in an attempt to digitize her recipes collection.</p> <p>UC DESCRIPTION Odisseas logs in the Elder-Spaces platform and poses a query on how to use a GPS device. He comments that although the employee of the shop was speaking to him in simple wording, he cannot still find out how to function his newly bought device. So, he would like another member to practically explain the main functionality.</p> <p>Melpomeni who is using GPS for the last decade, decides to create a step-by-step guide in order to help Odisseas. She uses even screenshots from the specific model's navigation menu, turning the guide to a visualized tutorial, which she uploads on the platform.</p> <p>In the meantime, Erato tries to follow the posts that already exist in the platform and decides to initiate a new one. As she explains, she would like to digitize her recipes collection, due to the fact that nearly half of them are written in old timeworn pieces of paper. Thus, she would like to be trained on how to write documents on her PC.</p> <p>UC ROLES</p> <p>Anastasia (Pensioner): Anastasia (60) is lives in Edessa, Greece. She is recently retired and tries to find new hobbies to occupy her time. She knows how to play other card games, but she would like to know how to play 'Bridge'. Thus, she initiates such a query hoping to be trained on how to play.</p> <p>Charalampos (Private employee): Charalampos (56) is a private employee who lives and works in Thessaloniki, Greece. He is an active member of the Greek 'Bridge' Association, taking part in national and international tournaments. For him, it is quite positive that through Elder-Spaces he can properly teach 'Bridge' to others.</p> <p>Theodoros (Pensioner): Theodoros (67) lives in Pella, Greece, and likewise Anastasia tries to occupy his time. He visits the KAPI of his neighbourhood, but feels no interested in playing the same game ('xeri') all the time. He logs in Elder-Spaces platform and follows the instructions on how to learn and play 'bridge'.</p> |

UC DESCRIPTION

Anastasia logs in the Elder-Spaces platform and poses a query on how to play ‘_Bridge’. She has heard that it is quite interesting and she would like an expert teach her throughout the platform.

Charalampos logs in the platform and starts commenting on how to play the game. Due to the fact that the rules are a bit complicated, he decides to follow step-by-step instructions. He considers that a 7-day course would be feasible to turn someone to bridge player.

Theodoros starts following the instructions and invites more of his KAPI friends to try themselves this new card game.

UC 160-02: ELDER-SPACES - search function**General**

| Name of Use Case | | | | |
|--|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 160 | - | - | ELDER-SPACES - search function | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-23 | Doma | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| D1.3: Scenarios, Use Cases and Target User Groups (ELDER- SPACES_e- Trikala_WP1_D1- 3_v1.4_for_Review. pdf) (AAL JP Call 2) | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #human_communication; #relationships; #work:type:retired; #key_enabling_technology:communication_functions; #key_enabling_technology:games; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case | |
|--|--|
| | |
| Complete Description | |
| <p>UC ROLES</p> <p>Stella (Pensioner): Stella (62) lives in Bologna, Italy. She wants to search for any classmates of her since the elementary school. Her interest is focused on the period from 1956 to 1968. She cannot locate any relevant information and though decides to create a new group called "Old classmates", analysing the schools she attended per year.</p> <p>Persefoni (Pensioner): Persefoni (64) lives in the suburbs of Bologna, Italy. She is already an 'Elder-Spaces' friend of Stella, and gets a notification of her to join the group. She is surprised to see that she had attended the same High School, without knowing that any of the two 'friends'.</p> <p>UC DESCRIPTION Stella logs in the Elder-Spaces platform and searches for any of her old classmates. She is mainly focused on the decade 1956-1966, where she had some of the best memories of her childhood. Her query returns no results, thus she creates a new group, "Old Classmates". She sends notification messages to her existing near-aged friends, in order to forward this query to people of their environment who may be concerned. Persefoni, who is already registered in Elder-Spaces, decides to join the group. Then she is surprised to see that during the years 1962-1964 they attended the same High school.</p> <p>UC ROLE</p> <p>Panagiotis (Pensioner): Panagiotis (76) lives in Munich, Germany. He is accustomed to the Elder-Spaces platform, as he already participates in many groups and uses many of its applications. His age though makes him forget which steps to follow in order to locate a desired application. Thus, he uses the special provided search text field of the platform which points him directly to the desired location inside the platform.</p> <p>UC DESCRIPTION Panagiotis logs in the Elder-Spaces platform and wants to comment on a newly created group concerning politics. As he cannot remember the exact steps to follow, he uses the search tool provided by the platform. After commenting on this group, a 'friend' of his challenges him to play backgammon throughout Elder-Spaces. Panagiotis accepts the challenge, but as he cannot remember once again how to reach the application, he uses the search tool.</p> | |

UC 163-02: Fosible - Smart TV

General

| Name of Use Case | | | | |
|--------------------|-------------|-----------------------------|--------------------|-------------------------------|
| ID | Domain Role | Function | Name of Use Case | |
| 163 | | | Fosible - Smart TV | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or | | Approval Status draft, for |

| | | | | | | | | |
|--|-------------|--------------------|--|------------------------------------|--|--|--|--|
| | | Committee | | comments, for voting, final | | | | |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial | | | | |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft | | | | |
| Basic Information to Use Case | | | | | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | | | | | |
| Fosible - D2.1: Report on user requirements as with respect to the addressed applications. Delivery date: M4 (updated version due 31.01.2012) (AAL-JP Call 2) | Link | | Public | | | | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | | | | | |
| Visionary | | | | | | | | |
| Generic, Regional or National Relation | | | | | | | | |
| Generic | | | | | | | | |
| Further Keywords for Classification | | | | | | | | |
| #neuromusculoskeletal:joints_and_bones, #sensory:pain, #relationships, #mobility:walking, #community:religion, #stakeholder:secondary:relatives, #key_enabling_technology:ambient, #localization:indoor, #human_communication, #key_enabling_technology:communication_functions, #key_enabling_technology:games, #self_care:looking_after_ones_health, #key_enabling_technology:mobile_devices, #learning, #general_tasks:daily_routine, #domestic_life:shopping, #domestic_life:household_tasks, #purpose:safety:disease_rehabilitation, #key_enabling_technology:telemedicine, #stakeholder:secondary:doctors, #key_enabling_technology:body_area, #key_enabling_technology:vital_parameters, #purpose:safety:alert_detection, #mobility:transportation, #stakeholder:secondary:non_medical_services | | | | | | | | |
| Scope and Objectives of Use Case | | | | | | | | |
| | | | | | | | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| Rosa Lind is a 78-year old widow who is living on her own in her house in a small town. She is glad that she still can manage her every-day life mostly independently. Her biggest problem is joint pain due to arthritis in her arms, legs and hips which comes regularly. When an acute attack arises she is not able to leave her flat as the pain is too strong. In those cases she is happy that she has a nice neighbor who helps her with the groceries. The main problem for her when she is not able to leave her house is that she then is isolated and feeling alone: She misses the chats with people she talks regularly to, as the shop assistants at the shops |

and at the post office. She also loves to join the weekly bridge afternoon which is organized by the local church. She then has the chance to see other elder ladies from the quarter she otherwise could not meet as all are not so mobile anymore, due to the same or other health-related reasons, and do not live in walking distance. As the bridge meeting for all is a traditional event they join since long time, their children try to bring them to the church center by car, but it is not always possible for all to participate, dependent on the availability of the children.

Rosa is a widow since three years, and she has also lost her siblings who all her life had been her close social network. Her family relations today are reduced to her daughter and son-in-law with their two 8 and 10-year old daughters who are living quite far away in another city. They come to visit the grand-mother regularly once a month on a Sunday. As she is more and more bounded to her house, Rosa is very happy that her son-in-law bought her a special TV which can more than only watching TV:

General Connectedness: She likes to watch a daily TV show – as much as some of her bridge ladies, too. In the past, when all were more mobile, she and three of the ladies met often to watch the show together. The special TV allows now a watching situation as sitting all together in front of the TV: when she activates a “buddy-list” overlay, pictures of the ladies from her network who are also watching the show are shown. She can also see if some of the ladies are watching another program, and she can invite them to watch the program she is watching. If they accept, the TV automatically switches to the right program. They can then also chat by text input or even talk to each other and comment the show. If one of her friend does not appear on the “buddy-list” she can contact her to let her know that other friends are watching the TV show. Other shows she likes to watch “together” with her grand-daughters, they either arrange dates for commonly watching TV or sometimes they just show that they are watching a program and then Rosa knows “ah, they are there”. The children and grand-children also like the feeling that granny is also “there” when she has activated the “I am also on the sofa” - button. For these situations of “just being there” as sitting beside each other on the sofa without talking rather just watching, Rosa likes her “caress-y”. It is a little ball which vibrates and gets warm when the remote grand-daughters have it in their hands and stroke it. Also Rosa can transport her emotional feelings via stroking the ball to her grand-children.

Video chat. It often happens that after the show they start a video chat. Rosa likes this new way of talking to each other very much and the new TV has enriched the basis for a chat with her grand-daughters. In former times they only talked on the phone, but it was hard to find interesting topics for a longer chat with the children who often were too impatient for a longer telephone chat. Now the commonly watched TV program is a nice hanger to start a conversation on topics both are interested in.

Gaming. As Rosa has reported to her bridge ladies on the advantages of her son-in-laws’ special TV some other also have bought and installed one. As many of them are no more able to join the meeting regularly, they have started to play bridge via the TV. There are different ways of starting a game. Via the menu Rosa can invite the ladies and propose a date for the next game. Or they decide to start a game spontaneously after haven commonly watched their TV show. The game is displayed like that: they all see a 3D bridge table, and figures representing the players. Each player sees her cards and can easily select a card and put it on the table. Further the level of distribution can be different. On some days Rosa plays with two of her friends physically together on the table against two other friends which are physically together too over the internet. The System can flexible integrate single player or groups of player which are physically together or distributed. She also likes to “meet” her grand-daughters for common games. With them she plays gym games. She opens then the virtual “gym” and can see her and the children as figures on the screen. By means of a controller and stripes which she puts around her arms and legs she can play different immersive games with the children. She likes the games very much as she can adapt movements on the screen to her daily conditions, e.g. when she cannot lift her arm very high she can accomplish small movements and the special TV adapts them to the game.

Being connected by sensors in the house. As Rosa is often doing homework in the kitchen and then cannot notice if an invitation for a “couch game” or “couch experience” is entering on the TV, she likes her notify device “Noty”. “Noty” is a smart-phone/picture-frame-like device which displays photos of the persons of her inner network – as her ladies and her family members – when these are on the TV and have sent an invitation to a common activity. “Noty” also displays notes of the people. “Noty” also contains some symbols which represent the grand-children. When the color of the symbols change, Rosa gets a sense of the

activities of the children, e.g. green shows that they are playing outside in the garden. She likes this very much as she – despite the distance – has the feeling that she is connected closely to her children and grandchildren and can take a bit part at their lives. Noty also can do something else: it gives a sense of activities which have happened in Rosa's virtual community. Then Rosa knows who of her peers in the forum are online and she can decide to go her special TV and join the activities in the forum she likes.

Virtual groups. "The internet" always has been something to Rosa which is only useful for younger people. But since her special TV also provides access to the internet she developed an interest to use it, too. As she had heard that you can find everything in the internet, she has asked her daughter to search together with her for information on coping with arthritis. Through the TV she can also access community forums, where she can help her peers or ask for advice. They detected a forum where affected persons exchange their experiences. Rosa now likes to take part in discussions on that forum. She has found some very nice other people with similar problems. She has even invited some of them, after she knew them for a while, to connect with her on her special TV device to be able to voice chat or video chat.

Media exchange platform. Another experience the special TV provides is her "modern photo album". Here, her family can send photos. As taking a picture and uploading it is very easily done via smart phones, children and grand-children send photos very often and of every-day activities. Rosa can also see the arrivals of new pictures on "Noty". The same can be done with videos. But Rosa can also produce content and send it to others. She herself can take pictures and videos with "Noty" and send them to peers and family. She is especially thankful for being able to write down a shopping list using "Noty", which is then transported to her neighbor. She prefers to send the list on this way as she is afraid to disturbing her neighbors when she calls them on the phone. The neighbors are free to choose the way they wish to receive the list, either via email or sms. Rosa's grand-daughters or she herself can also record a program which is broadcasted too late in the evening, when Rosa and the grand-daughter are already asleep. This program will then be available on the TV and they will be able to decide when they want to watch the program together.

Sharing common activities. Besides watching TV together, Rosa can also share other activities with her peers or family. She likes to cook and she would like to share this experience with others. "Noty" knows when she is cooking (through sensors in her kitchen appliances) and notifies others as soon as she starts. When someone wants to join her, they can set up a voice or video chat while cooking. Noty also allows transmitting the recipe to others so they can cook the same food.

Window to the quarter. As so many elder people who are living in the quarter are not so mobile anymore, the church has started a project to bring events to the peoples' living rooms. They have installed cameras on different public places in the quarter. Rosa likes to open the "quarter window", especially the park where the children play in the afternoons. Due to privacy protection, only the silhouettes of the people are being transmitted.

Training together: As Rosa is suffering from arthritis, regular exercising is very important for her. Using her TV she can join specific exercise courses which help her to improve her coordination abilities. Rosa's friends, who suffer similar pain from now and then, are also interested in doing exercises. In cooperation with a physiotherapist, a group-gym lesson is organized and transmitted via the TV on a regular basis. Thus, Rosa can stay in contact with her friends and practice her exercises. To ensure that Rosa does not overextend herself and fulfills the exercises in a correct way, the camera, which is usually used to communicate with her relatives and friends, is used to transfer her picture to the screen of the physiotherapist. In addition to the visual monitoring of the movements, Rosa is wearing a pulse meter, recording the course of her heart rate during the exercise lesson, which can be used as feedback of the intensity for the physiotherapist. After the training, Rosa receives automatic feedback on her training progress and is reminded to drink something afterwards.

Organizing and support: Rosa has not only bad days. On some days her only problem is that she lives too far away from her friends. Her family has not always the time to drive her around so that she can anticipate on her favorite events. As a work around Rosa sometimes uses the taxi or the public service system (bus, train and so on). But the taxi is very expensive and if she takes the bus it's often very complicated and exhausting because Rosa has to change the bus very often. The System can help Rosa and her friends to stay connected and help to organize the meetings. Therefore the system connects the meetings of all of

Rosa's friends and searches for similarities. If the system recognizes that Rosa and some friends want to go to the same event, the system plans the way for all participants. The system may recommend driving with the taxi because all friends live near the route to the event. So the costs for the taxi could be shared. Further, the system can help finding new Events for a group of people. If Rosa and some friends want to do something new they can ask the system for support. Based on the interests and the situation of Rosa and her friends the System can provide suggestions for new activities. The activities could be evaluated by distance, by disabilities (maybe someone couldn't walk for long distances...) or by chances and abilities (maybe someone of the group has a car or will be driven by family) of the participants.

Gesture recognition user interface: As Rosa is suffering from arthritis, using a standard keyboard or a mouse is problematic for her. She rather likes to control her media- and gaming platform by simple hand and arm gestures. When she sits in front of her media center or TV furniture she is recognized and welcomed by the system. A number of options to use the system are displayed. She is able to control the system, navigate through menus and select the option she likes by about 10 basic hand and arm gestures. The same gesture recognition supports her in doing her exercises in a correct way. Differently than with many other systems Rosa does not need to use an electronic pen or hold a reflective device ('marker') which easily get lost in Rosas apartment as she often forgets where she puts things.

UC 164-02: Fosible - Smart Furniture

General

| Name of Use Case | | | | |
|--|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 164 | | | Fosible - Smart Furniture | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.1: Report on user requirements as with respect to the addressed applications. Delivery date: M4 (updated version due 31.01.2012) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |

| Generic, Regional or National Relation |
|--|
| Generic |
| Further Keywords for Classification |
| #key_enabling_technology:home_automation, #key_enabling_technology:communication_functions, #relationships, #human_communication, #localization:indoor, #stakeholder:secondary:relatives, #key_enabling_technology:ambient |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Rosa likes to sit in front of her working desk, reading newspaper, doing some daily tasks.</p> <p>a. The “SmartLamp” looks like a desk lamp (that can be also used as a classical lamp). It can project pictures, video, browser, news and custom interface for interaction on top of the desk. Rosa interacts and manages information on the desk by finger touch or touch-and-drag. She can also use digital pen to enter text or push the content. The lamp has a camera that tracks Rosa’s finger movement. Small projectors project multiple screens of information on different places which can Rosa re-arrange as she wants by finger drag. The projector can also project on wall if lamp is close to the wall.</p> <p>b. Smart-Lamp projected info can be easily managed by finger touch or digital pen. The size of text, size of content can be increased to a level of size of the desk which can be much bigger than typical home LCD/Plasma TVs. Due to decreased dexterity in fingers, Rosa likes simple navigation by hand and digital pen.</p> <p>c. Rosa can find every day news on the table to read, it will automatically project as she approaches the lamp</p> <p>d. Rosa can get pictures or videos sent by her family to the lamp when she approaches the lamp or access specific application for watching (as Media Exchange Platform)</p> <p>e. When family member or friend calls Rosa, the picture/video of member/friend is projected on wall or desk, and/or sound/music is generated. The link can be established when Rosa approaches desk and accepts the call.</p> |

UC 165-02: Fosible - Awareness

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 165 | | | Fosible - Awareness | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |

| | | | | |
|--|------------|------------------|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.2: Documents that describe the functionality of the system and its components. Delivery date: M6 (updated due 31.01.2012) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #work:type:retired; #stakeholder:secondary:relatives; #relationships; #key_enabling_technology:communication_functions; #human_communication; #localization:indoor; #key_enabling_technology:ambient; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Theresia is 65 years old and lives with her husband Peter (69 years) in a house in a small town near Vienna. They have a dog with which they walk every day. Before her retirement 7 years ago she worked as a shop assistant in a fashion boutique.</p> <p>Theresia's four children all live and work in bigger cities and visit her about once per month. Theresia and Peter used to live in Vienna until they retired, so many of their friends are still there. They talk a lot to them on the phone, and sometimes they drive to Vienna to visit a museum or go to the theatre. Although all her neighbours are nice to her, she hasn't yet made a lot of close friends. When Theresia is at home, she sometimes misses the feeling she had in Vienna, when there was always someone around to talk to. She and her neighbour Helga, who lived next door for many years, used to leave messages or small presents at the door from time to time, to remind one of the other. Recently she and Helga got a new device that is connected to their TV and allows them to talk to each other. Furthermore, and more important to them, it allows them to continue with an old tradition: They now can leave messages on the TV screen of the other person. These messages can be of different type: They can be type-written, handwritten, spoken or some images or even video messages. Theresia always needs to smile when she comes home and finds a message from Helga on her screen. It shows her, that Helga is still thinking of her.</p> |

If Theresia wants it Helga automatically gets a notice if she is present in front of her TV set or in the living room. If configured so the device will automatically trigger a call if both are present in the room. So they never miss an occasion to communicate with each other.

Theresia likes the sense of connectedness she gets, when she knows what people are important to her during the day.

UC 166-02: Fosible - Sharing Things Together

General

| Name of Use Case | | | | |
|---|-------------|--|-----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 166 | | | Fosible - Sharing Things Together | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.2: Documents that describe the functionality of the system and its components. Delivery date: M6 (updated due 31.01.2012) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #community:recreation; #stakeholder:secondary:relatives; #work:type:retired; #localization:indoor; #key_enabling_technology:communication_functions; #human_communication; #key_enabling_technology:ambient; #key_enabling_technology:home_automation; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Helga is 66 years old and still active. She lives in the city in a flat with her husband and enjoys short trips to the countryside and other cities. She retired 8 years ago, after working for 23 years as an assistant in a notary's office.</p> <p>Helga has frequent contact with her friends and still meets with one former colleague once a week. She's attending an English conversation club to not forget her English skills. The club is very informal and the members enjoy the relaxed atmosphere.</p> <p>Helga also has the new special set connected to her TV. With it, Helga can not only send little messages to her friends and family, but also share items of common interest. For example, she can share tips on interesting books with the other members of her English conversation club. They all can also write book reviews and share it with everybody involved. With Theresia, she regularly shares recipes about dishes she likes to cook. Any content can be shared in different manners.</p> <p>The device automatically turns on whenever Helga sits in her chair in front of her TV set. A welcome screen appears with a menu that lets her select the main functions via intuitive arm gestures. To help her with the operation the device can be controlled via gestures. Turning the pages of a book for example is easy with a few simple armmovements.</p> |

UC 167-02: Fosible - Museum Visits

General

| Name of Use Case | | | | |
|--|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 167 | | | Fosible - Museum Visits | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.2: Documents that describe the functionality of the system and its components. Delivery date: M6 (updated due 31.01.2012) (AAL-JP | Link | | Public | |

| | | |
|--|--|--|
| Call 2) | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #community:recreation; #work:type:voluntary; #relationships; #key_enabling_technology:communication_functions; #mobility:walking; #human_communication; #key_enabling_technology:ambient; #life_areas:work | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
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| Complete Description |
| <p>Madeleine is 75 years old and she still lives independent in a house in a small town. Until her retirement 20 years ago she worked part-time as a secretary in the local commune. She had frequent contact with many different people in her position as administrative staff. Although her husband died and the fact that she lost contact with her work colleagues she does not feel so isolated.</p> <p>Madeleine is a very independent and active person. She goes every morning to the city centre for shopping. She likes helping people by doing volunteer work at the local parish, taking part in a bridge club once per week and attending philharmonic concerts, but recently her legs make it more and more difficult to walk and she had to give up some of these activities and also the gardening work that she loved. Her neighbour is now caring for her garden and doing shopping for her.</p> <p>What Madeleine preferred was to participate in collective activities organized by a local association for elderly: Roundtable discussions organized by a psychologist, philosophycoffee - a debate around a theme that aims to establishing a philosophical exchange in which everyone can speak, theatre, and annually travel. Unfortunately, since this year, due to financial restrictions, all of these activities are no more organized. This change affects Madeleine and all her friends from the association and as a result, they do not see each other so often anymore.</p> <p>Madeleine recently received from the city (as a part of a local project) a television set with special features that permits her to participate with other persons who are in old people's home in group activities. Virtual guided tours on this special TV for cities and museums can be organised and also collective discussions.</p> |

UC 168-02: Fosible - Round-table discussions

General

| Name of Use Case | | | | |
|--------------------|-------------|----------|-----------------------------------|-----------------|
| ID | Domain Role | Function | Name of Use Case | |
| 168 | | | Fosible - Round-table discussions | |
| Version Management | | | | |
| Changes / Version | Date | Name | | Approval Status |

| | | | | |
|---|------------|-------------------------------|---------------------------------|--|
| | | Author/Editor(s) or Committee | | draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.2: Documents that describe the functionality of the system and its components. Delivery date: M6 (updated due 31.01.2012) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #relationships, #localization:indoor, #key_enabling_technology:ambient, #key_enabling_technology:communication_functions, #human_communication, #learning | | | | |
| Scope and Objectives of Use Case | | | | |
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Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>As Madeleine and her friends liked so much the round-table discussions organised by the local association, they decided to organise them on the TV among all the former members of the association. The only thing is that the round-table discussions were organised by a psychologist and they do not have any idea on how to fix the discussion theme or who will animate the debate. To define interesting themes for everyone they decide to let everyone propose a theme, and all the themes will be treated one by one. Also, persons who want to animate the debate for a theme can put its name beside.</p> <p>After that the date, the theme of the debate and the animator are fixed, every participant receives an alert on her/his TV screen 15 minutes before the meeting starts to remind her/him that the round table discussion that she/he was interested in will start soon.</p> <p>When the meeting begins, a 3D environment with a round table is displayed on the TV screen. All the participants are represented around the table by 3D avatars or their photos (as they prefer) with their names or pseudo. For this first round-table discussion, Madeleine is the animator and the theme is 'the television'.</p> |

Madeleine starts to explain the theme and the objectives of the round-table discussion (based on her last experiences in the local association), she defines also the points to discuss which every participant can access on her/his TV screen from the “round-table plan” rubric. The participants can use a white board if they want to explain something by writing or drawing.

Madeleine and her friends enjoy the discussion and speak about this new special television and how they expect to use it in the future. For their next round-table they decided to invite persons from old people’s home that have more experience with this system to share experiences.

UC 169-02: Fosible - Gaming

General

| Name of Use Case | | | | |
|--|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 169 | | | Fosible - Gaming | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.2: Documents that describe the functionality of the system and its components. Delivery date: M6 (updated due 31.01.2012) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #localization:indoor, #key_enabling_technology:ambient, #key_enabling_technology:communication_functions, #human_communication, #relationships, #key_enabling_technology:games, #self_care:looking_after_ones_health, #stakeholder:secondary:relatives, #community:recreation | | | | |

| |
|---|
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| <p style="text-align: center;">Complete Description</p> <p>Viktor has been using the FoSIBLE product for several months. A SocialTV platform is running on Viktor's TV so that besides TV watching Viktor is also able to keep contact with his friends and relatives by means of video chatting or gameplay. Viktor's sofa is equipped with simple yet big enough controllers in both handrails (arm rest of sofa) and on the floor mat. Two controllers can be removed and put on most sofa handrails. They are big enough for hand yet not too high (Something like a bigger "button joystick" that fits to a hand, looks like a button but have functionality of joystick. Optionally we can also imagine only bigger buttons instead of such joystick). Viktor doesn't like the remote control of the TV due to small buttons, he sometimes uses the controllers on the sofa to control the TV to achieve some simple tasks, e.g. switching channels, or adjusting volume. The sofa is also used to play games on the TV. Viktor likes to play some games on the TV from time to time, because it involves body movement and he can play with his friends even when they are not nearby.</p> <p>Viktor is watching the news in the afternoon. There is nothing special happening today, Viktor is a bit bored by the news. He sees in the buddy-list overlay on the TV that Karl- Heinz is also watching TV. Viktor selects Karl-Heinz from the buddy list and sends him an invitation to a game. Karl-Heinz is using FoSIBLE product too. Being invited to play a game with his friend Viktor, Karl-Heinz sees the invitation on his TV. Karl-Heinz has an option to accept the invitation for the game or to decline it. Karl-Heinz accepts it. The game is then started between Karl-Heinz and Viktor. They can choose to play the game in competitive or collaborative mode.</p> <p>There are 3 games for showcasing. The first is "Online Sudoku". Sudoku is a well-known and widely-accepted game. Viktor likes playing Sudoku very much. He sometimes plays it alone on the TV. The "Online Sudoku" also supports multi-play, so that Viktor can solve a Sudoku puzzle together with friends.</p> <p>The second game is "Bouncing Ball"¹. The concept of the game is conveyed in Figure 3. This game involves much arm and hand movement to move the "plate" in the game to prevent the ball from hitting the player's own goal. Image 1 shows the competitive mode of "Bouncing Ball", however, the game also offers a collaborative mode, where players play side by side. In collaborative mode, Viktor and Karl-Heinz defend the big goal in a way that each of them is responsible for its own half of the big goal.</p> <p>The third game is called "Hit the mice"². The concept is shown in the following picture (Figure 4). In the game there are 4 holes on the ground, and mice might come out of the holes. Hitting the mice correctly in time will bring positive points during the gameplay. The player either presses the hand controllers or taps on the floor matt to hit the corresponding mice on the screen. The game can be either played in a competitive manner to achieve the highest score, or in a team manner to just have fun together. This game involves both movement of the arms and legs.</p> <p>The SocialTV platform is an open platform. New games or applications can be designed for it. Viktor's grandchild occasionally checks the App-marketplace on the SocialTV platform to look for new interesting games. When Viktor's grandchild sees Viktor on the buddy-list overlay, he/she invites Viktor to play a game. After playing the game, they usually establish a video chat to plan family meeting or simply comment the game results. Although Viktor doesn't like some of the games, he enjoys the feeling of living independently but at the mean time staying in tight contact with the family and friends.</p> |

UC 170-02: Fosible - Social TV**General**

| Name of Use Case | | | | |
|---|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 170 | | | Fosible - Social TV | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.2: Documents that describe the functionality of the system and its components. Delivery date: M6 (updated due 31.01.2012) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #relationships, #human_communication, #key_enabling_technology:communication_functions, #key_enabling_technology:ambient, #localization:indoor | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Karl occasionally checks his account on fosible.kaasa.com, where he registered once with his login name |

“karl” and password “karl70”. He also accepted few friendships. When Karl starts TV, a transparent FoSIBLE widget is started, asking Karl to login once with his fosible.kaasa.com login and password into the FoSIBLE widget. Next time this information is automatically remembered upon switching TV on. Upon login, Karl can see regular full-screen TV program rounded with some SocialTV features: (1) selectable buddy list to show who is online watching TV, what channel and current program name, yet optionally if somebody is sitting in front of sofa or is temporarily away of it; (2) positioning on a buddy refreshes wall by showing recent status i.e. recommendations of programs by others or new friend add-ons. (Given that somebody recommended a TV channel and program to Karl, a notification to either accept or not this program is shown. For simplicity we assume this is not the case right now as it will be described later). Karl-Heinz is switching channels and stops on ZDF, while his friend is watching SAT3 program. Buddy list shows to Karl-Heinz that his friend is online and he is watching SAT3 with current program titled “Daily News”. Karl-Heinz positions to SAT3 as well.

Karl-Heinz and his friend start a chat to see if there is anybody writing there as of channel-chat functionality (chat with friends watching same channel). Karl-Heinz types some words via tablet. But, seeing nobody is interested in chat, Karl decides to switch channel to RTL1 where he decides to check if something interesting might be going on worth to recommend to his friend for watching. He selects his friend from the buddy list and context menu shows up offering to send message, or recommend channel/program, or continue watching just his TV channel. Karl decides to send recommendation, what brings up a TV-Guide window showing program list and timeline of different channels. He observes that “Baywatch” is to start at 18.00 in 2 hours from now on RTL2. He decides to recommend this to his friend. Karl still watches RTL1. Karl's friend receives the recommendation notification popup with option to either accept recommendation or not. Choosing recommendation enables a reminder popup 15 minutes before start of the show. The recommendation is also shown on his wall inside FoSIBLE widget and on the wall of his web account on fosible.kaasa.com. Optionally, Karl decides also to send some message by choosing this option from the contextual menu when selecting his friend.

UC 171-02: Fosible - Reading Club

General

| Name of Use Case | | | | |
|---|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 171 | | | Fosible - Reading Club | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Fosible - D2.2: Documents that describe the functionality of the | Link | | Public | |

| | | |
|---|--|--|
| system and its components. Delivery date: M6 (updated due 31.01.2012) (AAL-JP Call 2) | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #learning, #human_communication, #key_enabling_technology:communication_functions, #key_enabling_technology:ambient, #localization:indoor, #relationships | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>François is staying on his armchair watching a literary program “le bateau livre” on “France 5” channel. He likes to be abreast of literary news. The show discussion was about Jonathan Franzen’s new novel “Freedom”. He activates his buddy list and sees that Madeleine is online, watching “Arte” channel. Using his tablet, he activates the chat box and sends her a message by typing on the virtual keyboard to invite her to switch to “France 5” channel. On Madeleine’s TV the chat box appears on the corner of the screen highlighting the message of François. Then they start to exchange messages about the TV show. Madeleine says, “This is a great show I did not hear about it before”. François is very happy that he can find someone who shares his passion for books.</p> <p>François has an idea: “it will be nice to recommend this book to my book club community”. He activates the FoSIBLE widget. To have access, he does not need to identify himself as he chose to connect automatically by saving his login and password. Once connected, François uses left and right gestures to navigate and find the “Clubs” service. Existing clubs appear and with the tablet he chooses the “Book Club”. François can see on his main page persons who joined the club recently, the most recommended books and the last active discussion(s) on the forum. On his tablet, he clicks on “Recommend a book” icon. A recommendation form is represented. He fills in the form using the virtual keyboard on the tablet -with the book title and author name. From the “Share Book Recommendations” space, François can see what his friends are reading now, and he can keep track of what he would like to read by marking some recommendations as “book to read”. As François wants his best friend Pierre to be notified of this recommendation, he sends him a dedicated message “A really good book! Come this weekend and we can discuss around a cup of tea”. Pierre receives the message instantly on his “Stay in Touch” space with a notification displayed on his tablet.</p> <p>To help the members of the “Book Club” to stay in touch and being aware of the activity of the community, a monthly letter is sent to them by the system on their “stay in touch” inbox. This monthly letter is a kind of newsletter that contains book reviews from the club members and the most recommended readings.</p> |

UC 173-02: HomeDotOld - Video Conference**General**

| Name of Use Case | | | | |
|--|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 173 | | | HomeDotOld - Media Sharing | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HomeDotOld: State-of-the-art and Requirements Analysis (Deliverable D 2.1) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #relationships, #key_enabling_technology:communication_functions, #human_communication, #neuromusculoskeletal:movement, #general_tasks:daily_routine, #purpose:safety:disease_rehabilitation, #key_enabling_technology:ambient, #localization:indoor, #stakeholder:secondary:relatives | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| User-Profile 1: Mary is 84 years old. She worked as a librarian when she was younger and was very socially active. Mary has three sisters but they live spread around over the country. She has a daughter who moved to Australia for studies and never returned home. Mary has a grandson of 12 years old, Kevin. She stays in touch with her daughter and grandson using Skype. Mary always enjoyed learning new things on |

the most diverse topics, including new technologies. Mary is afraid that as she gets older her excellent memory will become less and less. She enjoys different kinds of puzzles to keep her mind active and alert. Unfortunately, her physical condition isn't what it used to be; therefore she doesn't go out much. Still, she gets a lot of visitors to help her out with daily tasks like getting dressed, preparing meals, and etcetera. Once a week someone comes to pick her up to go to a course on brain training. Here she assists the teacher.

User-Profile 2: Kevin is Mary's 12 year old grandson. He is living in Sydney with his father David and his mother Karen, Mary's daughter. Kevin goes to school. Lately he got problems in mathematics.

Combined sub-scenario: Mary sees on her calendar that Kevin had an important mathematics test today. Knowing that he has difficulties with math, she decides to call him to ask how it went. She uses her television to set up a conference call. There is no answer and Mary figures he must still be at school. Mary decides to surprise him by leaving a video message. She planned on going for grocery shopping, however now she decides that it can wait till tomorrow and that she'd rather wait and be home in case Kevin calls her. She changes her status to available. About twenty minutes later, Kevin arrives home from school. Both his parents are still at work and he switches on the TV. He notices a popup on the screen saying that he has a video message from his grandmother. He watches the message and sees that it was left only twenty minutes ago. He checks to see if she is still available and decides to return her call immediately. In the mean time Mary is watching TV. She sees a pop-up message saying the Kevin is calling her. She's accepts his call and they chat for some time about Kevin's test that day and other stuff he has going on at school. Kevin proudly shows his grandmother a work he made during art class.

UC 174-02: HomeDotOld - Media Sharing

General

| Name of Use Case | | | | |
|---|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 174 | | | HomeDotOld - Media Sharing | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HomeDotOld: State-of-the-art and Requirements Analysis (Deliverable D 2.1) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |

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|--|
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #work:type:retired; #sensory:hearing; #neuromusculoskeletal:joints_and_bones; #relationships; #key_enabling_technology:communication_functions; #human_communication; #localization:indoor; #key_enabling_technology:ambient; #stakeholder:secondary:relatives; #life_areas:work |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>User-Profile 1: Mario is a 58 year old retired mechanic who lives in Hamburg. He is mentally fit but he suffers from age-related hearing loss and he also got problems with his knee since he had an accident 4 years ago. In general, Mario is a bit negative, not interested in modern technology. Moreover he is not able to see his son and his grandson very often because they live in Munich. For the use of the HOMEdotOLD system he needs, whenever hearing is necessary, to turn the TV loud.</p> <p>Beside-User-Profile 2: Bernd is Mario's 35 year old son who lives with his wife and his daughter in Munich.</p> <p>Combined sub-scenario: Bernd was on vacation in Italy with his wife and his daughter. He took a lot of nice pictures. Back at home he wants to share these photos with his dad. He uploads the photos from a USB-stick to the HOMEdotOLD "photos, videos, experience" sharing service. When Mario starts his system he gets the information that there have been new photos uploaded from his son. He is now able to take a look at the photos and is thereby more integrated in family life.</p> |

UC 175-02: HomeDotOld - Social Voluntary Work

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 175 | | | HomeDotOld - Social Voluntary Work | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / | Link | | Conditions (limitations) of Use | |

| Literature | | |
|---|------|--------|
| HomeDotOld: State-of-the-art and Requirements Analysis (Deliverable D 2.1) ((AAL-JP Call 2) | Link | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #work:type:retired; #sensory:seeing; #relationships; #key_enabling_technology:ambient; #key_enabling_technology:communication_functions; #community:religion; #work:type:voluntary ; #life_areas:work | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>User-Profile 1: John is a 70 year old retired cook who lives on his own in London. He does not have kids and his wife died 3 years ago. A part from that he got some friends who live around his place and some who live in Spain and Portugal. He loved his work and travelled a lot. Since he retired he feels a bit useless and lonely. His typical daily routine involves reading newspapers and watching football on TV. He is mentally fit but he needs a cane for walking and he suffers from mild sight loss. For the interaction with the HOMEdotOLD system he uses oral speech commands and the remote-control. When trying to control his television it is very hard for John to see the numbers on his remote control due to his farsightedness.</p> <p>Combined sub-scenario 1: John is already using the HOMEdotOLD system for staying in contact with his friends. But he would like to feel more useful and needed by doing something meaningful for people who are in need. So he registered himself to the “social voluntary work” service of the system. The Municipality in which John lives frequently organises cooking of meals for the homeless, usually every Saturday; moreover, the church close to John’s house, once a month, places a stand in the square where people can drop off clothes and food for the homeless. Both these activities are described in detail in the HOMEdotOLD “social voluntary work” service that John has access to, so when registering, John declares his interest in both activities, and does not forget to mention his vast cooking experience. 2 weeks later he gets told by the system, with the assistance of the text to speech functionality, that there is an upcoming social event around his block where he could participate. John will have to cook some meals for homeless people at the event together with his fellow citizens participating in the event. He confirms that he wants to participate by oral speech commands. John is now part of a meaningful activity and therefore feels more self-confident and selfsatisfied.</p> <p>Combined sub-scenario 2: When registering to the “social voluntary work” service of the HOMEdotOLD</p> |

system, only one possibility of voluntary work is available based on the current activities of the local authorities: the church close to John's house, once a month, places a stand in the square where people can drop off clothes and food for the homeless. So when registering, John declares his interest in this activity, however, he does not forget to mention his vast cooking experience when asked about his past profession. 2 months later, the Municipality where John lives decides to organise cooking of meals for the homeless every Saturday. They would love to recruit as many volunteers for this as possible both for cooking meals and serving them to the homeless. Given his cooking experience, John is notified about this upcoming activity and is asked, through the HOMEdotOLD system if he would like to contribute to this activity. He is thrilled that he can practice his cooking skills again, even if his sight does not help him much anymore. His fellow citizens, who have volunteered, like him, will be there to help, if needed, and this gives him a lot of confidence. He gladly volunteers.

UC 176-02: HomeDotOld - Intelligent Calendar

General

| Name of Use Case | | | | |
|--|-------------|--|-----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 176 | | | HomeDotOld - Intelligent Calendar | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HomeDotOld: State-of-the-art and Requirements Analysis (Deliverable D 2.1) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #work:type:retired; #key_enabling_technology:ambient; #human_communication; #learning; #key_enabling_technology:communication_functions; #community:recreation; #localization:indoor; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>User-Profile 1: Susan is a 65 year old grandmother who is a retired mathematician. She is living alone in an assisted living home in Bristol. Her son David had to move to Australia because he got a well paid job there. Susan is mentally and physically fit for her age. Her daily routines involve shopping, walking the dog, cleaning, watching TV and reading books. Her relationship with technology is weak. Since her husband died, she has not used her DVD player anymore. Despite the fact that she has no computer, she is aware of the internet and would like to learn more about it. She is conservative and does not like changes. Moreover she misses her son and her grandson a lot.</p> <p>Beside User-Profile 2: Kevin is Susan's 12 year old grandson. He is living in Sydney with his father David and goes to school. Lately he got problems in mathematics.</p> <p>Combined sub-scenario 1: For some time Susan and her son David are staying in contact with each other through the HOMEdotOLD system. They usually do a videoconference weekly. David told his mother Susan that Kevin got some problems in mathematics. Because private lessons in mathematics are quite expensive, Susan decided to give Kevin a Remote Tutorial with the assistance of the HOMEdotOLD system. They arrange a date for the tutorial through the "intelligent calendar" service. First Kevin suggests a date for the tutorial (e.g. 30th of July 2010 at 6 o'clock pm). Afterwards Susan confirms the date and so it is fixed. Both start the "videoconference" service on the 30th of July 2010 at 6 o'clock and hold the remote tutorial.</p> <p>Combined sub-scenario 2: David lost his job in Sydney so he moved with his son back to Bristol. Susan is happy about that because now she sees her son and her grandson more often. They both had defined in their HOMEdotOLD-profile that they like watching comedy-movies, and that Robert de Niro is one of their favorite actors, so the "intelligent calendar" service automatically suggests possible comedies, or other films with Robert de Niro, being played around their location, in which both Susan and David might be interested. When they enter the "intelligent calendar" service they see the date and the place of the movie which is deposited in colour. They both confirm the date and so it is fixed.</p> |

UC 177-02: HomeDotOld - Remote Dining

General

| Name of Use Case | | | | |
|--------------------|-------------|--|----------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 177 | | | HomeDotOld - Remote Dining | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |

| Basic Information to Use Case | | |
|--|------|---------------------------------|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| HomeDotOld: State-of-the-art and Requirements Analysis (Deliverable D 2.1) (AAL-JP Call 2) | Link | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #work:type:retired; #general_tasks:daily_routine; #human_communication; #relationships; #key_enabling_technology:communication_functions; #key_enabling_technology:ambient; #life_areas:work | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
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| Complete Description |
| <p>User-Profile 1: Pavlos is a 70 year old retired cook. He is living in the country, in a village around 300 km from Athens. After his retirement he decided to live in his old family home. He barely sees his family as they reside in Koropi, a city neighbouring Athens and due to distance and time issues they hardly come to visit him.</p> <p>Beside User-Profile 2: Maria is a 47 year old divorced mother. She is working and residing in Koropi and she has a 15 year old son, George.</p> <p>Beside User-Profile 3: George is a 15 year old boy living with his mother Maria, in Koropi, Greece.</p> <p>Combined sub-scenario 1: Pavlos seeks more communication with its family members in Koropi, his daughter Maria and his grandson George. Most of all, he would like to share some everyday life moments that due to the distance between them, it becomes increasingly difficult to experience. The three users use the HOMEdotOLD remote dining service not only to see each other through videoconference, but to have a taste of what everyday life could be if they lived together. At least two times in the week, the users turn on remote dining service when they are ready for lunch or dinner, and they start videoconferencing while they are eating. They discuss with each other using the microphone and share the experiences of the day, having that way a sense that they are living together. HOMEdotOLD remote dining service makes Pavlos feel less lonely and to have a more vivid contact with his beloved ones.</p> |

UC 178-02: HomeDotOld - News Headlines**General**

| Name of Use Case | | | | |
|---|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 178 | | | HomeDotOld - News Headlines | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-10-31 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HomeDotOld: State-of-the-art and Requirements Analysis (Deliverable D 2.1) (AAL-JP Call 2) | Link | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #work:type:retired; #mobility:walking; #neuromusculoskeletal:movement; #learning; #key_enabling_technology:ambient; #localization:indoor; #community:recreation; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>User-Profile 1: Marios is a 59 year old retired miner. He is living alone in an assisted living home in Koropi. Three years ago, he had a serious accident at work and he was obliged to retire. He has some kinetic problems and he cannot walk for long distances. He spends most of his day in the house and he finds enjoyment in watching TV, for entertainment and information. Once before the accident he used to get a lot of newspapers and to read the news from various sources. Getting informed about the news is of great</p> |

importance to him, as he feels that he is staying in tune with what happens in the society and seeks for the widest information possible.

Beside User-Profile 2: Helena is a 65 year old retired journalist. She is healthy and lives alone in a rural area near Koropi. After her husband died two years ago, she has decided to leave behind the noisy life of Athens and settle down to a more relaxed kind of life. As she has quite plenty of free time, she is leading a newly formed social enterprise in Koropi which organizes information campaigns about excluded people from the job market, and issues a weekly newspaper on local, regional and national developments about social economy.

Combined sub-scenario 1: Marios wants at a glance to be informed about the most prominent features of everyday life, from economic matters to health issues. He uses the personalized news service of HOME dot OLD that he has already customized to fit his individual interests. Once he starts the service the categories he is most interested in, show up. He reads the headlines and selects the topics of his particular choice. He open the links provided to each topic to get further details. Then, he is able now to obtain again the variety of information he wants and in the most personalised way.

Combined sub-scenario 2: HOME dot OLD service "personalized news headlines" is very essential for Helena. Not only it helps her to keep in touch with the latest news, but it also consists an invaluable tool for her social venture and the newspaper she issues. HOME dot OLD flexibility to provide personalized news at different levels (local, regional, national, European) contribute to keep her informed about a (pre) selected topic with the most easy and efficient manner instead of searching to a vast pool of information provided in conventional means such as newspapers and the internet.

UC 183-02: Accompany - Drinking Reminder

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 183 | | | Accompany - Drinking Reminder | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Accompany: Deliverable 2.1 (FP7) | http://rehabilitationrobotics.net/cms2/sites/default/files/ACCOMPANY%20D1.2%20V1%202%20pm%20final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |

| Generic, Regional or National Relation |
|--|
| Generic |
| Further Keywords for Classification |
| #key_enabling_technology:robotic, #purpose:safety:disease_detection, #purpose:safety:disease_prevention, #self_care:drinking, #general_tasks:daily_routine, #key_enabling_technology:communication_functions, #localization:indoor, #digestive:water, #domestic_life:shopping |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| User sits on the sofa in the living room and watches TV/reads. The robot has noticed that she has been sitting there for 2 hours and hasn't had anything to drink for a while (in fact for 5 hours). It approaches her in a friendly/un-intrusive manner with slow/gentle movements/trajectories, adopting an appropriate social interaction distance, produces appropriate attention seeking behaviour - according to previously learnt user-preferences. The robot waits for the user to turn towards the robot. The robot then reminds the user of having something to drink and offers to fetch a drink from the kitchen. The user confirms via the 'interface'. The robot then uses learnt information on the user's drink preferences, goes into the kitchen, picks up a small bottle of water, brings it to the user, waits in front of the user in waiting position until the user indicates through the interface to place the bottle on the table. The robot puts the bottle down, says "You are welcome". The robot then suggests "Would you prefer if I would bring a large bottle next time, so that you drink whenever you like?" The user confirms and enters water on the shopping list. After completing the tasks the robot adopts an "empathic" position (next the user, pretending to "watch TV"), shifting position in synchronisation with the user. |

UC 184-02: Accompany - Activity Reminder

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 184 | | | Accompany - Activity Reminder | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / | Link | | Conditions (limitations) of Use | |

| | | |
|---|---|--------|
| Literature | | |
| Accompany: Deliverable 6.2: Identification and discussion of relevant ethical norms (FP7) | http://rehabilitationrobotics.net/cms2/sites/default/files/ACCOMPANY%20D6.2%20Identification%20and%20discussion%20of%20relevant%20ethical%20norms.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #skin_and_hair, #stakeholder:secondary:professional_care, #key_enabling_technology:communication_functions, #key_enabling_technology:robotic, #self_care:looking_after_ones_health, #mobility:walking, #general_tasks:handling_stress, #self_care:drinking, #key_enabling_technology:health_information, #general_tasks:daily_routine, #localization:indoor | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Marie, who is 78 years old, has lived alone since her husband died ten years ago. She has ulcers on her leg, the dressings for which are changed by a nurse once a week. It is important for the healing of these ulcers that she moves around as much as possible to encourage circulation to her legs and avoid further swelling. Her Care-O-bot® knows that she should be encouraged to move about, and suggests several times a day that she walks with it to look out of the window at either the garden or the street below. Marie is reluctant to get up from her chair because she is afraid of falling and walking is uncomfortable. She also uses the Care-O-bot® to get drinks for her from the kitchen, even though the nurse has suggested that she should go to the kitchen with the Care-O-bot® but let it carry the drinks back to her chair for her. Also the Care-O-bot® can only bring bottles of water to her and the nurse suggests that she would feel warmer if she made herself hot drinks. The Care-O-bot® reminds her to take her antibiotics and to keep her leg up on a stool when she returns to her chair after, for example, going to the toilet. She is grateful for the reminders about the antibiotics but feels irritated about the reminders to elevate her leg as she hardly ever forgets to do this but she likes to get comfortable first. She sometimes put her leg down so that her cat can sit on her lap more comfortably. Her ulcers are slow to heal but when the nurse asks if Marie is moving around more she always says that she is, even though she ignores the prompts to come to the window and doesn't go to the kitchen with the robot.</p> |

UC 185-02: Accompany - Communication Assistance

General

| Name of Use Case | | | | |
|--|---|--|--------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 185 | | | Accompany - Communication Assistance | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Accompany: Deliverable 6.2: Identification and discussion of relevant ethical norms (FP7) | http://rehabilitationrobotics.net/cms2/sites/default/files/ACCOMPANY%20D6.2%20Identification%20and%20discussion%20of%20relevant%20ethical%20norms.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement, #key_enabling_technology:robotic, #relationships, #human_communication, #general_tasks:daily_routine, #key_enabling_technology:communication_functions, #stakeholder:secondary:relatives, #localization:indoor | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| Frank is 89 years old and generally frail. He lives alone and needs assistance from a Care-O-bot® to live independently. He prefers the Care-O-bot® to having the neighbours or carers helping him because he thinks they are inclined to be intrusive and interfering. He uses his Care-O-bot® interface to talk about fishing with a friend he has known since childhood. Neither of them can go fishing anymore, but they enjoy |

talking about when they did and discussing items in a fishing magazine that they both subscribe to. They talk about once a month. Frank really looks forward to these conversations and they put him in a good mood for days afterwards. He becomes quite miserable if his friend is in hospital and unable to talk to him. Frank's daughter has suggested that the Care-O-bot® should be used to encourage Frank join a virtual fishing forum on the internet. She is worried that he only has one friend who is older and poorly and may die leaving Frank with no one else to talk to about fishing. Frank says that he is too old to be making new friends.

UC 186-02: Accompany - Daily Assistance

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 186 | | | Accompany - Daily Assistance | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Accompany: Deliverable 6.2: Identification and discussion of relevant ethical norms (FP7) | http://rehabilitationrobotics.net/cms2/sites/default/files/ACCOMPANY%20D6.2%20Identification%20and%20discussion%20of%20relevant%20ethical%20norms.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #skin_and_hair, #mental, #general_tasks:handling_stress, #localization:indoor, #key_enabling_technology:robotic, #key_enabling_technology:communication_functions, #general_tasks:daily_routine | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Nina who is 70 years old had a stroke two years ago but has now recovered the use of her arm though one side of her face droops slightly. She is self-conscious about this, but it does not affect her physical functioning. She is supported at home by a Care-O-bot®. Since having the stroke she has become quite irritable and impatient. She often shouts at her daughter when she visits and complains angrily about her condition. Her daughter finds this very upsetting and has come to dread her visits. Nina has been so rude and demanding that two cleaners have already refused to work for her anymore. She is usually polite with her friends. Her Care-O-bot® has been programmed so that it will not do things for her if she asks sharply or in a demanding tone. It encourages her to say please and thank you and will withdraw help until she does so. Nina finds this infuriating and insists that the Care-O-bot® is reprogrammed to do what she asks no matter how she asks for help. |

UC 187-02: Accompany - Activity and Daily Assistance

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 187 | | | Accompany - Activity and Daily Assistance | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Accompany: Deliverable 6.2: Identification and discussion of relevant ethical norms (FP7) | http://rehabilitationrobotics.net/cms2/sites/default/files/ACCOMPANY%20D6.2%20Identification%20and%20discussion%20of%20relevant%20ethical%20norms.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |

| |
|--|
| #stakeholder:secondary:relatives, #neuromusculoskeletal:movement, #mobility:walking, #key_enabling_technology:robotic, #key_enabling_technology:games, #key_enabling_technology:telemedicine, #community:recreation, #general_tasks:daily_routine, #purpose:safety:alert_communication, #purpose:safety:fall_detection, #localization:indoor, #key_enabling_technology:communication_functions, #human_communication |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Louis, who is 75 years old, is determined to continue to live in his own home, which is in a small town in which two of his sons live. He is regularly visited by his daughters-in-law, who bring him food, help with his cleaning and do his laundry. Louis was left with some weakness in one of his legs as a result of an accident in his 40's. He is becoming frail and is finding it increasingly difficult to get up from his chair and walk with his sticks. Louis is supported at home by a Care-O-bot®. The Care-O-bot® is programmed to help support him when he gets up from his chair and can be summoned to help if he falls. Louis has discovered that he can use the interface on the Care-O-bot® to visit online gambling sites and enjoys playing poker in the evening. He also uses the interface to give his doctor his blood pressure measurements, and sometimes his medication is adjusted as a result of the measurements he gives. Louis falls over about once a week on average. On the whole he is able to get up again with the help of the Care-O-bot®, but he recently was on the floor for several hours unable to get up and developed a bladder infection from lying in the cold unable to reach the toilet. He was in bed for several days as a result. This placed an additional burden on his daughters-in-law, who took turns to stay with him during the day until he was well enough to live alone. It was during this time that his daughters-in-law realised that he used the Care-O-bot® to play poker on line. They are very unhappy about this as he often loses money. They want access to the poker site to be blocked. They have taken away his sticks so that he has to use his walking frame, which means that he is less likely to fall. They want the Care-O-bot® to be programmed so that it alerts them as soon as he falls. Louis insists that it is up to him what he does with his own money and says that he doesn't want them to come rushing around every time he falls because he can usually get himself up.</p> |

UC 188-02: Cardiac - Dynamic composition complex interfaces (mash-up of services)

General

| Name of Use Case | | | | |
|--------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 188 | | | Cardiac - Dynamic composition complex interfaces (mash-up of services) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |

| | | | |
|---|---|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | Draft |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | Conditions (limitations) of Use | |
| Cardiac: Final Report (D5.4) (FP7) | http://www.cardiac-eu.org/deliverables/CARDIAC_D5.4_Final.pdf | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| Visionary | | | |
| Generic, Regional or National Relation | | | |
| Generic | | | |
| Further Keywords for Classification | | | |
| #sensory:seeing, #key_enabling_technology:communication_functions, #learning | | | |
| Scope and Objectives of Use Case | | | |
| | | | |

Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>Mario is a Spanish blind person travelling abroad. When interacting with a public eKiosk, he indicates that his preferred language is Spanish and that he requires a screen reader. The eKiosk have installed software for automatic generation of personalized interfaces enhanced with the possibility of using mash-up of services. In order to provide the most suitable interface to Mario, the eKiosk's software composes a personalized interface by making use of its personalization capabilities, and two Web Services (WS): one WS provides automatic translation among different languages, and other WS provides screen reading services.</p> |

UC 189-02: Cardiac - Personal Communicator (P-Com)

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 189 | | | Cardiac - Personal Communicator (P-Com) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |

| | | | |
|--|---|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | Draft |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| Visionary | | | |
| Generic, Regional or National Relation | | | |
| Generic | | | |
| Further Keywords for Classification | | | |
| #key_enabling_technology:communication_functions, #key_enabling_technology:ambient, #key_enabling_technology:body_area, #relationships, #human_communication | | | |
| Scope and Objectives of Use Case | | | |
| | | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>In the scenarios it is assumed that Mary (Jane) lives in a possible instantiation of the Information Society, which has evolved as an “Ambient Intelligent (AmI)” environment. The environment is accessible. Audio (e.g. speech synthesis and recognition), video (e.g. gesture recognition) and tactile (able to present information in a tactile form or to react to tactile input) interfaces are freely available in the environment. Special interfaces are supposed to be easily connected to the environment, when necessary.</p> <p>Mary (Jane) is always connected through her personal communicator (P-Com) and the related set of intelligent agents, which are able to grant connection to the environment itself and to all its facilities. Its characteristics and interfaces are not precisely defined, but it can in principle make available all the necessary interaction technologies in order to adapt the environment to the type of interaction suitable for the user and the context of use. It is very likely that the interface is not part of the communicator itself, but of the environment. The communicator is a disembodied functionality supported by the ambient intelligence with different interfaces. Mary (Jane) may wear it as a bracelet, it may be embedded in her clothes but it may also be implantable. It is adaptive, and learns from Mary’s (Jane’s) interactions with the environment. It offers communication, processing and decision-making functions. Its functions may either be based on on-board intelligence or on distributed intelligence in the infrastructure. It deals with calls. When necessary, it becomes an avatar-like system and deals with most of her social communication, using her own voice. There are some characteristics of the communicator important for all people: it is personal, lightweight, wearable, and continuously available. Finally, it is interesting to observe that it must not necessarily be a highly sophisticated piece of equipment, the performances of which may be limited by size, weight, and power. The interaction peripherals and the intelligence needed to support, for example, the transduction of</p> |

information necessary to address the different modalities and to support the user can be in the environment and in the network. In principle, the only limiting factor can be bandwidth.

UC 190-02: Cardiac - Control and interaction with the environment for blind people

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 190 | | | Cardiac - Control and interaction with the environment for blind people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #purpose:comfort:heating, #sensory:seeing, #self_care:eating, #general_tasks:daily_routine, #domestic_life:household_tasks, #key_enabling_technology:communication_functions, #self_care:drinking, #localization:indoor, #key_enabling_technology:ambient, #learning, #key_enabling_technology:home_automation, #domestic_life:shopping, #stakeholder:secondary:non_medical_services, #life_areas:economic_life | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |

| Complete Description | |
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| <p>In the kitchen</p> <p>When Mary wakes up in the morning the rooms of her apartment adopt her 'personality' as she enters.</p> <p>The room temperature is adjusted and a range of music choices are spoken or displayed on a Braille display. However, it is time for the morning news. Since Maria wants to be informed of what happens in the world, the radio is switched on.</p> <p>Using voice commands she can command a bath and switch on the gas under the coffee machine and the milk kettle. When the milk is warm (according to her liking) the gas under the milk is switched off.</p> <p>At the end of the news, the radio tunes on the classical music station normally listened to by Maria. But this morning, Maria must do some shopping and the radio is switched off. She needs her foldable Braille display. Where did she leave it last night?</p> <p>Fortunately, the object has an intelligent tag. It is only necessary to ask the apartment to localize it.</p> | |
| <p>Shopping</p> <p>While taking her breakfast coffee Mary checks whether she has everything it is necessary for today learning. All goods on and in her desk are smart tagged.</p> <p>Mary can remotely check if she has the musical scores she is supposed to play during the day. She is notified of the missing materials by voice or on her Braille display. Her personal intelligent agent starts to explore the network to find out who has the necessary materials, negotiating price and delivery. Musical scores, if available, can be delivered though the network and printed at home.</p> <p>During the day Mary can check the progress of her virtual shopping expedition, using her P-Com or from any enabled device at home, the learning environment or from a kiosk in the street.</p> <p>In the meantime her fridge, on the basis of its contents and the average consumption of food, suggests her what is probably lacking. She confirms the suggestions and asks the fridge to negotiate its delivery with the market. She also authorises the e-fridge to pay up to a limit of €50. If the cost is higher, the fridge is given the task of selecting the most urgent items or reducing quantities, on the basis of Mary's usage statistics.</p> | |

UC 191-02: Cardiac - Control and interaction with the environment for deaf people

General

| Name of Use Case | | | | |
|--------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 191 | | | Cardiac - Control and interaction with the environment for deaf people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-22 | Lars Rölker-Denker | | Initial |

| | | | | |
|---|---|------------------|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #sensory:hearing, #purpose:comfort:lighting, #key_enabling_technology:home_automation, #self_care:washing, #self_care:drinking, #general_tasks:daily_routine, #domestic_life:shopping, #learning, #key_enabling_technology:communication_functions, #human_communication, #self_care:eating, #domestic_life:household_tasks, #key_enabling_technology:ambient, #localization:indoor, #life_areas:economic_life, #stakeholder:secondary:non_medical_services | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>In the kitchen</p> <p>When Mary wakes up in the morning the rooms of her apartment adopt her 'personality' as she enters.</p> <p>The room temperature and default lighting are adjusted and a range of video choices are displayed on the video wall. However, it is time for the morning news. Since Maria wants to be informed of what happens in the world, the subtitled video transmission is switched on.</p> <p>Using voice commands she can command a bath, switch on the gas under the coffee machine and the milk kettle, and adjust the light level. When the milk is warm (according to her liking) the gas under the milk is switched off.</p> <p>At the end of the news, the radio tunes on the video channel normally looked at by Maria. But this morning, Maria must do some shopping and the video is switched off. She needs her glasses. Where did she leave them last night?</p> <p>Fortunately, the object has an intelligent tag. It is only necessary to ask the apartment to localize it.</p> <p>Shopping</p> |

While taking her breakfast coffee Mary checks whether she has everything it is necessary for today learning. All goods on and in her desk are smart tagged.

Mary can remotely check if she has the painting and engraving materials she is supposed to use today. She is notified of the missing materials on the screen of the e-fridge. Her personal intelligent agent starts to explore the network to find out who has the necessary materials, negotiating price and delivery. Painting and engraving materials must be delivered at home or near home. The agent knows the brand(s) of the materials preferred by Mary, but today there is a special offer. It decides to contact her. Audio and visual communication is established with the shop. She can inspect personally the materials, also using a tactile display to check the texture of the materials to be used for the bas-relief she is presently producing, control the colours and discuss with the shop attendant about the characteristics of the offered items. Before deciding, the agent explores reference sites for comments. They are favourable. Therefore the order is confirmed and the agent asks for the material to be delivered to the closest distribution point in her neighbourhood.

During the day Mary can check the progress of her virtual shopping expedition, using her P-Com or from any enabled device at home, the learning environment or from a kiosk in the street.

In the meantime her fridge, on the basis of its contents and the average consumption of food, suggests her what is probably lacking. She confirms the suggestions and asks the fridge to negotiate its delivery with the market. She also authorises the e-fridge to pay up to a limit of €50. If the cost is higher, the fridge is given the task of selecting the most urgent items or reducing quantities, on the basis of Mary's usage statistics.

UC 192-02: Cardiac - Learning and communicating for blind people

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 192 | | | Cardiac - Learning and communicating for blind people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-23 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in | | | | |

| preparation, visionary ...) |
|--|
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #sensory:seeing, #learning, #key_enabling_technology:ambient, #life_areas:education, #relationships, #community:recreation, #key_enabling_technology:questionnaires, #human_communication, #purpose:security:access_control, #stakeholder:secondary:relatives, #key_enabling_technology:communication_functions, #key_enabling_technology:health_information, #stakeholder:secondary:professional_care, #key_enabling_technology:body_area |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>The “social learning environment”</p> <p>Mary moves to her next door learning environment where a plenary meeting of a studies group in a local ‘Ambient for Social Learning’ is taking place. The group ranges from 10 to 75 years old. They share a common desire to learn music (art) and how to express themselves with music (art). It is led by a mentor whose role it is to guide and facilitate the group’s operation. It is not necessary that the mentor is an expert of the field, but only able to cope with the “social” aspects of the meeting.</p> <p>The plenary takes place in a room looking much like a hotel foyer with comfortable furniture pleasantly arranged. The meeting is open from 7.00-23.00 hours. Most participants are there for 4-6 hours. A large group arrives around 9.30 a.m. Some are scheduled to work together in real time and space and thus were requested to be present together (the ambient accesses their agendas to do the scheduling).</p> <p>When Mary enters the room and finds herself a place to work, she hears a familiar voice asking “Hello Mary, I got the assignment you did last night from home: are you satisfied with the results?” Mary answers that she was in general happy with her performance but there is a passage in the second movement where she is not sure.</p> <p>Mary is an active and advanced student so the ambient says it might be useful if Mary spends some time today trying to pin down the problem.</p> <p>The enhanced interactive sound simulation and playing facilities can help her learning to play the difficult music passage, first reproducing and analysing the details of the performances of famous performers and then simulating a personal performance, to be reproduced with a synthesised instrument.</p> <p>The ambient goes briefly through its understanding of Mary’s availability and preferences for the day’s work. Finally, Mary agrees on her work programme for the day.</p> <p>One long conversation takes place with Solomon who has just moved to the area and joined the group. The ambient establishes Solomon’s identity; asks Solomon for the name of an ambient that ‘knows’ Solomon; gets permission from Solomon to acquire information about Solomon’s background and experience. The</p> |

ambient then suggests Solomon to join the meeting and to introduce himself to the group.

In these private conversations the mental states of the group are synchronised with the ambient, individual and collective work plans are agreed. In some cases the assistance of the mentor is requested. A plenary meeting begins with those who are present.

Mary gives a performance of her assignment. A group member asks questions about one of Mary's decisions and alternative performances are listened to.

During the presentation the mentor is feeding observations and questions to the ambient, together with William, an expert who was asked to join the meeting. William, although several thousand miles away, joins to make comments and answer some questions. The main problem is that William speaks only Finnish and therefore the conversation must be translated in real time. Automatic language translation is a common practice, as translation from text to voice and from voice to text, or lip movement, or sign language. The session ends with a discussion of how Mary's work contributes to that of the others and the proposal of schedules for the remainder of the day. The ambient suggests a schedule involving both shared and individual sessions.

During the day individuals and sub-groups locate in appropriate spaces in the ambient to pursue appropriate learning experiences at a pace that suits them. Virtual private spaces are created for the individual groups. The ambient negotiates its degree of participation in these experiences with the aid of the mentor.

The ambient and the mentor will spend some time negotiating shared experiences with other ambients – for example mounting a single musical concert with players from two or more distant sites.

They will also deal with requests for references / profiles of individuals. Time spent in the ambient ends by negotiating a homework assignment with each individual, but only after they have been informed about what the ambient expects to happen for the rest of the day and making appointments for next day or next time.

Unconscious Communication

Mary is proud of 'being in communication with mankind': as are many of her friends. Her P-Com is able to act as a voice activated 'gateway' or digital avatar of herself, familiarly known as 'D-Me' or 'Digital Me'. A D-Me is both a learning device, learning about Mary from his interactions with her environment, and an acting device offering communication, processing and decision-making functionality. Mary has partly 'programmed' it herself, at a very initial stage. At the time, she thought she would 'upgrade' this initial data periodically. But she didn't. She feels quite confident with his D-Me and relies upon its 'intelligent' reactions.

She doesn't want to be bothered during her learning. Nevertheless, all the time her D-Me is receiving and dealing with incoming calls and emails. For example, Mary's D-Me has caught a message from a person D-Me, located in the nearby metro station. This person has left home without her medicine and would feel at ease knowing where and how to access similar drugs in an easy way. She has addressed his query in natural speech to Mary's D-Me, who appears to be nearby. Mary happens to suffer from similar heart problems and uses the same drugs. Mary's D-Me processes the available data as to offer information. It 'decides' neither to reveal Mary's identity (privacy level), nor to offer Mary's direct help (lack of availability), but to list the closest drug shops, the alternative drugs, and to offer a potential contact with the self-help group. This information is shared with the person's D-Me, not with the person herself as to avoid useless information overload.

Communication becomes conscious

The above communication scheme is tenable only when "service" information needs to be exchanged, i.e. neutral information that does not imply any personal involvement of Mary. The D-Me must know what persons she must listen to with particular attention and be able to spot emotions (emotional information

processing) that deserve special attention.

At 11:10 a.m., following many other calls of secondary importance – answered formally but smoothly in corresponding languages by Mary's D-Me with a nice reproduction of Mary's voice and typical accent, a call from her mother is further analysed by his D-Me. In a first attempt, Mary's 'avatar-like' voice runs a brief conversation with her mother, with the intention of negotiating a delay while explaining her current environment. Finally, her mother's call is now interpreted by the D-Me as sufficiently pressing to mobilise Mary. It 'rings' her using a pre-arranged call tone and Mary can take up the call.

UC 193-02: Cardiac - Learning and communicating for deaf people

General

| Name of Use Case | | | | |
|--|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 193 | | | Cardiac - Learning and communicating for deaf people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-23 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #sensory:hearing, #key_enabling_technology:ambient, #key_enabling_technology:communication_functions, #life_areas:education, #community:recreation, #learning, #relationships, #human_communication, #stakeholder:secondary:professional_care, #purpose:security:access_control, #key_enabling_technology:health_information, #stakeholder:secondary:relatives, #key_enabling_technology:body_area | | | | |
| Scope and Objectives of Use Case | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>The “social learning environment”</p> <p>Mary moves to her next door learning environment where a plenary meeting of a studies group in a local ‘Ambient for Social Learning’ is taking place. The group ranges from 10 to 75 years old. They share a common desire to learn music (art) and how to express themselves with music (art). It is led by a mentor whose role it is to guide and facilitate the group’s operation. It is not necessary that the mentor is an expert of the field, but only able to cope with the “social” aspects of the meeting.</p> <p>The plenary takes place in a room looking much like a hotel foyer with comfortable furniture pleasantly arranged. The meeting is open from 7.00-23.00 hours. Most participants are there for 4-6 hours. A large group arrives around 9.30 a.m. Some are scheduled to work together in real time and space and thus were requested to be present together (the ambient accesses their agendas to do the scheduling).</p> <p>When Mary enters the room and finds herself a place to work, she gets a tactile alarm and a message appears on a nearby display asking “Hello Mary, I got the assignment you did last night from home: are you satisfied with the results?” Mary answers that she was in general happy with the landscape of the bas-relief but the human figure is not satisfactory. It does not have movement. It does not give the idea of a human body but of an object without life.</p> <p>Mary is an active and advanced student so the ambient says it might be useful if Mary spends some time today trying to pin down the problem.</p> <p>The enhanced 3-D interactive image processing and projection facilities can help in trying different approximations of the figure in the landscape and in playing with different colour combinations.</p> <p>The ambient goes briefly through its understanding of Mary’s availability and preferences for the day’s work. Finally, Mary agrees on her work programme for the day.</p> <p>One long conversation takes place with Solomon who has just moved to the area and joined the group. The ambient establishes Solomon’s identity; asks Solomon for the name of an ambient that ‘knows’ Solomon; gets permission from Solomon to acquire information about Solomon’s background and experience. The ambient then suggests Solomon to join the meeting and to introduce himself to the group.</p> <p>In these private conversations the mental states of the group are synchronised with the ambient, individual and collective work plans are agreed. In some cases the assistance of the mentor is requested. A plenary meeting begins with those who are present.</p> <p>Mary shows the bas-relief she has produced. A group member asks questions about one of Mary’s decisions and alternative 3-D visualisations are produced.</p> <p>During the presentation the mentor is feeding observations and questions to the ambient, together with William, an expert who was asked to join the meeting. William, although several thousand miles away, joins to make comments and answer some questions. The main problem is that William speaks only Finnish and therefore the conversation must be translated in real time. Automatic language translation is a common practice, as translation from text to voice and from voice to text, or lip movement, or sign language. The</p> |

session ends with a discussion of how Mary's work contributes to that of the others and the proposal of schedules for the remainder of the day. The ambient suggests a schedule involving both shared and individual sessions.

During the day individuals and sub-groups locate in appropriate spaces in the ambient to pursue appropriate learning experiences at a pace that suits them. Virtual private spaces are created for the individual groups. The ambient negotiates its degree of participation in these experiences with the aid of the mentor.

The ambient and the mentor will spend some time negotiating shared experiences with other ambients – for example mounting an exposition with items in different sites, with fruition using a virtual reality system.

They will also deal with requests for references / profiles of individuals. Time spent in the ambient ends by negotiating a homework assignment with each individual, but only after they have been informed about what the ambient expects to happen for the rest of the day and making appointments for next day or next time.

Unconscious Communication

Mary is proud of 'being in communication with mankind': as are many of her friends. Her P-Com is able to act as a voice activated 'gateway' or digital avatar of herself, familiarly known as 'D-Me' or 'Digital Me'. A D-Me is both a learning device, learning about Mary from his interactions with her environment, and an acting device offering communication, processing and decision-making functionality. Mary has partly 'programmed' it herself, at a very initial stage. At the time, she thought she would 'upgrade' this initial data periodically. But she didn't. She feels quite confident with his D-Me and relies upon its 'intelligent' reactions.

She doesn't want to be bothered during her learning. Nevertheless, all the time her D-Me is receiving and dealing with incoming calls and emails. For example, Mary's D-Me has caught a message from a person D-Me, located in the nearby metro station. This person has left home without her medicine and would feel at ease knowing where and how to access similar drugs in an easy way. She has addressed his query in natural speech to Mary's D-Me, who appears to be nearby. Mary happens to suffer from similar heart problems and uses the same drugs. Mary's D-Me processes the available data as to offer information. It 'decides' neither to reveal Mary's identity (privacy level), nor to offer Mary's direct help (lack of availability), but to list the closest drug shops, the alternative drugs, and to offer a potential contact with the self-help group. This information is shared with the person's D-Me, not with the person herself as to avoid useless information overload.

Communication becomes conscious

The above communication scheme is tenable only when "service" information needs to be exchanged, i.e. neutral information that does not imply any personal involvement of Mary. The D-Me must know what persons she must listen to with particular attention and be able to spot emotions (emotional information processing) that deserve special attention.

At 11:10 a.m., following many other calls of secondary importance – answered formally but smoothly in corresponding languages by Mary's D-Me with a nice reproduction of Mary's voice and typical accent, a call from her mother is further analysed by his D-Me. In a first attempt, Mary's 'avatar-like' voice runs a brief conversation with her mother, with the intention of negotiating a delay while explaining her current environment. Finally, her mother's call is now interpreted by the D-Me as sufficiently pressing to mobilise Mary. It 'rings' her using a pre-arranged call tone and Mary can take up the call.

UC 194-02: Cardiac - Informal cooperation for blind people

General

| Name of Use Case |
|------------------|
|------------------|

| ID | Domain Role | Function | Name of Use Case | |
|--|---|--|---|---|
| 194 | | | Cardiac - Informal cooperation for blind people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-23 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #domestic_life:shopping, #key_enabling_technology:home_automation, #key_enabling_technology:ambient, #key_enabling_technology:communication_functions, #sensory:seeing, #community:recreation, #localization:outdoor, #relationships, #human_communication, #localization:indoor, #general_tasks:daily_routine | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Going home, Mary arrives at the local distribution node (actually her neighbourhood corner shop) where she picks up her goods. The shop has already closed but the goods await Mary in a smart delivery box. By getting them out, the system registers payment, and deletes the items from her shopping list. The list is complete. At home, her smart fridge screen will be blank.</p> <p>Back home, Mary goes through the work done during the morning.</p> <p>She is happy enough of the improvements. The execution is now technically good (even if she must learn to</p> |

reproduce it with the real instrument, but she feels that it is still without life. She knows that there is a concert in the evening, where the musical composition will be performed. She decides to go. Live performances are normally more involving than recorded ones. Then, she can meet a lot of friends there, with whom she can discuss.

What about having a chat with Jane? She is confident of her appreciation of the problem both from the technical and the aesthetical perspective. She calls Jane with the video-telephone. One of the walls of her living room becomes a video display. (Even if Mary is blind, the video-telephone is useful when she has friends with her). Jane asks Mary about her morning work and the improvements in comparison with the day before. They listen together to the performance synthesised by Mary on the audio facility of the classroom. Jane agrees on the improvements and thinks that it is a good idea to go to the concert and discuss with friends.

However, Jane knows that a friend of their (Paul) has recorded recently the same musical composition. The intelligent agent has only suggested famous performances. Listening to the performer of the same school and with similar experience could be useful to find a satisfactory compromise. Is Mary really sure to be able to reproduce with her instrument what she has simulated on the synthesiser? Mary and Jane switch on their virtual reality facility. Now, they are sitting together in the virtual conservatory room, listening to the execution of their friend. They can replay the single parts and discuss. They can play with the computerised music synthesiser and with their real instruments. It is a fortunate coincidence that Paul is available and can join them in the virtual space.

UC 195-02: Cardiac - Informal cooperation for deaf people

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 195 | | | Cardiac - Informal cooperation for deaf people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-23 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |

| |
|---|
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #domestic_life:shopping, #localization:outdoor, #sensory:hearing, #key_enabling_technology:ambient, #key_enabling_technology:home_automation, #key_enabling_technology:communication_functions, #community:recreation, #relationships, #human_communication, #general_tasks:daily_routine |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| |
|--|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Going home, Mary arrives at the local distribution node (actually her neighbourhood corner shop) where she picks up her goods. The shop has already closed but the goods await Mary in a smart delivery box. By getting them out, the system registers payment, and deletes the items from her shopping list. The list is complete. At home, her smart fridge screen will be blank.</p> <p>Back home, Mary goes through the work done during the morning.</p> <p>She is happy enough of the improvements. The human figure has improved, but she is not completely satisfied with some details. She has problems with colours too. There is an exposition in the modern art museum, where she can probably get some additional hints. 3-D virtual presentations are very good now, but real artefacts are still better. Then, she can meet a lot of friends there, with whom she can discuss.</p> <p>What about to have a chat with Jane? She is confident of her appreciation of the problem both from the technical and the esthetical perspective. She call Jane with the video-telephone. One of walls of the living room becomes a video display. Jane asks Mary about her morning work and the improvements in comparison with the day before. They reproduce the outcome of the work in the morning on the home 3-D representation system. Jane agrees that there are improvements, but probably this is not enough. They agree that it is a good idea to go to the museum to look at real artefacts and to discuss with friends.</p> <p>However, does Mary know that an exposition has opened today in Japan, dealing with the same technique Mary is using for her work? Would not it be interesting to visit it together? After negotiations of their intelligent agents with the museum agent in Japan, they can stroll virtually through the museum. They can look at the exposed items and they can also touch them, because the tactile displays in their room reproduce the real tactile sensations. They could also speak with people there, if they would be able to speak Japanese. Obviously, they could also use an automatic translation service, but these services are still very expensive.</p> |

UC 196-02: Cardiac - Moving through the city for blind and/or deaf people

General

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|-------------------------|
| Name of Use Case |
|-------------------------|

| ID | Domain Role | Function | Name of Use Case | |
|---|---|--|--|---|
| 196 | | | Cardiac - Moving through the city for blind and/or deaf people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-24 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #sensory:seeing, #sensory:hearing, #mobility:transportation, #human_communication, #key_enabling_technology:communication_functions, #key_enabling_technology:body_area, #life_areas:economic_life, #purpose:safety:alert_detection, #purpose:safety:alert_communication, #purpose:safety:disease_prevention, #domestic_life:shopping, #purpose:safety:orientation, #stakeholder:secondary:non_medical_services | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Planning</p> <p>Now Mary needs to plan her travel to the city. She needs to leave in 40 minutes, in order to have time should something go wrong with the traffic in the city. She asks the Aml, by means of a voice command, to find a vehicle to share with somebody on her route. The Aml starts searching the trip database and, after checking for willingness of drivers, finds someone that will pass by in thirty minutes. The invehicle biosensor has recognised that this driver is a nonsmoker – one of Mary requirements for trip sharing. From that moment on, Mary and her driver are in permanent contact if wanted (e.g. to allow the driver to alert Mary if</p> |

he/she will be late). Both wear their P-Coms allowing seamless and intuitive contacts.

Going around

Thirty minutes later Mary goes downstairs onto the street, as her driver arrives. When Mary gets into the car, the VAN system (Vehicle Area Network) registers her and by doing that she sanctions the payment systems to start counting. A micro-payment system will automatically transfer the amount into the e-purse of the driver when she gets out of the car.

On the way to the city the shared car system senses a bike on a dedicated lane approaching an intersection on their route. The driver is alerted and the system anyway gives preference to bikes, so a potential accident is avoided. A persistent high-pressure belt above the city for the last ten days has given fine weather but rising atmospheric pollutants. It is rush hour and the traffic density has caused pollution levels to rise above a control threshold. The citywide engine control systems automatically lower the maximum speeds (for all motorised vehicles) and when the car enters a specific urban ring toll will be deducted via the Automatic Debiting System (ADS).

In the car, the dynamic route guidance system warns the driver of long traffic jams up ahead due to an accident. The system dynamically calculates alternatives together with trip times. One suggestion is to leave the car at a nearby 'park and ride' metro stop. Mary and her driver park the car and continue the journey by metro. On leaving the car, Mary's payment is deducted according to duration and distance.

Out of the metro station and whilst walking a few minutes to the place, Mary is alerted by her P-Com that a Chardonnay wine that she has previously identified as a preferred choice is on promotion. She adds it to her shopping order and also sets up her homeward journey with her P-Com. Mary arrives on time.

UC 197-02: Cardiac - Leisure activities for blind people

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 197 | | | Cardiac - Leisure activities for blind people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-24 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in | | | | |

| preparation, visionary ...) |
|---|
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #sensory:seeing, #key_enabling_technology:body_area, #key_enabling_technology:mobile_devices, #stakeholder:secondary:professional_care, #purpose:security:access_control, #community:recreation, #learning, #relationships, #key_enabling_technology:communication_functions, #human_communication, #key_enabling_technology:vital_parameters, #key_enabling_technology:telemedicine, #key_enabling_technology:ambient, #vital:cardiovascular |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Moving around</p> <p>Mary passes through the hall. She does not need to stop at the cloakroom. She has only a small bag. She does not need any more all the equipment that students used to have (laptop PC, mobile phone, electronic organisers etc.). Her computing system is reduced to one highly personalised communications device, her 'P-Com' that, for example, she wears on her wrist.</p> <p>Being blind, she may have a foldable tactile display for presentation of Braille and other tactile information.</p> <p>Tickets have been arranged by the intelligent agent and entrance is granted through conversation between her agent and the entrance control agent of the place. If she likes, the agent will make available to the Aml a description of Maria's physical and sensory characteristics. In this case a special support can be offered. In most cases she can cope with the normal facilities of the place.</p> <p>The program is made available on the P-Com. Aml is tracking the position of all the people and the P-Com take care of guiding them to their seats.</p> <p>Enjoying the concert</p> <p>Now Maria is waiting for the starting of the performance. She is a musician, and she likes to follow the performance reading the musical score. She has the score available, but she asks to the concert house, just in case they would use some revised version of the musical score she has. If this is the case, the concert house will make it available to her for free, because she is a music student. Evidence of being a student is given by the P-Com. She has also time to go on the network through information about the performer and the instrument used.</p> <p>The Aml, when allowed, is able to track the positions of all persons. In particular, Maria's P-Com knows all her friends and can ask the Aml if some of them are in the concert house at the moment.</p> <p>If this is the case, it can ask them if they are available for a short exchange of comments during the interval.</p> <p>A final drink?</p> |

When the activity is over, the friends discuss about having a last glass of wine together before going home. In the vicinity there is a very nice wine shop. Maria's clothes appear perfectly normal, but a lot of sensors are embedded, because she has some minor heart problems. A health control centre is continuously monitoring her health parameters and activities. Apparently, everything is ok, but it has been a long and busy day. Why not to go home and relax? Maria accepts the advice of the medical centre and declines the gentle offer.

UC 198-02: Cardiac - Leisure activities for deaf people

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 198 | | | Cardiac - Leisure activities for deaf people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-24 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #sensory:hearing, #key_enabling_technology:body_area, #key_enabling_technology:communication_functions, #purpose:security:access_control, #life_areas:economic_life, #community:recreation, #key_enabling_technology:ambient, #purpose:safety:orientation, #learning, #life_areas:education, #relationships, #vital:cardiovascular, #key_enabling_technology:vital_parameters, #key_enabling_technology:telemedicine, #stakeholder:secondary:professional_care | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Moving around</p> <p>Mary passes through the hall. She does not need to stop at the cloakroom. She has only a small bag. She does not need any more all the equipment that students used to have (laptop PC, mobile phone, electronic organisers etc.). Her computing system is reduced to one highly personalised communications device, her 'P-Com' that, for example, she wears on her wrist.</p> <p>Visual information, if she is deaf, can be reproduced on the display of her P-Com or, alternatively, in the projection system built in her spectacles.</p> <p>Tickets have been arranged by the intelligent agent and entrance is granted through conversation between her agent and the entrance control agent of the place. If she likes, the agent will make available to the Aml a description of Maria's physical and sensory characteristics. In this case a special support can be offered. In most cases she can cope with the normal facilities of the place.</p> <p>The museum catalogue is made available on the PCom. Maria's agent will take care of asking her whether she wants to buy it. In this case it will not be cancelled from the P-Com at the end of the visit. A special fare will be charged if she also wants to print it when at home or to have it mailed home in printed form. Aml is tracking the position of all the people and P-Com take care of guiding them through the exposition according to the known or explicitly expressed preferences of the persons.</p> <p>Enjoying the visit</p> <p>Now, Maria starts her visit of the museum. She does not have time to see the entire exposition. The P-Com knows what she wants to see and, in cooperation with the tacking system of the museum, is able to guide her to the sites of interest. While she is walking through the rooms, the Aml gives her some information about what is around. The quantity of information is a function of the movement speed. When she stops in front of an artefact, the Aml gives her a description of what she is looking at - an eye pointing system is also able to spot the zone of the artefact she is looking at for some time. The Aml knows that Maria is an art student and it is able to match her known or perceived needs. For example, on the basis of the time available and the number of artefacts to be considered, it can estimate the amount of information that can be made available. This estimation can be reiterated after each item. If Aml is allowed to have personal information about Maria, offered by her or constructed through data collected during multiple visits, Aml can also personalise the presentations and suggest possible changes to the planned visit.</p> <p>The Aml, when allowed, is able to track the positions of all persons. In particular, Maria's P-Com knows all her friends and can ask the Aml if some of them are in the concert house at the moment.</p> <p>If this is the case, it can ask if they are interested in visiting the exposition with Maria. As a matter of fact, according to a recent research, it is clear that visiting museums is reconsidered a social activity and people like to share the experience. As soon as a group is formed, Aml reprograms itself in order to take into account the needs of all the participants in the group and not to be too invasive, offering information only if explicitly asked.</p> <p>A final drink?</p> <p>When the activity is over, the friends discuss about having a last glass of wine together before going home. In the vicinity there is a very nice wine shop. Maria's clothes appear perfectly normal, but a lot of sensors are embedded, because she has some minor heart problems. A health control centre is continuously</p> |

monitoring her health parameters and activities. Apparently, everything is ok, but it has been a long and busy day. Why not to go home and relax? Maria accepts the advice of the medical centre and declines the gentle offer.

UC 199-02: Cardiac - Control and interaction with the environment for old people

General

| Name of Use Case | | | | |
|--|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 199 | | | Cardiac - Control and interaction with the environment for old people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-24 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Cardiac: Report with basic materials needed to support the SDDP-3 meeting (D4.1) (FP7) | http://www.cardiac-eu.org/deliverables/d4-1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #sensory:hearing, #sensory:seeing, #mental, #general_tasks:daily_routine, #key_enabling_technology:home_automation, #relationships, #stakeholder:secondary:relatives, #purpose:safety:alert_communication, #key_enabling_technology:communication_functions, #self_care:eating, #domestic_life:shopping, #purpose:safety:alert_detection, #self_care:drinking, #self_care:washing, #purpose:comfort:lighting, #localization:indoor, #learning, #key_enabling_technology:body_area, #key_enabling_technology:ambient, #key_enabling_technology:vital_parameters, #domestic_life:household_tasks, #stakeholder:secondary:doctors, #key_enabling_technology:telemedicine, #human_communication, #key_enabling_technology:health_information, #purpose:safety:disease_detection, #stakeholder:secondary:non_medical_services | | | | |
| Scope and Objectives of Use Case | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>In the kitchen</p> <p>When Jane wakes up in the morning the rooms of her apartment adopt her 'personality' as she enters.</p> <p>Ms Jane Smith is 75 years old. She does not have any really disabling health care problem. She has a reduced sight and hearing and starts to forget what to do. She is waiting for her milk to be warm, when the fridge starts to speak: "Jane, did you forget that tonight your granddaughter and her husband will have dinner with you?" Ms Smith does not want to admit that the fridge is right. Therefore she replies: "Obviously I did not forget. Can you suggest a menu for the dinner?" The fridge knows the culinary habits of her relatives. They are usual guests. It proposes a list of dishes. The menu is right, but with the present economic crisis the fish is too expensive. Can the fridge suggest a less expensive alternative? Ms Smith agrees with the following proposal of the fridge, but asks for a new recipe. The fridge searches the web and selects some new recipes on the basis of the known tastes of the guests. After the selection, the fridge finds out what is lacking for the preparation of the dishes by interrogating the RFIDs available on all items in the kitchen. Then it is authorized by Ms Smith to connect with the supermarket. It buys what is lacking within the authorised expense limits and agrees on the delivery compatible with the preparation. Finally, the kitchen programs itself for activating on time the necessary components (e.g. the oven) and to guide Ms Smith in the preparation of the dinner. In the meantime the gas under the milk kettle has been switched off on time to avoid spilling and Ms Smith has been notified that the milk is ready.</p> <p>After breakfast, Ms Smith heads for the living room, where she left her book last night. While passing in front of the bathroom door, she is notified that the water has been warmed at the requested temperature. She replays that she does not feel ready to take the bath now and instructs the bathroom to keep the water at the preferred temperature (probably this is not ecologically correct. The bathroom should tell her, but considering that the lady 75 years old, it decides to forget it). While Ms Smith is moving through the house, the lights are switched on for the time necessary for the blinds to open.</p> <p>When in the living room, the radio is switched on. Ms Smith likes to know what happens in the world and the house knows it. Obviously, the radio would have been switched on in the kitchen, if she would have not moved. After the news, the radio tunes on the classic music channel normally listened to by the lady. This morning Ms Smith prefers to read and tells the radio to switch off. However, she does not remember where she left her reading spectacles. She thinks that they are in the living room, but where? Fortunately the spectacles have an RFID on them. Therefore it is only necessary to tell the house to localise them. They can emit a signal (auditory or visual). Otherwise the house can tell Ms Smith where they are.</p> <p>Looking at Ms Smith, one would see an old lady with an informal house dress. But her dress is not normal, even if it is impossible to realise it. Her clothes are "intelligent", meaning that sensors are embedded in them able to take under control parameters connected to her health status (measuring, for example, temperature, blood pressure, and the stress status). These sensors have a wireless connection with a memory system and, if necessary, they can be transmitted in real time to a medical centre. This is the case with Ms Smith. Recently, she had some problems, and, even if, minor, the doctors prefer to take her under control. Nothing serious, but given the age, it is better to be careful.</p> <p>Suddenly, a portion of the wall in front of Ms Smith lightens. A moving projector is able to transform in a screen any surface in front of the lady. It is a video telephone call by the control centre. Ms Smith is not</p> |

concerned. It happens every day. She knows and likes the doctor and it is pleasant to speak with a nice girl. She accepts the call and switches on the TV camera, because she likes to be seen. The doctor tells her that her data have been checked and everything appears under control. On the contrary, an improvement in the general status appears and she can skip the pill at 4 p.m. (the house reprograms itself to skip the alarm at 4 p.m.). After a short conversation, the communication is switched off. This is the routine procedure. Obviously, if one of the vital parameters of Ms Smith would appear outside limits, the medical centre would be alarmed immediately. Concerning the support to memory, Ms Smith gets suggestions for the fundamental activities, related to the medical therapies but also to the normal domestic activities and to the social relations in a form matched to the contextual needs. For example, if she is listening to music a light signal is activated to attract her attention, while if she is reading a voice message will be spoken.

UC 200-02: EPAL - Senior professionals association

General

| Name of Use Case | | | | |
|--|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 200 | | | EPAL - Senior professionals association | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental; #work:type:retired; #work:type:voluntary; #relationships; #key_enabling_technology:communication_functions; #human_communication; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case | |
|--|--|
| | |
| Complete Description | |
| <p>Mario is a senior electrical engineer that used to work for the national energy distributor as a public installations analyst and inspector. Although 65 years old he is a healthy man and felt frustrated for being obliged to retire so soon and at the same time depressed because he was at home with nothing interesting to do; he was feeling that he needed to give his brain some activity.</p> <p>One day, when navigating on the Internet, Mario found a website that attracted his attention – the ActiveSeniors Community. This website supported a community of senior people that was created out of the necessity of people to remain active after retirement through sharing with others their experiences, skills and knowledge. The main objective of ActiveSeniors is providing professional assistance to people, companies or organizations located in developing countries through unpaid/volunteering senior expertise.</p> <p>Mario felt enthusiastic with the ActiveSeniors Community, especially with the idea of travelling to a new country and of putting his brain in motion again, and registered immediately as a new member. After the registration process Mario received a welcome letter and a collection of information containing the community rules.</p> <p>A couple of months later, Mario was still waiting to be contacted for an assignment and he started to feel anxious with the situation and remembered to start looking for missions. After a couple of days searching he found a small electrical company in Cabinda, Angola, that was passing severe financial problems. Mario contacted both ActiveSeniors and the small Angolan company and after all the arrangements were properly made Mario went to Cabinda.</p> <p>When Mario returned from Angola he was so happy that his relatives realized the importance of keeping retired people active...</p> <p>In fact, contributing to help a region in need and also having the opportunity to travel was a great reward, specially considering that Mario's pension is enough for his needs. But the lack of opportunities to contribute is something that still worries him ... By the way, thinking about the difficulties, he also felt a bit uncomfortable for having to perform his mission alone and having to do some field work in Cabinda to better understand the problem before he actually could contribute to solve it.... As a result his contribution was a bit limited as the resources for the mission ended ...</p> | |

UC 201-02: EPAL - Elderly person volunteering services

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|--|
| ID | Domain Role | Function | Name of Use Case | |
| 201 | | | EPAL - Elderly person volunteering services | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for |

| | | | | |
|--|---|--------------------|--|----------------------|
| | | | | voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #work:type:retired; #relationships; #work:system_scope:communication; #work:type:voluntary; #learning; #community:recreation; #life_areas:work; #key_enabling_technology:communication_functions; #human_communication; #self_care:looking_after_ones_health; #stakeholder:secondary:relatives | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>After a long professional career as a high ranking marketing executive for his company, Manuel opted into an early retirement plan, despite not having even reached the age of 60, as a consequence of a multinational restructuring of his company in 2005. The first few months of retirement were, for Manuel, a time of great satisfaction since he was at last free from responsibilities, long working hours and long business trips that meant he had to pass a lot of time away from his home and family.</p> <p>Getting up late, playing sports, dedicating time to his reading and spending more time with Sara, his wife of more than 35 years, all allowed him to enjoy his newfound way of life. About six months later Manuel realised that his new routine was not giving him the same satisfaction as before. His wife Sara had not retired and she had to maintain her normal timetable on top of her home and family responsibilities. His sons had grown up and were no longer living at home and although his activities engaged him and occupied a certain amount of what he would call quality time, he still had time spare and at such times he found himself missing the surge of adrenaline he got from the problem solving that had been normal in his work.</p> <p>Upon talking with a friend, Jim, who had co-retired from the same company, Jim commented: I've joined an association of early retired. After having a series of interviews with the head of the association, Manuel joined up and started to get involved in helping other people and small companies using his knowledge and experience.</p> |

The association is aimed at providing business development help to small businesses, that don't have the necessary resources to pay specialised consultants and to giving conferences and limited training to young people who want to start their own company. Since then Manuel's life has changed. In the morning, after having breakfast with his wife, he opens his laptop and logs into the associations intranet through which, in his own site, he receives the work assignments given to him and that are urgent.

Typically he deals with short answers to very structured questions about business problems, which have been categorised by one of the heads of the association. Not more than 30 minutes later he finishes with this activity so he is free to go and play some sport, an activity that, added to the aperitif with his friends, usually takes him up to lunch. In the afternoon he dedicates an hour to dealing with longer questions related to the four companies for which he undertakes a more continual consultancy, including a video conference of 15 minutes with the finance director of one of them.

After a walk with his wife he spends an hour getting himself up to date, by using the association's "on line" training, on a new method introduced for the control of varied procedures, with which he finishes the day's work. Manuel is extremely satisfied with this new activity since it allows him to make use of the knowledge and experience he has gained and allows him to develop a wide range of relationships with other people while at the same time maintaining his independence. The arrangement also allows great flexibility in both workload and timetabling and is completely compatible with his leisure time and family time. On the downside, Manuel is a bit disappointed that on some occasions there are not enough work assignments for all members of the association ...

UC 202-02: EPAL - Virtual Volunteering: cyber-grandparents

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 202 | | | EPAL - Virtual Volunteering: cyber-grandparents | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |

| Generic, Regional or National Relation |
|--|
| Generic |
| Further Keywords for Classification |
| #work:type:retired; #neuromusculoskeletal:movement; #mobility:walking; #relationships; #stakeholder:secondary:relatives; #human_communication; #key_enabling_technology:communication_functions; #work:type:voluntary; #work:system_scope:communication; #life_areas:work |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Sandra has been retired for a number of years and had been working in a part time capacity as a customer service manager at a local DIY store. Unfortunately, she recently developed a number of mobility problems due to her increasing old age and is no longer able to make it into work. Sandra very much enjoyed the social side of her work, talking with her colleagues and customers. Without her work and due to her lack of mobility she is forced to stay at home and spend a lot of time on her own. She also feels like she has little sense of purpose and reason to get up in the morning.</p> <p>Sandra's family, being worried about her decided to search online for a scheme that would help alleviate her boredom at home. Her son came across the Elder Wisdom Circle while searching for a virtual volunteering programme for seniors. Elder Wisdom Circle is a good example of how elders can continue to remain "active" in society from their own homes. Advice seekers in their teens, 20's and 30's from all over the globe consult the EWC, a widely diverse group of wise sages aged 60-105. The elders themselves are given the name "Cyber- Grandparents". Virtual volunteering differs from traditional volunteering as the volunteer and host may never meet in person, with communication between the two parties happening in cyberspace. The working relationship is conducted via email or online.</p> <p>Sandra signed up as a Cyber Grandparent and now receives emails from young people looking for her help. She now has a renewed sense of purpose and really enjoys helping out young people. She still misses seeing her old colleagues and getting out of the house everyday as well as meeting new people at work, but is still much less worried about the prospect of having to spend most of her time at home. She even has the chance to occasionally work in a team with other cyber-grandparents to address the issues that need such a collective approach. If only she could do more of this online, it would be easier to work more often in a team...</p> |

UC 203-02: EPAL - Identifying Problems and providing solutions

General

| Name of Use Case | | | |
|------------------|-------------|----------|---|
| ID | Domain Role | Function | Name of Use Case |
| 203 | | | EPAL - Identifying Problems and providing solutions |

| Version Management | | | | |
|---|---|--|---------------------------------|---|
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal; #life_areas:work; #life_areas:economic_life; #work:system_scope:error_detection; #work:system_scope:mentoring; #work:sector:handicraft | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Last year Jane was an employee of a hoe manufacturing industry that faced job redundancy. Following a difficult life in the city, six months ago, she decided to go back to her home village in a far remote area. After arriving at the village she learned that there are a number of individuals and small groups of people who are producing traditional hoes manually. Although, these traditional hoes are of relatively less quality as the ones produced by industries but they are cheap and thus affordable by peasants in the village.</p> <p>Jane realized that these craftsmen produce small number of hoes than their capabilities and cannot even sell them as little as they produce. However the craftsmen themselves could not exactly pin-point their problems. She knew from the past that such groups of people can acquire support for knowledge and experience provided through associations of senior professionals. Thus the next day she decided to go to the near town to visit one association of senior professionals. At the office of the association she met the administrator, a retired person who used to be district development officer. After explaining to him the purpose of her visit the administrator told her that the members of the association could provide support of knowledge when the problem is clearly defined. She was further told that in past some senior professionals were sent to some areas to solve problems, however they found out that the problems were not in their</p> |

areas of expertise. Therefore, she needs to workout herself and clearly define what kind of knowledge is needed to those local craftsmen. Lastly Jane was told that at the district office where the administrator used to work there is an office responsible for entrepreneurship. So she was told to try to get support from that office.

Jane left the office of the association and directly went to the district office to meet the district community development officer at the entrepreneurship department. At this office she was told that if she can find experts to help her with the task of identifying related inefficiency problems of these craftsmen which need solutions, then the district office will provide necessary funding for the experts. She left the office thinking about how to get the needed experts.

Jane decided to call a friend who is a professor in industrial engineering at one university in her previous city of residence to ask for possible approach to help her identify the problems. The professor finds it interesting and promises to send four senior PhD students with different related expertise related to small industries to do the research. But these students need some financial support related to transport and accommodation. Jane confirmed to the professor about the financial support that will be fully compensated by the district office.

A week after, the PhD students were sent that under supervision and through mediation of Jane could consult the craftsmen and do some necessary research. After one month, a report was handed by Jane to the district office and the association of senior professionals. The report identified a number of problems, among others, they included lack of steady suppliers of raw materials, lack of capital, lack of needed workers, and poor marketing. The report also suggested some needed specialized training for craftsmen.

The association of senior professionals then used the report to form a few teams of professionals, e.g. for training and providing advice on financial and economical aspects to the village craftsmen, etc., who started their work.

One main achievement requested by the district was that the craftsmen should be then capable to produce and sell beyond their village(s) and even in other regions where such traditional technology is lacking.

Furthermore, the report motivated the district office and asked Jane to continue collaborating with the association of senior professionals to find possibilities and propose projects that will deliver solutions to existing problems in that village and others in the region. The projects were then be fully funded by the district office. Jane was happy not only because she has found a solution for people in her village but also that she will now have a formal job for a relatively longer period.

UC 204-02: EPAL - A virtual well of knowledge and expertise

General

| Name of Use Case | | | | |
|--------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 204 | | | EPAL - A virtual well of knowledge and expertise | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |

| | | | | |
|---|---|--------------------|---------------------------------|---------|
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Not technical | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #life_areas:economic_life; #work:location:workplace; #work:system_scope:mentoring; #work:sector:handicraft | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Three years ago the governmental national authority (NAUT) organization responsible for supporting the sustainability of small industries in a developing country realized that, when motivated, senior professionals in the country present potential sources of knowledge and experience. It also learned about the concept of Communities of Active Senior Professionals– CASPs- and started the creation of a so-called “virtual well of knowledge and expertise - VWKE”. Today, the VWKE has a number of stakeholders who either support or benefit from it. Matika is one of the beneficiaries of the VWKE.</p> <p>Matika, a citizen of this country, has been abroad for more than 20 years. She returned to her homeland after retiring at 60. One day while driving, her car has unexpected problems and its engine shuts off, but she manages to park it at the roadside. While standing by her car, two young men of around 19 years old –Ziga and Shana - approached her. Ziga asked her whether her car has a problem and if she allows them to help her. Ziga further told Matika that they are car technicians and have graduated from college the year before and helping people with problems such as hers is their daily works. Matika allowed them to inspect her car after seeing evidences.</p> <p>After some minutes Ziga informed Matika that her car have a problem in the auto-electric system. He further tells her that they are specialist of car engine and thus they cannot help her with this problem. But they can call another friend who can help to fix the problem. Matika accepts the proposal and Ziga calls Juma who is an auto-electrician. After 30 minutes Juma arrives and checks the car and identifies a problem in the electric switch the car that he managed to repair.</p> |

Then Matika asks how much she has to pay them. While they were arguing among themselves on the collective amount, Matika thought of some amount to pay them based on typical services in a garage but not more than that. When Juma tells her the amount of money they wanted she realizes that it was one fifth of what she calculated. After paying them Matika asks them if and how she can help them to set up a small business in order for them to efficiently use their know-how? Shana told her they would like to have a garage close to a main road where customers can bring their car. They also need basic tool boxes for car maintenance. Then Matika asks them whether there is any formal organization which deals with helping small industries. Juma answers that he has heard about the NAUT in the past. Matika takes their contacts information and promises to call them once she has found a solution.

Another day, on her way around the city she decides to visit the NAUT office. In that office she meets Meda, an operational manager of NAUT, responsible for the management of VWKE. Matika first tells her the story of the three young car technicians and how they helped her. She tells Meda about her willingness to help them by establishing a car garage where they and others can use for free the facilities to provide services to customers until they get formal employment or set up their own businesses. While responding to Matika's interests, Meda searches on the system to find out which expertise is needed to start such a small industry. She tells Matika that NAUT, with the use of the expertise in VWKE, can help her with the process of starting the garage once she finds a place and required facilities.

Matika is happy and thanks for the support that NAUT can provide. She then tells Meda that there might be problems related to the management of the garage since there will not be any fulltime employees. Meda promises that once the garage is operational it can further benefit from financial and administrative experts available in VWKE. Matika is very happy after realizing that she can actually invest some time and money to both help the young professionals in the car repair industry as well as perhaps making a little income for herself. She then goes home thinking about the next day to start searching a place where the garage can be established.

UC 205-02: EPAL - Specialized and adaptive IT systems for seniors

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 205 | | | EPAL - Specialized and adaptive IT systems for seniors | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|---|---|--------|
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Not technical | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #sensory:hearing; #sensory:seeing; #human_communication; #learning; #life_areas:education; #work:type:voluntary; #community; #life_areas:work | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Paul had been retired from his job as a senior executive for nearly a decade when he found out about It's Never 2 Late through his local Community centre. With the development of new technologies and new ways of communicating he had begun to feel rather isolated in his community and left behind by what he saw as the impersonal and confusing nature of online communication. This isolation extended to his family where his grandchildren spent most their time on computers and he struggled to find a common point of reference with them. He also has a problem with his hearing and eyesight.</p> <p>Having once been an active part of his community he decided to get back on touch with a local community group and explained that he would like to enrol himself on a computer skills course but felt that at his age and given his complete lack of computer knowledge it just seemed an impossible target and too daunting. Luckily, he was not the only senior to express such concerns and his Community Centre was able to offer him access to adaptive technology. His Community Centre through hearing many seniors concerns got in contact with It's Never 2 Late. It's Never 2 Late helped them to source a local grant to pay for their adaptive technology, specifically tailored for seniors. They were then given help to set up the software to fit the needs of their group and training so they could effectively teach ICT technology to seniors.</p> <p>Paul is now learning about ICT technology in an environment which has been specifically adapted for the needs of people of his age and includes provisions for his hearing and sight impediment. He is now able to communicate with his family members through email, is enjoying learning new skills and has made new friends through the other seniors on the course. He feels that his short term memory has improved and is even considering getting involved in online volunteering activities to help local businesses, through a scheme his community has told him about. He realises, though, how lucky he was to find a Community Centre that was able to support him in his endeavours. Without their support, the skills he now values and the technology he uses would have been inaccessible.</p> |

UC 206-02: EPAL - A service market portal**General**

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 206 | | | EPAL - A service market portal | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:location:home_office; #stakeholder:tertiary; #key_enabling_technology:communication_functions | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Manuel just finished his breakfast and while enjoying this lovely morning of early Spring, he is now logging in the ProSolve portal. ProSolve is an electronic market place for innovation and problem solving allowing a community of retired highly skilled professionals to address problems and innovation challenges posted by client companies. A number of mechanisms are implemented in this marketplace, including:</p> <p>- Open innovation challenges. A company looking for new ideas and potential solutions places a "challenge"</p> |

in the market and indicates the associated monetary value. Members of the pool of experts of ProSolve can offer ideas / solutions (bid) on a confidential basis. The author of the idea / solution picked by the client company will be the one to be paid.

- Target problem solver. A company wants to find an expert with the right profile to perform a specific problem solving task. ProSolve helps matching potential experts with the requested expertise and facilitates the negotiation and contractual arrangements as well as other due diligences.

- Assistance / coaching. A company needs consultancy / coaching on some best practice. Potential experts are identified by ProSolve (matching mechanisms) and when agreement is reached the task is contracted.

ProSolve plays an important role in all issues related to confidentiality, intellectual property, contractual aspects, and quality monitoring.

After browsing over the new opportunities, Manuel found an interesting challenge and started digesting a solution based on his accumulated experience but also considering the pleasure of competing to offer a winning idea.

Two weeks later, Manuel received the great news that his idea was selected. Wow! He had been participating in other challenges before without being selected ... nevertheless he continued just for the pleasure of exercising his knowledge and experience. But now, the 10 000 euros reward for his solution are certainly much welcomed and right on time to plan his summer holidays!

While enjoying the news of the day, another idea came to his mind: It would be much more interesting if ProSolve evolved from a marketplace to a real community offering social networking aspects and also mechanisms for easily teaming up with our experts to work together on a problem instead of being alone ...

UC 207-02: EPAL - Remote working and virtual workers

General

| Name of Use Case | | | | |
|--|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 207 | | | EPAL - Remote working and virtual workers | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |

| | | |
|--|--|--|
| for Active Ageing in Europe (FP7) | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Not technical | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #life_areas:work; #work:location:home_office | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Jonathon is a recently retired, successful Sales Manager. He was given a generous retirement package from his full time job by his employer but he is worried that his private pension plan will not be enough to provide for a comfortable retirement. Having worked for 25 years for the same company in a full time position, Jonathon does not know how to market himself and find work as a freelancer. His retirement package and pension mean that he does not need a full time job to cover his living expenses but he does need some work to top up his retirement income. He is also keen to avoid taking up the travel burden which his former position involved and would like to be able to work from home in order to devote more time to pursuing his passion for golf and other hobbies. Unfortunately, he is concerned about the lack of work opportunities available to someone of his age regardless of his many years of valuable experience.</p> <p>Through searching the internet he came across Guru.com. The Guru.com model – and others like it – demonstrates the way in which the internet is creating a virtual marketplace for services where the physical identity of the person carrying out the work is less important than the market price and the results. Bearing in mind some of the inherent prejudices that exist within the physical workplace towards elderly workers, the virtual workplace offers the opportunity for elderly workers to compete for work on a level playing field.</p> <p>Through registering his profile and experience on Guru.com, Jonathon has been contacted by a number of employees seeking his skills. The fact that he already has a retirement income means that Jonathon is able to offer a competitive fee for his services and the online nature of virtual working means he is able to attract a wider pool of potential clients, who benefit from his advice as a consultant. His paid advice has meant that a number of companies have been able to turn around their negative sales results and he is free to devote more time to his hobbies, being free from travel commitments.</p> <p>He has also been looking to involve his friend John in the same type of activity. However, John is a little older and is less of a regular Internet user. He's worried that the whole experience might be difficult for him to connect with. Also, John worked as an engineer and there are not that many opportunities for engineers on the Guru portal. If only there was something geared more to John's needs...</p> |

UC 208-02: EPAL - Tri-partite company**General**

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 208 | | | EPAL - Tri-partite company | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
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| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Not Technical | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:system_scope:mentoring | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>José is apprehensive today. In fact he has been worried lately. Everything was different two years ago when he and his friend had this idea for an innovative low consumption air conditioning device and started their FreshAir company. The two engineers soon developed the new equipment thanks to their dedication and enthusiasm. But now they are facing difficulties. They don't know much about marketing or internationalization, although they understand the need to target a global market. Unfortunately they spent all their resources in the start-up phase and now cannot afford to get assistance from one of those big consultancy companies ... Either something happens or may have to close and fire their employees soon...</p> |

Three weeks later ...

José and his colleague are having a meeting with Carlos and Ana, two members of the local branch of the Regional Development Agency (RDA). After some initial contacts, Carlos and Ana spent some time in the company making an analysis of its problems and today they are presenting their conclusions. The diagnosis seems logical to José. It is clear that FreshAir needs some coaching and specialized guidance in two crucial areas – focused marketing and internationalization.

But they cannot afford the high costs of such specialized assistance. RDA, an organization funded by the local government and that aims to promote local businesses, made the analysis for free. Unfortunately they do not have the expertise to help in the next phase ...

Guessing the worries passing through José's mind, Ana told them that there is a potential solution. Then she mentioned the ActiveSeniors association ...

Pedro is a retired professional, member of ActiveSeniors. Based on his specific expertise and experience in marketing, he was invited to join a team involving 2 other members of ActiveSeniors with competencies in internationalization and air conditioning. Together with Carlos and Ana from Rda, this team started a temporary collaborative network with people from FreshAir. After 3 months the first results are starting to show up. The ActiveSeniors team not only provided technical assistance and guidance, but also helped FreshAir establish some contacts with a new market in India. Now the business prospects for the young company seem brighter...

Pedro is quite satisfied for having this opportunity to work on a topic where his experience was a real added value. He very much appreciated the diagnosis and preparatory work done by RDA, which allowed him and his senior colleagues to focus on the core issues. Working in a team was a great experience. The small payment Pedro received is also great to complement his pension and give him some better living conditions. FreshAir and RDA could mobilize some resources to pay a small fee to the 3 members of ActiveSeniors, a value much lower than the typical consultancy prices that could never be afforded by FreshAir.

Carlos and Ana got a special recognition from their boss at RDA for being successful in helping a local company and thus creating better economic prospects for the region.

José and his friend re-gained their enthusiasm and they really appreciated the value of this collaboration endeavour with RDA and ActiveSeniors. They certainly plan to keep contact and look forward to again use the amazing pool of expertise & experience available at ActiveSeniors.

UC 209-02: EPAL - Multi-actor network

General

| Name of Use Case | | | | |
|--------------------|-------------|--|----------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 209 | | | EPAL - Multi-actor network | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |

| | | | | |
|---|---|--------------------|---------------------------------|---------|
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| non technical (specific) | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>ANDALUCIA is a European region in which there is a clear growth in interest to create new companies, especially amongst the population of young people. Additionally, due to the agreeable climate and high quality of life, it finds itself as a popular place of, more or less permanent, residence for a growing number of retired/early retired, amongst who stand out management professionals and business people.</p> <p>As a consequence of joining the European Union and of a desire to join the computer age, it is developing dense communications networks, amongst which broadband Internet is very prominent, so much that in a short while the entire region will have access to it. There coexist, therefore, a wide range of business people, above all young, in need of assistance and without the financial capital to be able to pay for it, a wide range of professionals with vast experience and a large amount of free time and a dense network of high speed communications technology. There does not however exist a way of connecting and structuring these resources.</p> <p>Helped by local government, a network which integrates retirees is being put into place with the aim of resolving this situation and of taking advantage of the situation, with the aim of providing free support to young business people and small companies, using new computer and information technology. Initially, the retiree has to connect by Internet to the network in order to evaluate their experience and training upon which they will be rejected from or incorporated into the network. In this way, the network keeps an up to date database of the elderly people available to provide services.</p> <p>The network itself organises promotional activities for young people and small companies in order to gain</p> |

clients for the elderly who form part of the network and the network makes token payment to their elderly members for the services they supply. An individual agreement is reached between the network and the professional which stipulates the length of time they supply services for, the hours required and the specifics of the work required. The elderly person provides the services to the young and small businesses, both in person and through various communications and computer technologies.

It is the network itself that monitors the activities, analyzing the level of satisfaction gained and evaluating the final outcomes so building up and adding to part of the database of personal files of the participants. Although at the moment there is no ongoing training nor other additional services based on new technology, it is envisioned that such will be provided in the future. In this way the elderly retired and early retired are able to continue to have an active life with commitments sufficiently flexible and compatible with their new needs and desires that accompany their retired situation.

UC 210-02: EPAL - Knowledgeable jubilees

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 210 | | | EPAL - Knowledgeable jubilees | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
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| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:type:retired ; #work:system_scope:mentoring; #work:system_scope:communication | | | | |
| Scope and Objectives of Use Case | | | | |
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Narrative of Use Case

| Narrative of Use Case | |
|--|--|
| | |
| Complete Description | |
| <p>Like in the past, Robert is heading to the headquarters of WiseCompany where he used to work as a senior project manager. But today he travels in a relaxed mood. His destination is not his old office where he would get immersed on the daily routine problems, all waiting for urgent solution. Now that he is retired, his destination is the SeniorClub, so he is not under stress and can spend time observing the frenetic movement around and enjoying his trip.</p> | |
| <p>Concerned with the prospects of the first wave of brain drain as baby boomers generation retires – i.e. face the sudden departure of thousands of skilled workers, WiseCompany launched the SeniorClub as a mechanism to keep the links with their best knowledge workers after retirement.</p> | |
| <p>The club offers conditions for socializations of former employees and among them and active (young) employees. Furthermore, retired experts are encouraged to continue contributing to some high-level activities of the company, e.g. coaching or advising in critical projects, participation in strategy and roadmap definition brainstorming sessions, or acting as consultants</p> | |
| <p>in specific tasks. The Senior Club offers a nice lounge / meeting facility, with free access to ICT equipment, refreshments, entertainment facilities, etc. Furthermore, members can get some other fringe benefits and some payments as a result of their contribution to the economic activities of the company.</p> | |
| <p>Robert joined the SeniorClub initiative and today he is going to discuss with his fellows and some young engineers some strategy for the introduction of a radical new product in the market. It is very rewarding for him to feel that his accumulated experience and mature knowledge is appreciated by his former employer and that he has the opportunity to continue active. Keeping the social links with his former colleagues while given the opportunity to stay in touch with new developments and trends is also very important for Robert. Furthermore, his contribution to the company is rewarded with some payment and fringe benefits that help him keep is standard of life.</p> | |
| <p>Robert feels lucky for having this opportunity but a sad thought came to his mind. He just remembered his relative Fred, that used to work for a SME and has no such opportunity to keep and active life. Last time they met at a family gathering, Fred looked a bit depressed...</p> | |

UC 211-02: EPAL - Paid work involving senior professionals

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 211 | | | EPAL - Paid work involving senior professionals | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |

| | | | | |
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| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EPAL: D2.1 Interim Report on a Vision for Active Ageing in Europe (FP7) | http://www.epal.eu.com/xstandard/docs/ePALd2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| non technical (specific) | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #work:type:retired; #work:location:home_office; #work:system_scope:training; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>Pedro is 67 years old, a university professor who has reached retirement age and has thus had to give up teaching in the faculty of Economics where he has taught for more than forty years. When he retired, two years ago, he considered himself happy since he was able to dedicate time to writing, one of his passions, to sports and dedicate more time to his wife, their children having long left the family home.</p> <p>A few months ago his wife died, which has meant a drastic change in both his personal and economic situation. As regards his personal situation, his spare time has increased considerably while at the same time his interpersonal relationships have reduced in number and quality. Economically he is facing a considerable increase in his monthly expenditure, now that he has to afford to pay someone to fulfil the care needs that used to be fulfilled by his wife. This, added to the steady loss of buying power of his pension may, in the medium term, result in economic problems.</p> <p>Talking the subject over with his friends, one of them told him about the existence of a consultancy firm in his city that regularly reaches agreements with independent professionals, who are experts in certain fields, to cover work contracts usually related to international institutions. On talking to the consultancy firm, he finds that it is indeed true that certain agreements of this nature are possible, always assuming that the retired person is legally able to carry out the service and bill for it accordingly. Whilst chatting to his financial advisor he learns that the government has made a recent change in the law that allows retirees to sign up on a part time basis for the execution of professional services.</p> <p>Working it all out on paper, with the time that the consultancy is willing to guarantee him, Pedro thinks he</p> |

would be interested, since it would give him a guaranteed increase in his level of income, would cover his new expenditures and at the same time would be compatible with the time he has free and would additionally afford him a chance to increase his social and interpersonal relations. As an aside, he tells the consultancy that his health seriously limits his ability to travel, for which reason his services should be limited to his immediate environment or be given through new information technology. The consultancy makes it clear that in this regard he will have no problems, since they dispose of the necessary methodologies and technical equipment and communications to allow him to work, even through video conferencing.

On reaching an agreement, Pedro starts his working activities and a few months later finds himself very satisfied. His expectations have been met and apart from a few problems related to the use of some technology (which were resolved by the training provided by the consultancy) he has adapted perfectly to the new situation. His next objective is to diversify his sources of work so he is thinking of the possibility of affiliating to a body of retired professionals that offers similar opportunities, or in the case that no such body exists in his city, attempt to found one himself. To this end he is using his recently gained knowledge of the Internet to look into the existence of this type of association.

UC 212-02: Florence - Keeping in touch

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 212 | | | Florence - Keeping in touch | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Florence: D1.3 Final robot based service scenarios (FP7) | http://www.hitech-projects.com/euprojects/florence/D1_3_Florence_Final_robot_based_service_scenarios_v1_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #human_communication; #stakeholder:secondary:relatives; | | | | |

| Scope and Objectives of Use Case |
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Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>It is Tuesday morning and Carla is feeling down, the bad weather doesn't help. She gets up and makes some coffee. Carla widowed four months ago and since then she is feeling lonely. On Tuesdays she would play tennis with her husband, but today she is not feeling like going out on her own.</p> <p>The Florence system detects Carla's mood and lets Marcus, her son and Sofia, her friend, know that Carla would benefit from some chatting.</p> <p>Sofia phones Carla. The Florence system finds Carla and lets her know she has a request for virtual visit call. Carla accepts and Sofia and Carla happily talk to each other. Sofia can virtually move with Carla in the house to check the new curtains Carla would like to show her. By the time they hung up Sofia is feeling much better and starts preparing lunch.</p> <p>In the evening the Florence system receives two pictures from Marcus's son's social networking tool. The Florence system knows Carla has been watching TV all the afternoon so it informs her about the new pictures. Carla likes one picture very much and let's her grandson know about it.</p> |

UC 213-02: Florence - Advanced Home Interface

General

| Name of Use Case | | | | |
|--|---|--|------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 213 | | | Florence - Advanced Home Interface | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Florence: D1.3 Final robot based service scenarios (FP7) | http://www.hitech-projects.com/euprojects/florence/D1_3_Florence_Final_robot_based_service_scenarios_v1_0.pdf | | Public | |

| |
|---|
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) |
| Visionary |
| Generic, Regional or National Relation |
| Generic |
| Further Keywords for Classification |
| #sensory:hearing; #general_tasks:daily_routine; #domestic_life:household_tasks; #key_enabling_technology:robotic; #key_enabling_technology:home_automation; #key_enabling_technology:ambient; |
| Scope and Objectives of Use Case |
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Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>John is 75 years old, he suffers from hearing impairment and is sitting on his couch watching TV. To switch off the main room light without getting up he just asks the robot to switch it off and turn on the lamp next to his TV. The Robot takes John's order and passes it to the home control system which in turn switches off the light in the room and powers up the smaller lamp.</p> <p>While John is watching TV, the door bell is ringing, because John's friend Alex is visiting. John's door bell is equipped with camera and a microphone/speaker system. If someone is ringing the bell, John can see and interact with the person on the other side of the door using whatever interface is currently in use by John, i.e. which interface John is currently interacting with. This could be the TV set, a mobile phone or the Robot.</p> <p>Since John is currently using the TV, he gets a visual notification on the TV indicating the door bell is ringing. The output of the camera on the door bell is also shown to John, so he can see who is in front of the door.</p> <p>John's friend Alex can even speak into the outdoor camera's microphone which may result in a transcription of the words to text (speech recognition) shown on John's screen(s).</p> <p>Using the robot and/or the TV remote control, John can instruct the opening of the door. This again is automated by the home control system the robot interfaces with.</p> <p>While John and Alex are having fun in the living room, the windows in John's bedroom are open. Taking into account sensor information, e.g. room temperature and humidity level, the robot realises that the window has been opened for long enough and the air quality is now ok. It therefore suggests John to close it. John agrees and the robot sends a signal to the home control system to close the windows automatically.</p> |

UC 214-02: Florence - Fall situation handling

General

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| Name of Use Case |
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| ID | Domain Role | Function | Name of Use Case | |
|--|---|--|------------------------------------|---|
| 214 | | | Florence - Fall situation handling | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Florence: D1.3 Final robot based service scenarios (FP7) | http://www.hitech-projects.com/euprojects/florence/D1_3_Florence_Final_robot_based_service_scenarios_v1_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #purpose:safety:alert_detection; #key_enabling_technology:telemedicine; #human_communication; #purpose:safety:fall_detection; #key_enabling_technology:communication_functions; #stakeholder:secondary:relatives | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Peter is in a relative good physical and mental condition for his age. He lives on his own since four years ago he widowed. His sons live in the same city as him and visit Peter at least twice a week. Peter has lately started to be aware of his forthcoming age decline and requested the Tele-care service along with the Florence system. This makes him feel secure in case of an unexpected emergency.</p> <p>In fact, he has already had an accident a while ago. The experience has not been too traumatic since he was supported from the beginning. While the emergencies were coming to Peter's place, the tele-care operators called Peter's son. They were following a protocol to support Peter. Peter now regards Florence as a need.</p> |

Peter has just woken up at the usual time. While he was preparing some breakfast and for no apparent reason he fell down and is not able to move naturally. He is in pain and fears the fact that he is alone and does not know how serious his fall was. Florence robot recognizes that fall and quickly approaches Peter. The tele care service gets notice and communicates with Peter calming him down, assessing the situation and warning the local emergency units.

UC 215-02: Florence - Agenda reminder

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 215 | | | Florence - Agenda reminder | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Florence: D1.3 Final robot based service scenarios (FP7) | http://www.hitech-projects.com/euprojects/florence/D1_3_Florence_Final_robot_based_service_scenarios_v1_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:robotic; #key_enabling_technology:medication_dispenser; #purpose:safety:alert_detection; #mental | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |

Quite often Santiago fails to remember to take his medication. Even when he does remember, he often makes a mistake with regards to which one and how many to take. After having lunch, Santiago usually takes a nap. On this instant right before his nap, he should have remembered to take his medication. The Florence alarm goes off and the whole system approaches Santiago. He notices the alarm and wakes up. The Florence alarm is a reminder for Santiago to take his medication. After taking the required medication, Santiago confirms to the system that he has done so and the action is recorded. In the case that he does not confirm his action, or the telecare unit detects a failure on the intake, Santiago will be contacted to make sure he is fine. Santiago feels relieved due to the fact that thanks to Florence his medicine intake is not going to be compromised by his memory failures.

UC 216-02: Florence - Lifestyle improvement

General

| Name of Use Case | | | | |
|---|---|--|----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 216 | | | Florence - Lifestyle improvement | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
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| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Florence: D1.3 Final robot based service scenarios (FP7) | http://www.hitech-projects.com/euprojects/florence/D1_3_Florence_Final_robot_based_service_scenarios_v1_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:telemedicine; #key_enabling_technology:robotic; #key_enabling_technology:vital_parameters; #key_enabling_technology:ambient; #key_enabling_technology:environmental_parameters; #neuromusculoskeletal:movement; #key_enabling_technology:communication_functions; #stakeholder:secondary:professional_care | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| Complete Description |
| <p>Thomas is a 75 year old senior whose wife recently passed away. He just woke up and is getting ready for the day in the bathroom. He stands on the scale and the results are being sent to his in home Florence system. Upon entering the kitchen for making breakfast he takes a quick look at the Florence robot's screen and notifies that his health status has dropped slightly. He decides to consult the Florence robot. The robot looks at the latest health records and since it's a sunny day and Thomas has no other appointments in the morning he suggests to take a walk through the park.</p> <p>After he gets back Thomas notices his hip being stiff again. Luckily his weekly telephone call with his physiotherapist is scheduled for later today. The Florence robot notifies Thomas that it is time for the call. Thomas discusses his stiff hip with the physiotherapist who advises him to do some exercises to improve his stance and ease his hip. The suggested exercises are being sent to the Florence system. Thomas' robot assists him by displaying the exercises on his screen. Since the robot is mobile Thomas can exercise wherever he wants and without needing a physiotherapist, whenever he wants.</p> |

UC 217-02: Florence - Collaborative gaming

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 217 | | | Florence - Collaborative gaming | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
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| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Florence: D1.3 Final robot based service scenarios (FP7) | http://www.hitech-projects.com/euprojects/florence/D1_3_Florence_Final_robot_based_service_scenarios_v1_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |

| |
|---|
| Generic |
| Further Keywords for Classification |
| #neuromusculoskeletal:movement; #community:recreation; #key_enabling_technology:robotic; #key_enabling_technology:communication_functions; |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Mary is at her place, ready to start making one of her favourite activities: making puzzles. She has chosen a big and challenging one.</p> <p>Unfortunately, her friend Susan isn't with her; it is a pity. Mary and Susan love to make puzzles together. They both feel part of a good team. Mary is very patient and can play for long hours while Susan is good at spotting an specific tile. They are proud of having been able to make a 1000-tile puzzle together last winter.</p> <p>These last months Susan is suffering from arthritis, so she is not as mobile as she used to and can not visit her friend as often as she would like to. Today, is one of those days, but not to worry!, the Florence system that Mary owns, will make it possible that they can continue with this activity remotely.</p> <p>Mary places all the puzzle tiles and the cover with the reference image on a table. The Florence system connects her with Susan, who is able to see and hear what's going on with the puzzle. If Mary requires the Florence system goes around the working surface to show different views, and zooms in and out as requested by Susan. She gives indications to Mary on the appropriate tiles for the difficult sections that Mary by herself is not able to fix. Mary takes into account Susan's indications and places tiles correctly. Meanwhile, they can chat as usual.</p> <p>After an hour, they both are happy to see that the work progresses correctly and a small but difficult part of the puzzle is already done. They agree to continue with this funny and entertaining activity tomorrow.</p> |

UC 218-02: Florence - Logging system

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 218 | | | Florence - Logging system | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-25 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |

| | | | | |
|--|---|-------------|---------------------------------|-------|
| 03 | 2013-12-26 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Florence: D1.3 Final robot based service scenarios (FP7) | http://www.hitech-projects.com/euprojects/florence/D1_3_Florence_Final_robot_based_service_scenarios_v1_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #purpose:safety:disease_rehabilitation; #neuromusculoskeletal:muscle; #neuromusculoskeletal:movement; #key_enabling_technology:robotic; #key_enabling_technology:telemedicine; #key_enabling_technology:vital_parameters; #stakeholder:secondary:doctors; #purpose:safety:fall_prevention; | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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| Narrative of Use Case |
| Complete Description |
| <p>Tom had a knee surgery two months ago. He has recovered well but to support the rehabilitation his doctor has created some exercises to train his muscles. He is using a recumbent bike for that. Tom is aware that, unless he recovers totally from the surgery, he won't be as stable as he was and could have high risk of falling. He is worried about it., but happy to own a Florence robot which will monitor his rehabilitation progression, assess his mobility and even collect his subjective opinion on his health status.</p> <p>Tom trains regularly, and the Florence Robot collects the data from the training bicycle and gives an overview of the training status. The doctor checks this status once a week to have a look if everything works fine. He should not completely stop the training to keep her muscles strong enough. Even if the doctor considers rehabilitation progression is good, Tom is sceptic about it. The knee sometimes hurts and he doesn't still have the range of motion he had to. He wants the doctor also know about it, so he logs his impressions in the Florence system, so that the doctor can also check how he feels.</p> <p>Tom is also aware that his risk of falling is getting higher. So he is pleased that the robot is monitoring his gait velocity and with these results his physiotherapy can be adopted and the caregiver personnel can react accordingly. One day, his assessment values have reached a critical value. So his care givers are advised by the robot to move some of the flowers from the corridor to the corner of the living room, where the risk of falling over it is much lower.</p> |

UC 219-02: Future BNCI - Sleep Coach**General**

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 219 | | | Future BNCI - Sleep Coach | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-27 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCI: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental; #general_tasks:handling_stress; #general_tasks:daily_routine; #life_areas:work; #work:system_scope:lighting; #work:system_scope:stress_handling; #purpose:comfort; #purpose:comfort:lighting; #key_enabling_technology:home_automation; #key_enabling_technology:vital_parameters; #key_enabling_technology:environmental_parameters | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Imagine Andrea (41), a manager who just got promoted. Her work often invades her private life and after a busy day she finds it hard to fall asleep. Using comfortable wet electrodes embedded in a sleeping cap the |

sleep-coaching system that she recently purchased can guide her toward sleep by rewarding proper brain activity patterns with a soft pleasant music. When she really falls asleep it turns off the music. The system adjusts the bed temperature to her sleep depth to avoid night-awakenings, and if she happens to wake up from a nightmare it turns on the nightlight. She lets it drive her alarm clock in weekends to wake her up well-rested.

UC 220-02: Future BNCI - Tension Indicator

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 220 | | | Future BNCI - Tension Indicator | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-27 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCI: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #work:system_scope:stress_handling; #stakeholder:work:colleagues; #key_enabling_technology:mobile_devices; #key_enabling_technology:vital_parameters; #stakeholder:secondary:doctors; #key_enabling_technology:telemedicine; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| Complete Description |
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| <p>Tamara, a 30-year old manager, has climbed the ladder of success by working hard. Since some months, self reflection has taught her that her social behavior in stressful situations could do with a little improvement. The problem is that she often reacts quite automatically. Her general physician advised her to try some primary preventive measures while waiting for an appointment with a behavioral therapist (which can take 3 months). So she has purchased a so-called DTI, a discrete tension indicator that continuously measures the level of her arousal and stress through a hidden heart rate sensor in her watch and some hidden sensors in her hair. When stress is building up the system sends a signal to her cell phone through Bluetooth. Slowly, the system teaches her to timely recognize her own emotional state. Tamara feels she probably won't need a behavioral therapist anymore because she is now sufficiently aware of her own body and mind. A weekly report is automatically mailed to her general physician every Monday through Tamara's phone.</p> |

UC 221-02: Future BNCI - Gaming with your brain

General

| Name of Use Case | | | | |
|---|---|--|--------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 221 | | | Future BNCI - Gaming with your brain | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-28 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCI: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental; #key_enabling_technology:games; #key_enabling_technology:vital_parameters; #sensory:seeing | | | | |

| Scope and Objectives of Use Case |
|----------------------------------|
| |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Samuel is 17 years old and likes to game. He prefers role playing games. He has pimped his Kinect system with an add-on that detects his mental state while he is performing actions or interacting with others in a virtual world. He can change the strength of his avatar by wilfully changing his mental state. This took some practice, but now pays off because he is increasing in rank. Sometimes avatars can invite him for a competition "who can concentrate the best?". He has to successfully focus his concentration in a game and if the mental state detector recognizes this state better in him then in other players, he wins.</p> <p>When he focuses his visual attention to another avatar information about the avatar is automatically given, such as his name, strength and clan.</p> |

UC 222-02: Future BNCl - Fatigue and error detector

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 222 | | | Future BNCl - Fatigue and error detector | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-28 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCl: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |

| Generic, Regional or National Relation |
|--|
| Generic |
| Further Keywords for Classification |
| #work:system_scope:fatigue; #key_enabling_technology:vital_parameters; #work:system_scope:error_detection; #work:system_scope:stress_handling; #stakeholder:work:colleagues; #work:sector:service_industry:general_office_work; #life_areas:work |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Theresa has a high workload and great responsibility as an air traffic controller within a team of 6 persons. She is well trained for her job, but since she is only human and subject to fatigue she uses a fatigue and error detector based on dry electrodes which are embedded in a small headset. When the system detects she is falling asleep it gently alarms her with a vibration in her neck, which increases until it detects she regains her attention. The system is context aware and understands that when it is night-time Theresa's body signals look different than during the day. The system is also task-aware and connected to the systems of Theresa's colleagues. Tasks are distributed over persons depending on their state and other jobs. For example, if the system knows Theresa is making a telephone call while keeping her attention to the control process it could automatically shift some of Theresa's tasks to her colleagues. This way the whole team, environment and tasks are interconnected and can function optimally as a group. Theresa and her colleagues feel the systems have lowered their workload, but they sometimes discuss just how much information their boss can read from their brain. |

UC 223-02: Future BNCI - BCI as neuroscience tool

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 223 | | | Future BNCI - BCI as neuroscience tool | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-28 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|--|---|--------|
| Future BNCI: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #mental; #key_enabling_technology:vital_parameters; #key_enabling_technology:health_information; #stakeholder:tertiary; #work:system_scope:fatigue; #life_areas:work | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Hans is a postdoc at a renowned Institute for Cognitive Neuroscience. He studies the difference in attention processes between healthy persons and persons with schizophrenia. In one of his experiments healthy subjects perform in a continuous attention test where they have to attend certain stimuli (n=200) and press a button as fast as they can. Hans is mainly interested in the times the subject failed to respond to the stimuli. What happened in the moments before the stimuli was presented? Was the subject distracted? Hans is very happy he can now use new methods and tools from Brain-Computer Interfacing to analyze his data. In former days he would have to average all trials in which the subjects failed to respond and look at the averaged ERP. Now he can investigate brain activity on a single trial basis and even real-time, while the subject is sitting in front of him. |

UC 224-02: Future BNCI - Brain toy

General

| Name of Use Case | | | | |
|--------------------|-------------|--|-------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 224 | | | Future BNCI - Brain toy | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |

| | | | | |
|---|---|------------------|---------------------------------|-------|
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-28 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCI: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #digestive:metabolism; #neuromusculoskeletal:muscle; #key_enabling_technology:body_area; #key_enabling_technology:communication_functions | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| Ben is a 7 year old intelligent boy who wants to explore the world. His main mission in life is to become a pirate and he collects every poster and video about pirate there are available. However, Ben has cancer and has spend most of the last two years in hospital beds, where there is little to explore. The disease makes him also very weak. Fortunately, the hospital disposes of a zeppelin-spy kit for kids like him. The toy allows Ben to drive the Zeppelin through the hospital corridors and a camera on the zeppelin allows him to take a peek in other rooms or to "visit" friends. He drives the zeppelin by imagining waving his right or left arm and a little baseball cap on his head seems to „read" his mind. He doesn't fully understand the details but enjoys his little adventure tours. |

UC 225-02: Future BNCI - Usability studies

General

| | | | |
|---------------------------|--------------------|-----------------|---------------------------------|
| Name of Use Case | | | |
| ID | Domain Role | Function | Name of Use Case |
| 225 | | | Future BNCI - Usability studies |
| Version Management | | | |

| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final | | | | |
|--|---|--|---------------------------------|---|--|--|--|--|
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial | | | | |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft | | | | |
| 03 | 2013-12-27 | Axel Helmer | | Draft | | | | |
| Basic Information to Use Case | | | | | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | | | | | |
| Future BNCI: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | | Public | | | | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | | | | | |
| Visionary | | | | | | | | |
| Generic, Regional or National Relation | | | | | | | | |
| Generic | | | | | | | | |
| Further Keywords for Classification | | | | | | | | |
| #work:system_scope:error_detection; #mobility:transportation; #key_enabling_technology:vital_parameters; #stakeholder:tertiary; #life_areas:work | | | | | | | | |
| Scope and Objectives of Use Case | | | | | | | | |
| | | | | | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Company X designs new trucks and buses. For their latest project they want to design a safe interface between a school bus driver and the bus. The bus driver at all times must open and close the doors at opportune moment. There are several ways information about the doors can be given to him. In a simulation experiment the company compares to different design in virtual reality while measuring, analyzing and classifying the bus driver's brain activity. |

UC 226-02: Future BNCI - Cognitive enhancer

General

| Name of Use Case | | | |
|------------------|-------------|----------|------------------|
| ID | Domain Role | Function | Name of Use Case |

| | | | | |
|--|---|--|----------------------------------|---|
| 226 | | | Future BNCI - Cognitive enhancer | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-27 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCI: D4.3: Report on multimodal and affective application interfaces workshop (FP7) | http://future-bnci.org/images/stories/deliverable%20report%20for%20d4.3.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental; #key_enabling_technology:mobile_devices; #key_enabling_technology:health_information; #key_enabling_technology:communication_functions; #work:system_scope:training; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Andreas is a ski jumper who is training for the Olympics. Before starting his jump it is extremely important he focuses his mind so that he is in the "right" mental state to jump. This involved visualizing and imagining the jump in every detail many times. Like his other colleagues he has been implanted with two small electrodes and micro-amplifier screwed in his skull that measure the quality of his visualization and the timing of his visualization. One electrode over his frontal cortex measures his mental state while the other over his motor cortex measures his motor imagery. So now, when he is on his way home from training, he can do this mental training in the bus by using a simple application on his iPhone connected with blue tooth to his implant. A nice animation shows him how well he is imagining the jump.</p> |

UC 227-02: Future BNCI - BCI-supported user interface for

communication, affect expression and enhanced human-computer interaction in locked-in patients

General

| Name of Use Case | | | | |
|--|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 227 | | | Future BNCI - BCI-supported user interface for communication, affect expression and enhanced human-computer interaction in locked-in patients | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-27 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCI: D5.5: Roadmap (FP7) | http://future-bnci.org/images/stories/Final_Roadmap.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:muscle; #neuromusculoskeletal:movement; #life_areas:education; #stakeholder:secondary:professional_care; #key_enabling_technology:ambient; #human_communication; #key_enabling_technology:body_area; #key_enabling_technology:vital_parameters; #work:system_scope:error_detection; #work:system_scope:fatigue; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| George is a 39-year old former lawyer. He suffered a brainstem stroke 4 years ago which left him in the |

locked-in state. He can still raise one eyebrow and blink his eyes when he wants, but otherwise he is completely paralyzed. He lives in a home for assisted living. Since he no longer has a steady income, he is going to start a course on writing in an online university. His objective is to write a book about issues related to intellectual property in the biomedical field, which is his speciality.

He has applied for and been granted a novel assistive technology system. The system supports multimodal interaction. That is, George can control the system using his eye gaze, his eye blinks, his eyebrow raise and his brain activity. Several comfortable, wearable and wireless sensors are placed in the vicinity of his eyes and on his scalp daily by a nurse.

The system also measures George's affective state in the brain activity and projects his mood or affective state as ambilight attached to his computer, which is practical given that George's face no longer expresses emotion. In daily communication, this screen helps other people in the home and elsewhere to understand him and communicate with him.

Finally, the information from his brain is used to enhance human-computer interaction. If George notices that the interface failed to do what he wants, the system automatically detects the "alarm" in his brain activity and corrects the last action. Also, the system goes in standby when it notices that George is dozing off.

UC 228-02: Future BNCI - Persuasive rehabilitation after stroke with a BCI game

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 228 | | | Future BNCI - Persuasive rehabilitation after stroke with a BCI game | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-27 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Future BNCI: D5.5: Roadmap (FP7) | http://future-bnci.org/images/stories/Final_Roadmap.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |

| |
|---|
| Generic |
| Further Keywords for Classification |
| #neuromusculoskeletal:muscle; #mental; #purpose:safety:disease_rehabilitation; #key_enabling_technology:robotic; #work:system_scope:training; #key_enabling_technology:games; #key_enabling_technology:mobile_devices; #life_areas:work |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Mrs. De Luca is a 62 year old lady living in Rome. She suffered a stroke 3 months ago that left her arms paralyzed. She also has slurred speech and some problems concentrating. Finally, just like many stroke survivors, she has developed depressive symptoms. She initially did not want to do the daily rehabilitation requiring several hours. However, the hospital purchased a novel rehabilitation system which offers a holistic rehabilitation program to its users.</p> <p>Mrs. De Luca still has to do the same physical arm training, but now it does not feel like training anymore; it is fun! Her arm is placed in a robotic device which assists her movement. She sits in front of a large computer screen and has to play a card game called "Patience". She can flip a card by bringing her arm to the card and hovering over it. The robot arm is not only controlled by Mrs. De Luca's attempted movement, but also by the related features in her ECoG signal. Directly after her stroke, surgeons implanted her with a temporary micro ECoG grid which wirelessly transmits to the robot arm. The game challenges Mrs. De Luca to train her arm and the damaged cortical areas. It also rewards her at opportune moments for her achievements or adapts the difficulty level of the game depending on her mental state. The engaging game, combined with support from both the robot arm and her own brain, persuades Mrs. De Luca to do her daily rehabilitation and reduces the time she needs to stay in the hospital.</p> |

UC 229-02: GUIDE - Telelearning application

General

| Name of Use Case | | | | |
|-------------------------------|-------------|-----------------------------|----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 229 | | | GUIDE - Telelearning application | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-11-27 | Lars Rölker-Denker | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| 03 | 2013-12-30 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|--|---|--|
| GUIDE: D7.1: Initial User Tests and Model (FP7) | http://www.guide-project.eu/includes/requestFile.php?id=129&pub=2 | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #sensory:hearing; #work:sector:handicraft; #neuromusculoskeletal:joints_and_bones; #life_areas:education; #learning; #key_enabling_technology:mobile_devices; #life_areas:work | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p><i>Text in italic are comments from the source document</i></p> <p>At 62, Jorge is quite agile after a 43-year work-life as a carpenter. Only his hearing has been somewhat degrading in the last decade and this knee joints are a bit painful sometimes. Now, after children finally moved out, he shares the village house with his wife Marta, 57, who works as a teacher for another couple of years and the dog. During all his work-time, Jorge dreamt of studying architecture and especially became interested in modern architecture and the use of traditional materials like wood. Only the responsibilities in his workshop and his devotion to his family kept him from starting it.</p> <p>After retiring, Jorge soon dedicated more time to his personal interests and enrolled in the University of the Third Age in the city 30km away, where now a course is offered with lectures on many of the most renowned architects of our time. As Jorge does not want to walk large distances, another lucky circumstance is that the university offers the courses online as webcasts through a telelearning application. This application allows him use the TV as a means for studying. One can watch either lectures live or recordings, and the number of available lectures has been increasing lately.</p> <p><i>This scenario does probably not apply to all users (may be too constructed anyway, but it's a first version), so this is probably the point to check whether people are "affine" with Third Age studying.</i></p> <p>As an alternative, Jorge now has a new tablet PC, which has a smaller screen but is much like a real book, so he can sit on the terrace and watch his lectures, especially if Marta wants to watch her favourite series on TV or if he wants to write down notes or draw something. Then he does not hold the tablet in his hands but rather puts it on the table beside his paper sketch block.</p> <p><i>Does a tablet seem like a good medium to do this? What do they prefer, hand-held or put on the tablet?</i></p> |

When Jorge begins his session, the tablet shows a number of pictures of users it already knows, as well as a button with an avatar head and a plus sign (for help or adding users).

What do they prefer, hand-held or put on the tablet? Any general objections against the tablet?

The first time, Jorge only saw this latter button, and touched it, upon which the tablet starts with an introduction. To bring the tablet “to life”, it is represented by an avatar; a speaking animated head that can explain how the applications work.

Is the avatar accepted? Is this (simple) gesture accepted and viable? Opposed to the VC scenario, here no camera information can control the avatar, e.g., to react to a face recognised in front of the screen.

For this it first welcomes Jorge and asks for the name. Jorge loudly tells it his name, and it is recognised.

This involves a risk: speech recognition may not work, or only for a small set of very common names. Alternatively, the user could be asked to type his or her name. Further, we haven't quite thought about what happens if an existing user gives their name a second time: The system should be able to recognise this and handle it adequately.

After the tablet knows Jorge's name, it creates a new user profile and asks Jorge whether he would like to make some tests in order to improve the communication between them.

This is where the initialisation application fits. At the same time, here we could have a larger menu for different available applications, not unlike a smartphone home screen.

Alternatively, Jorge can go ahead and let Guidy explain the telelearning application. Or he tries to explore it himself, in which case the avatar responds with explaining the way it can be called for help: with a circular gesture. This gesture is shown on the screen to guide the user.

When explaining gestures on the tablet, are these “multimodal” instructions an acceptable way to do it?

Jorge decides to skip the explanation and directly proceeds to the main screen. The avatar says goodbye and disappears.

At this point we assume that Jorge has his profile set up and is already enrolled into the course.

An overview screen is shown where Jorge can choose from the courses he is enrolled in (currently only one) and add new courses. Jorge chooses the lecture and is now shown an overview of the lecture, with the course name in a headline on top of the screen. Jorge browses the menu. There are titles and thumbnail images, and by touching either, a detailed screen on the lecture is shown. Further, by wiping up and down, Jorge can scroll the list in case it extends the visible screen. But he chooses the first lecture and reads its details.

How intuitive is it for users to touch the lecture buttons? Do they get the idea on their own?

By touching the silver arrow at the title, Jorge starts the lecture.

In order to get back to the upper menu, in the headline the left arrow can be used. Is this self-explanatory? I guess we have to make this more prominent.

The lecture screen shows different parts of the lecture: A video of the speaker on the upper left, some information on the slide number and progress time below this. The upper right part takes the space for the

slide that is explained by the speaker. In the lower part of the screen is a set of thumbnails that can be moved left or right in order to advance or rewind the lecture playback. On the bottom of the screen, a more traditional play/stop button set as well as rewind and fast forward buttons are shown.

Are these standard buttons self-explanatory for the users?

Of course, for the first time, this screen is a bit complex for Jorge's taste. He makes the circle wipe and Guidy, the friendly avatar, appears to explain what the functions of the screen are. Guidy also explains that there are different views that Jorge can choose: Lecture slide fullscreen view, Lecture slide view with speaker (which tries to cover as much as possible of the screen), and Lecture speaker view with small slide view. As Guidy explains, these views can be accessed by touching the screen with two fingers and wiping up or down.

Are two-finger gestures viable? Single-finger is already rewind and fast forward, so to keep the gestures easy, two fingers are a solution

UC 232-03: MOBISERV - Function for reminder and encouragement to eat (Nutritional Assistance)

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 232 | - | - | MOBISERV - Function for reminder and encouragement to eat (Nutritional Assistance) | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-30 | Axel Helmer | | Initial |
| 03 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |

| |
|--|
| - |
| Further Keywords for Classification |
| - |
| Scope and Objectives of Use Case |
| #digestive; #key_enabling_technology:questionnaires; #key_enabling_technology:robotic; #life_areas:education; #key_enabling_technology:health_information |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Use-Case 1:</p> <p>As Brenda has diabetes, her doctor has advised her to eat regularly. She is also prescribed some medication for her diabetes, which needs to be taken after meals, so it is important that she eats on time.</p> <p>Brenda's daughter has setup meal-time periods using the MOBISERV touch screen interface. When the intelligent monitoring system in the environment and robot has not observed any eating activity around such a timeslot, the system will ask Brenda if she has eaten. If she replies that she has not, it gently suggests that she should have something to eat.</p> <p>On the occasions when Brenda is out, the system knows that she is not in, so the reminder will not be issued. Later, the MOBSIERV system confirms whether she has eaten when she returns by politely inquiring.</p> <p>Use-Case 2:</p> <p>Aalbert lives on his own and often feels depressed and lonely. He has never been very good at cooking and consumes very little nutritious food, mainly relying on packaged food. Often he does not eat at all.</p> <p>When the monitoring system has not observed any eating activity for a pre-set period of time (set-up in consultation with Aalbert) or has received a negative response in response to the reminders, the system recommends to Aalbert that he eats something by a persuasive (to be determined by research and customisable to individual preferences) encouragement. It suggests meal options (based on the contents of his refrigerator or larder if these are known) or items that it has recorded as being Aalbert's favourite nutritional snack. It also lets him know of the benefits of eating regular healthy meals, and suggests that doing so will make him feel better. The system has a set of ways of proposing nutrition and does not repeat the same information every day.</p> |

UC 233-03: MOBISERV - Function for Reminder and Encouragement to drink (Dehydration Prevention)

General

| Name of Use Case | | | |
|------------------|-------------|----------|--|
| ID | Domain Role | Function | Name of Use Case |
| 233 | - | - | MOBISERV - Function for Reminder and Encouragement to drink (Dehydration Prevention) |

| Version Management | | | | |
|---|------------|-----------------------------|--|---|
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-30 | Axel Helmer | | Initial |
| 03 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System - Requirements Specification Volume II (D2.3) (FP7) | | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #digestive; #self_care:drinking; #key_enabling_technology:robotic; #key_enabling_technology:health_information; #sensory:seeing; #mental; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Use-Case 1:</p> <p>Brenda often forgets to drink enough during the day. Brenda's assistive robot will remind her to drink in combination with the other reminders or at moments where she is eating or taking her medicines. These reminders and triggers can be set-up by Brenda's daughter through the GUI on the PRU. Only when more than a pre-set number of hours pass by, without any drinking events, the robot will suggest to have a cup of tea, coffee or water. To detect this, intelligent sensors in the environment will be combined with the sensors of the robotic assistant.</p> <p>John, who will also find having this reminder useful, might potentially have problems with interpreting and recognising the reminder because of his memory problems. Therefore, the system will be fully customizable in terms of the interface mode used for the reminders, as well as the appearance of these reminders.</p> <p>Use-Case 2:</p> |

When Dafne is at home, her assistant robot provides gentle encouragements to drink, by proposing many varying fluids, on varying times of the day. Think about water, milk, coffee, tea, orange juice, wine, etc. The system learns what Dafne likes and what not, and adjusts the schedule to this, but every now and then, it will still propose new or other drinks.

For Brenda, her weak eye-sight has to be taken into consideration, so the information should not only be presented on the screen. For John, there might be potential problems with being able to interpret, recognise and respond to the encouragement because of his dementia. So for him, the messages should be very easy to understand and structured.

UC 234-03: MOBISERV - Function for Reporting to health professionals

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 234 | - | - | MOBISERV - Function for Reporting to health professionals | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-30 | Axel Helmer | | Initial |
| 03 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realised in R&D | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #sensory:pain; #human_communication; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Use-Case 1:</p> <p>Dafne has some physical problems, related to her age. Every now and then, she feels pain somewhere, or she does not feel as well as usual. She always wonders whether this is all related to her age, or that there is something more. She does not want to go to the doctor everytime as it is quite cumbersome to get to the clinic. With MOBISERV, Dafne can ask for a very quick but effective tele-consultation. This means that through an audio and video link, she can hear and see the doctor, and the doctor can hear and see her. She has to make an initial request to see the doctor via the system and then when there is a free slot the doctor calls her. The doctor has some standard questions, and Dafne can ask about her specific complaints. If needed, this tele-consultation can be followed up by a real consultation.</p> |

UC 235-02: MOBISERV - Function for a tele-medicine/self-check

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 235 | - | - | MOBISERV - Function for a tele-medicine/self-check | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realised in R&D | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mobility; #vital:cardiovascular; #key_enabling_technology:body_area; | | | | |

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|--|
| #key_enabling_technology:vital_parameters; #key_enabling_technology:telemedicine; #self_care:eating; #key_enabling_technology:home_automation |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Complete Description |
| <p>Use-Case 1:</p> <p>Brenda has mobility issues and has been prescribed with an exercise regime to improve her walking, balance and general fitness. She also has a heart problem, so her breathing and heart rate have to be monitored at the same time.</p> <p>Mobiserv system monitors the most important vital functions using smart garments and activity sensors, which Brenda puts on before the exercise sessions. The smart garment can follow her activities and issue an alarm to her to slow down or stop, for instance when her breathing and pulse functions become too high or irregular. All the readings during her exercise session are recorded and emailed to her doctor at the end of the week.</p> <p>Use-Case 2:</p> <p>Aalbert does not eat much and is prone to hypothermia due to low body weight, particularly at night in the winter.</p> <p>Aalbert puts on the MOBISERV smart garment night wear (or has smart sheets on his bed) that monitor his body temperature while he sleeps. If his temperature falls below a certain threshold, the system takes remedial actions – such as issuing an alarm to Aalbert, issuing an alarm to a neighbour, controlling the heating, or sending an email to the doctor.</p> |

UC 236-03: MOBISERV - Function for Games for Social and Cognitive Stimulation

General

| Name of Use Case | | | | |
|--------------------|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 236 | - | - | MOBISERV - Function for Games for Social and Cognitive Stimulation | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-30 | Axel Helmer | | Update |
| 03 | 2014-06-13 | Herjan van den | | Update |

| | | | | |
|---|------|--------|--|--|
| | | Heuvel | | |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #key_enabling_technology:games; #community:recreation | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>Use-Case 1: Although John has dementia, he really enjoys playing games such as Scrabble with his son. Sometimes he needs a little bit of guidance but for the most part he plays very well and enjoys the challenge of the game. The MOBISERV system will have inbuilt gaming functionality to stimulate users and also promote acceptance of the system. Users will be able to play against the machine and also against friends who have the same system or via a special website. John can play Scrabble and cards with his friends at the day centre from his own home, or play against the machine.</p> <p>Use-Case 2: Lilian likes to play board games with her husband when she can, particularly Othello. No one at the care home knows how to play Othello so Lilian has to wait until the weekend to play her favourite game.</p> <p>Lilian can also play Othello with her husband when she is in the home or play against the machine.</p> |

UC 237-03: MOBISERV - Function for Voice/Video/SMS via robot communication with friends and relatives

General

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|-------------------------|--------------------|-----------------|-------------------------|
| Name of Use Case | | | |
| ID | Domain Role | Function | Name of Use Case |
| 237 | - | - | MOBISERV - Function for |

| | | | | |
|---|------------|-----------------------------|--|---|
| | | | Voice/Video/SMS via robot communication with friends and relatives | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-30 | Axel Helmer | | Update |
| 03 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mobility; #human_communication; #stakeholder:secondary:relatives; #key_enabling_technology:communication_functions; #key_enabling_technology:robotic; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>Use-Case 1:</p> <p>Terry really misses his friends. He moved to the residential home from his hometown 250 miles away to be nearer to his children. His mobility issues prevent him from leaving the home very often to visit his family, and he misses things like the grandchildren's birthday parties as he is too frail to attend.</p> <p>The MOBISERV screen enables Terry to use video calling or hand free telephone calling (voice only) to his friends and family. Video calling helps Terry to feel like his distant friends are in the room with him. It also enables him to remotely attend birthday parties or family events with two-way interaction. Terry's family can also use the system to upload photos or videos of their activities to share with Terry at any time. Terry is able to select whether or not he wants the audio visual calling or voice only calling options with a one-step</p> |

interaction, and it is clear to Terry when the camera is on and what the other person is able to see.

Use Case 2:

Because Aalbert's sons and daughter live quite far away, they cannot come by every day or every week. Still, they do want to know about how their father is doing, and sometimes worry about his health and his loneliness.

With the MOBISERV system, they found a solution for this. Every morning, one of the children checks in on their father through the robot's audio and video connection. This can be done from a computer, laptop or smart phone. They can see their father, find out how he is doing, and have a chat. Because of the mobile robot, this can be done in any room and in any location in their father's apartment. Aalbert has the option of setting a do not disturb option if he does not wish to be contacted at any time, or turn the camera off and use voice only.

UC 238-03: MOBISERV - Function for a mobile intercom for enabling front door entry

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 238 | - | - | MOBISERV - Function for a mobile intercom for enabling front door entry | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-30 | Axel Helmer | | Draft |
| 03 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |

| |
|---|
| #mobility; #key_enabling_technology:robotic; #key_enabling_technology:home_automation; #key_enabling_technology:communication_functions; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Use-Case 1:</p> <p>Aalbert is at home, in his apartment on the 7th floor. He sits in his favourite chair, and is watching television. The doorbell rings. There is a visitor outside, in front of the main entrance of the building. Due to his impaired mobility, he misses quite some visitors; they leave before he reaches the intercom in his hallway. Sometimes Aalbert is also nervous about answering the door when he is not expecting anyone and does not know who is calling. With the MOBISERV system, combining the smart environment with the robot assistant, the robot comes up to Aalbert's chair when the doorbell rings. On the robot's display, it will show a live video of his visitor standing in front of the door. Aalbert can easily see who is there, then start an audio connection with the visitor if he wants to, or let her/him in right away, by telling the robot to open the door, or by pressing a button on the robot's touch screen.</p> <p>When Aalbert is not at home, the system will know this, and a short video will be record showing the visitor in front of the door. When Aalbert comes home, the robot will show a message with the option to see this video.</p> |

UC 239-03: MOBISERV - Function for responding to call for help from the user

General

| Name of Use Case | | | | |
|-------------------------------|-------------|-----------------------------|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 239 | - | - | MOBISERV - Function for responding to call for help from the user | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| 03 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|--|---|--|
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #mental; #key_enabling_technology:robotic; #key_enabling_technology:communication_functions; #key_enabling_technology:body_area; #sensory:hearing; #sensory:seeing; #human_communication | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Use-Case 1:</p> <p>John enjoys being at the day care centre, and likes the carers and nurses very much. He sometimes forgets where he is and what time it is, and starts to panic. At the day care centre, they know how to help him relax. Sometimes, this also happens at his home, even in the middle of the night. Once, he ran out of his bedroom, shouting for the nurse.</p> <p>John's MOBISERV system is able to detect loud voices, such as shouting or screaming. The system will locate the person in panic, and the robot will go to him/her, and setup an audio and video connection with the care call centre. The person in the call centre can immediately talk to John, to help him relax and set him at rest. John has memory problems, so the response will have to be appropriate for this. In the intelligent environment, panic or falls could also be detected or corroborated by monitoring sensors in smart clothing or smart bed sheets.</p> <p>Use Case 2</p> <p>For Aalbert, Brenda, Carol, Dafne, Lilian and Terry, the system will have the ability to trigger a call to the care call centre in response to a fall or a voice call for "help" from the person, informing the centre of the nature of the alarm, resulting in appropriate action. Brenda has poor eyesight and a pre-existing medical condition which should be known by the system and also communicated. Lilian's loss of hearing means that she might need alternative modes interaction with the call centre.</p> |

UC 240-03: MOBISERV - Function for Encouragement for exercising

General

| Name of Use Case | | | |
|------------------|-------------|----------|------------------|
| ID | Domain Role | Function | Name of Use Case |

| | | | | |
|--|------------|-----------------------------|--|---|
| 240 | - | - | MOBISERV - Function for encouraging and guiding physical exercises | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-30 | Axel Helmer | | Draft |
| 03 | 2014-06-13 | Herjan van den Heuvel | | Update |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MOBISERV: System Requirements Specification Volume II (D2.3) (FP7) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| realized in demonstration project | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:muscle; #key_enabling_technology:robotic; #mobility; #key_enabling_technology:body_area; #key_enabling_technology:communication_functions; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Use-Case 1:</p> <p>Aalbert, like many older people, suffers from very stiff muscles, especially in his hands, arms and legs. He does not engage in much physical activity during the day, so therefore the doctor told him to do some exercises, preferably every day. Aalbert knows the benefits, but still does not really like to do these exercises, and tends to skip them most of time.</p> <p>The MOBISERV system functions as a persuasive agent in this case. First, it detects when Aalbert is sitting still for long, by sensors in the environment, and by interaction through the robot. The system will try to find a pattern in Aalbert's daily activities, to find out the best or most preferred opportunity to propose and do some exercises. The system knows many exercises to offer diversity, and will ask for feedback after each</p> |

exercise. This way it learns what Aalbert likes, when he likes to do exercises, and how many time he wants to spend per session. Among other things, Aalbert is encouraged by feedback on his exercises, showing his progress and describing the benefits of regular gentle exercises, such as promoting a good night's sleep.

Use Case 2:

For people with mobility problems, such as Brenda, Dafne, John and Lilian, the activities will have to be specifically designed by a medical practitioner or physiotherapist. If needed, data from the exercises, for instance from the intelligent clothes or from the robot's video camera, can be recorded and analysed by a caretaker, for safety reasons, or for feedback or adjustments on the execution of the exercises.

UC 241-01: MYUI - Email Client Scenario

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 241 | - | - | MYUI - Email Client Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MYUI: Context Ontology, User Modelling Concept and Context Management Architecture (D1.1) (FP7) | http://www.myui.eu/deliverables/MyUI_D1-1_final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #human_communication; #key_enabling_technology:communication_functions; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case | |
|--|--|
| | |
| Complete Description | |
| <p>Arthur wants to use his new Net TV to see if his daughter has sent him an email. He starts the Net TV by pressing the „on“-Button on his remote of which he knows the position. Arthur selects the email service by choosing the relevant button on the screen by pressing the according number on the remote.</p> <p>The screen shows 3 Messages with the name of the sender and the subject of the mail in big letters but Arthur cannot read both of the texts. He tries to get nearer to the Net TV (leans forward) to see if he might be able to read the text from a lesser distance. The Net TV recognizes his movement and increases the font size.</p> <p>Still, Arthur cannot read the texts so he tries to decrease the distance again. The NetTV sees that it does not help to increase the font size any further and switches to pictures of the sender and a button to open the mail.</p> <p>Artur recognizes one of the pictures as his daughter and presses the according button on the remote.</p> <p>The Net TV switches to the message screen where the text as well as a button to read the message and different reply buttons are shown. The message is read by the system (Text2Speech) automatically. After the system has read him his daughters message he also describes the options available to Arthur (audio menu).</p> <p>His daughter asks him if a pickup for grocery shopping next Monday, 4 pm is okay for him, but since he has visitors at the time, he presses the button “record message” to record a reply to his daughter. The Net TV tells him that he can start to record after the „beep“ and also tells him how to stop the recording when he is finished. Arthur waits for the „beep“ and starts to speak his message.</p> <p>After the email is sent, a written dialogue pops up to ask Arthur if the changes made to the interface while using the Net TV were acceptable to him.</p> | |

UC 242-01: MYUI - Physiotherapy Scenario

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|-------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 242 | - | - | MYUI - Physiotherapy Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Initial |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|--|---|---------------------------------|
| MYUI: Requirements for User Interface Adaptation (D2.1) (FP7) | http://www.myui.eu/deliverables/MyUI_D2-1_final.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #vital; #purpose:safety:disease_rehabilitation; #key_enabling_technology:telemedicine; | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>When the stroke patient has returned home they have a need to carry out some exercises prescribed by a physiotherapist. The physiotherapy system is designed to support and reinforce these exercises.</p> <p>Liam, a physiotherapist, visits Doris in her home to carry out the assessment on her and to prescribe an appropriate exercise programme. Liam conducts the assessment and decides what exercises are appropriate for Doris to carry out. Liam then accesses the system to develop a programme of exercises for Doris to carry out. Liam works out a schedule of exercises to be performed at certain times during each day, for a certain number of days. He then configures the system to monitor Doris's progress and to adapt the exercises to increase their difficulty, to stop some exercises and to start other ones.</p> <p>Liam then passes the system to Doris and asks her to perform the exercise programme. Doris starts the exercise application. She watches the screen and listens to the instructions. The system tells her that "we are going to exercise your legs".</p> <p>Here various exercises can be performed by the system, based on the expert advice of physiotherapists...</p> <p>Doris carefully and slowly performs the exercise. The system knows that this is the first time that Doris has used the exercise system and takes this into account – running in a slow mode and checking (with audio prompts) that the exercise steps have been completed.</p> <p>Gradually, Doris gets better at the exercise and the application adjusts to this. It asks Doris to increase the height of the first leg lifting exercise, for example. When the system has detected that Doris has successfully completed the prescribed number of exercise steps of the first exercise, the system informs Doris that she has successfully completed the exercises.</p> <p>Liam concludes that Doris is able to use the system and can successfully perform the exercise programme he has configured for her. He is able to monitor her progress over the Internet, without having to visit Doris's</p> |

home and can remotely change the level of difficulty manually.

UC 243-01: MYUI - Email Client Scenario 2

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 243 | - | - | MYUI - Email Client Scenario 2 | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| MYUI: e-mail on iTV prototype (D4.3) (FP7) | http://www.myui.eu/deliverables/MyUI_D4-3_final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #human_communication; #sensory:seeing; #key_enabling_technology:communication_functions | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Manuela uses her TV remote control to use web applications on her interactive television. She visits the main menu of the MyUI system that provides web applications that make use of the MyUI self-adaptation system. She logs on to the system using her RFID card. From the MyUI main menu, Manuela selects the e-mail application. She sees a list of e-mails that she has received. As she can't read the information on the screen well, she leans-forward, the font size in which the list of e-mails is displayed is increased. She selects one. She will have the opportunity to read the e-mail and to respond by selecting from pre-defined answer options. Her daughter has set these options knowing that Manuela will read the e-mail via her</p> |

interactive television.

UC 244-01: RUBICON - Cooking

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 244 | - | - | RUBICON - Cooking | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| RUBICON: Learning Layer - Functional Design & Specification Document (D2.1) (FP7) | http://www.fp7rubicon.eu/uploads/articles/D2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #self_care:eating; #key_enabling_technology:home_automation; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| The user prepares food once, twice or three times a day, usually in the morning, early afternoon and evening. |
| The user's cooking habits may change, for instance, depending on the day of the week (working |

day/weekend) and the seasons of the year. However, before the meal is ready, the user rarely leaves the kitchen for more than few minutes.

The Rubicon learns to recognize when the user is ready to prepare food and will ask the user if he/she wants the Rubicon to warm the oven. From the fact that the user usually switches on the air aspirator while cooking, the Rubicon will learn to automatically activate it when appropriate.

UC 245-01: RUBICON - Eating

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 245 | - | - | RUBICON - Eating | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| RUBICON: Learning Layer - Functional Design & Specification Document (D2.1) (FP7) | http://www.fp7rubicon.eu/uploads/articles/D2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #self_care:eating; #key_enabling_technology:home_automation; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|-----------------------|
| |
| Complete Description |
| |

After cooking, the user usually eats his/her own meal after setting his preferred combination/intensity of lights where he/she eats.

This usually occurs either in the kitchen or in the living room, depending on the day of the week, or if the user is alone or in the company of other people. At lunch time he usually prefers the living room, where he/she can watch the news. The user usually activates the air refresher after cleaning the table.

The Rubicon learns to recognize the user's habits and preferences, and will automatically set the ambient lights in the proper room when the user is getting ready to eat his/her meal, switch on the TV in the living room at lunch time, and activate the air refresher when the user has finished eating.

UC 246-01: RUBICON - Laundry

General

| Name of Use Case | | | | |
|---|--|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 246 | - | - | RUBICON - Laundry | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| RUBICON: Learning Layer - Functional Design & Specification Document (D2.1) (FP7) | http://www.fp7rubicon.eu/uploads/articles/ D2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #self_care:washing; #key_enabling_technology:ambient | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>The user does the laundry once a week, usually preferring the time of the day when the electricity is cheaper.</p> <p>However, the user sometimes decides to reschedule the laundry, for instance, if there are not enough clothes to wash (e.g. as measured by a weighing scale located under the basket) , or if he/she receives an unexpected visit.</p> <p>The Rubicon learns the most appropriate times when to advise the user to do the laundry.</p> |

UC 247-01: RUBICON - Lightning Scenario

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 247 | - | - | RUBICON - Lightning Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| RUBICON: Learning Layer - Functional Design & Specification Document (D2.1) (FP7) | http://www.fp7rubicon.eu/uploads/articles/D2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #general_tasks:daily_routine; #key_enabling_technology:home_automation; #key_enabling_technology:environmental_parameter; | | | | |

| Scope and Objectives of Use Case |
|----------------------------------|
| - |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>The user usually waters the plants with a watering can filled from the tap in the kitchen. After watering, the user prefers to keep the room in low light for some time.</p> <p>The Rubicon learns to close the blinds and/or to switch off the lights if there is too much light after the user has watered the plants.</p> <p>On a very cloudy day, the Rubicon does not close the blinds after the user has watered the plants.</p> <p>After a while, the Rubicon closes the blinds as the day brightens up and lots of light enters into the room</p> |

UC 248-01: RUBICON - Room Localization

General

| Name of Use Case | | | | |
|--|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 248 | - | - | RUBICON - Room Localization | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| RUBICON: Learning Layer - Functional Design & Specification Document (D2.1) (FP7) | http://www.fp7rubicon.eu/uploads/articles/D2.1.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |

| |
|---|
| - |
| Further Keywords for Classification |
| #key_enabling_technology:robotic; #key_enabling_technology:ambient; #localization:indoor; #key_enabling_technology:mobile_devices; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|--|
| Narrative of Use Case |
| Complete Description |
| <p>Every time a robot navigates in a room with camera-based localization system, the Rubicon knows in which room the robot is located. The robot also senses the signal strengths to the various WSN nodes installed in the environment. The Rubicon learns to recognize in which room is the robot by just looking at the signal strengths information.</p> <p>The user starts wearing a bracelet equipped with a WSN node. The Rubicon shares the knowledge acquired through the robot and learns to recognize in which room the user is located by looking at the signal strengths information captured by the user's bracelet.</p> <p>The Rubicon system has learnt how to localize the user's room based on the RSSI signals from WSN nodes in the user's flat. The user changes some of the furniture in the flat. The Rubicon is still able to localize the user, with a reduction in the localization performance that is proportional to the changes in the environment. Similarly, the Rubicon will localize the user in case of re-installation of the ecology in a flat which is similar enough to the one in which the system has been trained.</p> |

UC 249-01: RUBICON - Ressource Addition

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 249 | - | - | RUBICON - Ressource Addition | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-05 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| RUBICON: Learning Layer - Functional | http://www.fp7rubicon.eu/uploads/articles/ | | Public | |

| | | |
|--|--------------------------|--|
| Design & Specification Document (D2.1) (FP7) | D2.1.pdf | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:home_automation; #key_enabling_technology:ambient; | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>The Rubicon system is installed in a new home. After some time, the user complains about Rubicon's quality of service, for instance, the Rubicon fails to help out in the kitchen, and the vacuum cleaner keeps being activated at inappropriate times.</p> <p>The system is updated by adding a number of extra microphones and PIR sensors in each room. After some time, Rubicon improves its understanding of each situation and learns to better help the user.</p> |

UC 250-01: SRS - Preparing Food Scenario

General

| Name of Use Case | | | | |
|-------------------------------|---------------------------------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 250 | - | - | SRS - Preparing Food Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| SRS: SRS System | http://srs- | | Public | |

| | | |
|--|--|--|
| Specification (D1.3 - a) (FP7) | project.eu/sites/default/files/SRS_247772_D1.3A_SRS%20System%20Specification.pdf | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #self_care:eating; #domestic_life:household_tasks; | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Because Elisabeth Baker (84) recently neglected to eat, stating she has no appetite, she and her son Martin have agreed that Martin would prepare lunch for her daily for a while and they would have a chat while he does it. Therefore, Martin today during his lunch break at work calls his mother. Elisabeth accepts the call and they talk about how her day went. Martin asks her what she would like to eat and Elisabeth chooses pasta.</p> <p>During the conversation, Martin directs SRS to the kitchen. Through SRS he opens the microwave oven, then the fridge, fetches the pasta microwave meal package, puts in the microwave, closes fridge and microwave oven, turns on the microwave by setting it to 5 min, fetches some water and puts it on the table, and after 5 min fetches the food and places it on the table.</p> <p>At the end of the process, Martin receives a message from SRS notifying him that a similar action sequence as today has been carried out 2 times before. SRS displays the recognized sequence and asks if it should be saved for future autonomous execution:</p> <ol style="list-style-type: none"> 1. Open microwave 2. ... 16. Place object pasta microwave meal on living room table. <p>Martin is also given the option to edit the action sequence before saving it. E.g. he can shorten it, delete elements, or define variable elements that SRS should ask for before executing the sequence. Martin thinks to himself "This is nice, so next time I can fully focus on my conversation with Mum and I will simply wait for SRS to finish preparing the meal, only intervening in case SRS encounters a problem." Martin cuts the segment "Fetch object water bottle; bring to location living room table" because his mother often has some water sitting there already. Also, Martin sets the sequence object pasta microwave meal a variable object so SRS will next time ask what kind of food to prepare.</p> <p>Next day: Martin again calls his mother. However, today, SRS prepares the meal autonomously and Martin and his mother chat on how her day has been.</p> |

UC 251-01: SRS - Fetching and carrying of difficult objects**General**

| Name of Use Case | | | | |
|--|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 251 | - | - | SRS - Fetching and carrying of difficult objects | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| SRS: SRS System Specification (D1.3 - a) (FP7) | http://srs-project.eu/sites/default/files/SRS_247772_D1.3A_SRS%20System%20Specification.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:robotic; mobility:body_position_and_carrying; #key_enabling_technology:communication_functions; #domestic_life:household_tasks | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Francesco Rossi (78) is mentally still quite fit. However, he does not feel safe climbing a ladder and has fallen before. He has an SRS system to help him with difficult objects. Since he has no cognitive deteriorations, he usually handles SRS himself, only falling back to a teleoperator in case it fails to execute an interaction with SRS.</p> <p>Francesco wants to find some information in an old book located on a high shelf. He uses his interaction device to navigate SRS by map to the shelf.</p> |

Since Francesco knows that SRS has never before seen this object, he switches to 3D object model approach of grasping. However, after several failed attempts, he gives up (the book is surrounded by other books causing problems with the collision-free path planning for the arm).

Recognizing the failed attempts, SRS suggests to forward the interaction request to Gianni, his son. Francesco agrees. Gianni does not answer however, so SRS suggests forwarding the interaction request to the 24-hour service. Francesco agrees.

Claudia from the 24-hour service answers the call and sees on her screen the steps that lead SRS to suggest call him (failed manipulation attempts). She greets Francesco and asks him to explain what he would like to do. Francesco explains it and shows her the book.

Claudia uses the professional mode with user assisted grasp to hold the book, moving aside the other books.

Knowing that Francesco will later want to return the book on his own, Claudia teaches SRS the book by the "rotate-on-gripper" approach. Francesco says thank you and the two agree to end the remote session.

Francesco searches the book and finds what he was looking for. He now uses the standard semi-autonomous grasping mode to return the book. He simply taps the object on his device (it is highlighted by a rectangle) and places it back on the shelf by tapping the desired place on the shelf.

UC 252-01: SRS - Fetch and carry + video call scenario

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 252 | - | - | SRS - Fetch and carry + video call scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| SRS: SRS System Specification (D1.3 - a) (FP7) | http://srs-project.eu/sites/default/files/SRS_247772_D1.3A_SRS%20System%20Specification.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |

| Generic, Regional or National Relation |
|--|
| - |
| Further Keywords for Classification |
| #key_enabling_technology:communication_functions; #self_care:drinking; #domestic_life:household_tasks; #key_enabling_technology:robotic; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Elisabeth Baker (84) lies at home in bed due to a cold. To check if everything is alright, her son Martin initiates a request for a remote session from his workplace. Elisabeth accepts the request on her portable communication device and a video communication is established. Martin asks if he could do anything for his mother.</p> <p>Elisabeth answers that she feels a bit thirsty. Martin therefore wants to fetch a bottle of water and a glass from the kitchen. He uses a room plan to specify that SRS should go to the kitchen.</p> <p>Having arrived in the kitchen, Martin drives SRS to the specific place where the bottle and glass are located.</p> <p>Having arrived in the kitchen, robot checks the environment and passes the perception to Martin. Martin drives SRS to the specific place where the bottle and glass are located.</p> <p>SRS indicates by a rectangle that it recognizes the bottle. This bottle has previously been taught to SRS. However, the glass is not indicated to be recognized. It is a new glass that SRS has not been taught before.</p> <p>Martin clicks on the bottle and SRS puts it on the tray.</p> <p>Because the glass is not recognized, Martin switches to user-assisted grasping mode. From a library of 3D object models, Martin selects from the category "glasses" a cylinder-shaped glass similar to the one to be grasped. He adjusts its shape (height, width, position) so that it matches what he sees on the video picture. He then clicks "GO" and SRS grasps the object and puts it next to the glass on its tray.</p> <p>Having finished the grasping, SRS asks Martin if this object should be saved for future grasping. SRS suggests to save it in the category "glasses". Martin confirms and assigns a name: "long glass".</p> <p>Martin directs SRS back to the bedroom of his mother. While SRS drives back, Elisabeth asks Martin what he is doing and why it takes so long. Martin speaks with his mother telling her that SRS will be there soon.</p> <p>Martin and his mother agree to end the conversation and speak again tomorrow. After ending the call, SRS autonomously drives back to its charging place.</p> <p>\\Next day: Martin calls again and again wants to get his mother a glass and bottle. Today, Martin can just click on the glass to grasp it.</p> <p>However, today grasping the bottle fails even though this is an object taught to SRS. There are many other objects in the scene. Martin uses the "reduce search space" approach and SRS successfully grasps the</p> |

bottle.

UC 253-01: SRS - Emergency scenario

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 253 | - | - | SRS - Emergency scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| SRS: SRS System Specification (D1.3 - a) (FP7) | http://srs-project.eu/sites/default/files/SRS_247772_D1.3A_SRS%20System%20Specification.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:mobile_devices; #purpose:safety:alert_communication; #key_enabling_technology:robotic; #key_enabling_technology:communication_functions; #neuromusculoskeletal:movement; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| Elisabeth Baker (84) watches TV. In the commercial break, she wants to go to the bathroom but falls on her way, unable to get up again. |
| With a device she always carries attached to her belt, Elisabeth presses a button "emergency". |

Right away, a call is placed to her son and daughter as well as to the 24-hour teleassistance center. \\The device asks Elisabeth for her current position and she selects the room from a list.

SRS starts moving from its charging station to the room where Elisabeth fell.

The 24-hour center first accepts the call. Through SRS's camera, Claudia, the tele-operator, can see Elisabeth on the floor and asks what happened. She uses manual navigation to further drive the robot to the place where Elisabeth lies and to point the robot's camera more downwards.

Then Martin, Elisabeth's son joins the remote session.

Because Elisabeth can no longer move her legs due to strong pain, the three decide to call an ambulance. Martin logs off to come over in person and Claudia from the 24-hour service keeps talking to Elisabeth.

The ambulance arrives before Martin and rings the door bell. As Elisabeth cannot move, the tele-operator navigates SRS to the door to open it.

SRS fails to find a suitable grasping point. Claudia tries to use user-assisted grasping mode (3D model approach) but it fails too. Therefore, she changes to professional manual mode and uses the force-feedback device to open the door. The ambulance personnel enters and helps Elisabeth.

UC 254-01: universAAL - IT developer view

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 254 | - | - | universAAL - IT developer view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |

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|--|
| - |
| Further Keywords for Classification |
| #self_care:eating; #stakeholder:tertiary; #key_enabling_technology:questionnaires; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Complete Description |
| <p>Alex is an IT developer and his company InnovIT is dedicated to the application of Information and Communication Technologies (ICT) to the fields of public health, quality of life and social services.</p> <p>The company is very interested in AAL services and decides to use universAAL Developer Depot to create new AAL services. For that reason, developers follow the instructions provided at the Developer Depot. The first step is to download Eclipse with all the required extensions described at the Developer Depot and install the AAL Studio from Developer Depot. After that developers could choose in Eclipse this specific kind of new project called "New AAL project" that help them out to start.</p> <p>Alex wants to develop a Nutritional Service and selects the option "New AAL service" that allows developers to browse through a list of service templates and selects a specific one that fits with the service he wants to develop. The necessary skeleton files for developing the service are set up as files in an Eclipse project. Besides the Eclipse IDE provides a workspace for storing all universAAL services, so Alex can manage all projects related with universAAL easily.</p> <p>After one month of using the service, Peter (the end user) receives an invitation to fill-in a questionnaire for giving his feedback. He decides to accept this invitation and give his feedback about his experience with the Nutritional Service and its usefulness to him. Peter fills in an online questionnaire regarding his experiences with the service. As a developer of the service, Alex receives this feedback and analysis reveals a missing functionality mentioned by the John. He considers it important and starts working on it. First of all, he searches in the online repository from universAAL (Developer Depot) for some resources that can help him in the development of the new functionality in the Nutritional Service.</p> |

UC 255-01: universAAL - Student view

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 255 | - | - | universAAL - Student view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |

| | | | | |
|---|---|-------------|---------------------------------|-------|
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:mobile_devices; #stakeholder:tertiary; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Dave is a senior year student at Faculty of Electrical Engineering and Computing. He has been interested in AAL domain for some time now, especially since his grandfather is living alone for several years and Dave would like to help him.</p> <p>Dave's mentor tells him about of using universAAL platform in developing AAL solutions. He signs up to Developer Depot and starts examining developer handbook and tutorials for different tools. Also, he notices the advantages e availability of free training sessions about the platform and tools. He registers for training workshop that will be held at the local university next month, and goes through available Web-based training programme in the meantime. In the beginning, Dave was able only to develop simple services, but after going through several sessions of extensive universAAL training, starts development of more sophisticated AAL solutions. For his diploma thesis assignment, he chooses to work on enhancement of the agenda and reminder service with support for wrist watch device. He downloads all necessary tools and platform components from Developers Depot for free and starts working on implementation. He used all tools available on Developers Depot and took advantage of several advanced features of universAAL platform, such as rich human computer interaction support, intelligent context support and end user security and privacy management functionality. After solution was finished, Dave's decides to share his work for free to the rest of the community. He made several improvements to existing components and contributed them on Developers Depot repository. He also decides to share his service as a new service in the uStore for free. After passing the uStore validation process the new improved service becomes available for free to everyone who wants to use it.</p> <p>In following years, Dave has continued his academic career at university on research in the field of AAL domain. He had continued to contribute free software components and services to Developer Depot and uStore, and become respected member of universAAL open source community.</p> |

UC 256-01: universAAL - Elderly person view**General**

| Name of Use Case | | | | |
|--|---|--|----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 256 | - | - | universAAL - Elderly person view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #self_care:eating; #digestive:metabolism; #stakeholder:tertiary; #key_enabling_technology:questionnaires; #domestic_life:household_tasks; #domestic_life:household_tasks; #domestic_life:shopping; #key_enabling_technology:communication_functions; #purpose:safety:alert_detection; #purpose:safety:alert_communication; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Peter, 77 is widower and since his wife died one year ago his health has deteriorated a lot. His son Jack is worried because his father does not follow a healthy diet after the death of his wife. Besides, he has hypertension and cholesterol, which are both a common illness at this age.</p> <p>Jack decides to use the uStore to locate a Nutritional Service. He finds a complete Nutritional Service Package provided by a regional supplier, consisting of some sensors for the kitchen to monitor actions</p> |

related to cooking; software that will show Peter menus according to his personal profile by involving a nutritional expert that will follow Peter's nutritional aspects is and send him nutritional advices and questionnaires. Jack finds this service as very complete solution to his father and acquires the service. They accept the service level agreement and after that the software is downloaded. Once the order is done service's devices arrive. The contacted service delivery provider assists in setting up the sensors in the kitchen. During the installation of the sensors it is clearly communicated to Jack's father that data collected from sensors and other privacy sensitive data that is needed for the appropriate running of the nutritional service will be only accessed by the nutritional expert. Jack agrees and signs a form. After a few weeks Jack is quite happy because his father is following a healthy diet. In fact his hypertension and cholesterol values have improved since he started using the Nutritional Service.

One morning, Peter is cooking breakfast and the system is aware of this action and suggests the shopping list for the current week on the touch-sensitive screen located in the kitchen. Peter touches the screen to confirm that he has read it.

The following week Peter has caught a cold and has lost his appetite. Sensors in the kitchen have detected a limited cooking activity (an abnormal situation) and an alert is triggered to the nutritional expert. The nutritional expert contacts Peter by teleconference and suggests drinking some soup. Additionally Jack is also informed that Peter is ill.

After five months of using the Nutritional Service from the uStore, Peter detects an error in the service where it forgets what was eaten on certain days. Peter informs Jacks about this issue. Jacks decides to access the user community to report it thanks to the ticketing tool available in the uStore. Immediately, the maintenance provider receives the ticket and solves the problem, reporting to Jack and Peter when the problem is fixed. Developers and deployers who were involved in creating this service also get additional feedback from Peter to improve this specific service.

Furthermore Peter receives the three-monthly universAAL newsletter and reads about a new service that is promoted by his city municipality. The municipality has created a Local Community service building a social network with focus on elderly users to share events, activities, interests in order to involve elderly users to get involved in local events. Peter sometimes feels alone as his social activity has been reduced after the death of his wife and he thinks that this service can help him. Peter talks with his son Jack about this service and they buy the service from the uStore. Using this social network Peter has found people of his age with similar interests and now he is participating in several activities of his city with his new friends.

UC 257-01: universAAL - Medical specialist view

General

| Name of Use Case | | | | |
|--------------------|-------------|--|--------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 257 | - | - | universAAL - Medical specialist view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |

| Basic Information to Use Case | | |
|--|---|---------------------------------|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:ambient; #self_care:eating; #domestic_life:household_tasks; #key_enabling_technology:health_information; #digestive; #key_enabling_technology:questionnaires; #stakeholder:tertiary | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Anthony is a nutritionist who is involved in universAAL as a formal caregiver through the services offered by the IT company InnovIT. His role is to supervise menus offered by the Nutritional Service of InnovIT, to send nutritional advices and questionnaires to users according to her/his personal profiles. This service has several physical devices installed around the kitchen that capture activity while the assisted person is cooking. Thanks to innovative algorithms Anthony knows if the user is following the menu or not.</p> <p>Peter, a 77-year-old widower, has been having problems maintaining a healthy diet. He has recently acquired this service and Anthony creates personalized menus for Peter. Peter needs to improve his nutritional habits and Anthony remotely tailors nutritional advices for him. These advices can be displayed in any interfaces (i.e. screen) around the house thanks to the context-aware interfaces feature of universAAL. For example, Peter has digestion problems and since it is the plum season Anthony decides to send Peter some advice. So when Peter enters the living room a digital photo frame displays the encouraging: "Did you know that the plum season has started? If you eat several plums per day your digestion might significantly improve!"</p> <p>One day, Anthony receives an alert triggered by the nutritional service because sensors in Peter's kitchen have detected low activity for an unusual long period. Anthony immediately logs into the system as a formal caregiver using his smartcard and decides to have a teleconference with Peter to learn more about this situation. Peter informs Anthony that he has caught a cold and has no appetite, which is the cause of the low activity in the kitchen. Anthony recommends him some soups and advices him to go to the doctor. After the doctor visit, Peter logs into the system using a username and password to upload his new medications prescribed by the doctor. The uploading is done using a secure connection with the service and all data being stored on the server are digitally signed. Anthony accesses Peter's medication panel (as he is allowed</p> |

by John's privacy policy) to check newly prescribed medications and then modifies Peter's menu.

Anthony as a medical specialist is interested in the users' opinion about the service, so he periodically reads comments published by end users in the uStore. Besides that he also participates in the uStore discussion forums giving his opinion as a nutritional expert. Thanks to it, developers get accurate knowledge about end user opinions in AAL services and what users like or dislike.

Anthony knows that he plays an important role in this service since he is responsible for tracking and influencing end users. So he decides to send Peter nutritional questionnaires twice per week in order to monitor his nutritional habits and get feedback.

UC 258-01: universAAL - Relatives view

General

| Name of Use Case | | | | |
|--|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 258 | - | - | universAAL - Relatives view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #stakeholder:tertiary; #key_enabling_technology:environmental_parameters; #self_care:eating; #purpose:safety:fall_detection; #localization:indoor; #localization:outdoor; #key_enabling_technology:mobile_devices; #key_enabling_technology:ambient; #purpose:safety:alert_communication; #key_enabling_technology:communication_functions; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case | | | |
|--|--|--|--|
| | | | |
| Complete Description | | | |
| <p>Jack's father, Peter, is 77 years old and he lives alone in his house. Jack recently heard about AAL services and decided to search for a service in the uStore that could help his father with his nutritional habits. He is already registered in uStore as his father's caregiver, thus he has permission (given and agreed by his father) to register in his father's name. First of all he logs in the uStore and provides a reference to his father's profile. He defines some key words in the uStore searcher and the search engine executes a search based on the input.</p> <p>The search engine returns personalized results related to Peter's profile (also includes information about the environment inside Peter's home). Jack finds a complete Nutritional Service, besides there is a special offer: one payment before ordering the hardware and the software comes free as part of this service so Jack decides to buy it.</p> <p>Unfortunately, Peter recently fell a couple of times and Jack is worried that it might happen again. As Jack is very satisfied with the services of the uStore, he decides to explore the uStore web site for "emergency and personal risk management" related services. He receives a list of suitable services sorted by their rating. He reads comments from other users that help her to decide what service is better for his father. The selected tracking service has the capability to track his father 24/7 in indoor and outdoor environments and could notify/alert Jack if his father is in a risky situation (falls, out of predefined area). Three days later a facilitator from the service delivery provider goes to Peter's house and installs the physical devices and sensors and left running the service. During the installation of the service, it is clearly communicated to Jack's father that tracking service will continuously access GPS data from the mobile device and additionally access the address book to call for help when required. Jack father's agrees and allow the service to access the necessary data. He is assured that no other data is accessible to the service. In addition, Jack's father can turn on and off the service(s) on his portable device in the situation where he feels that it might severely invade his privacy. Jack's father always takes his mobile device with him, on which the tracking application is constantly running.</p> <p>One morning Jack's father starts to feel ill and presses the panic button on his mobile device integrated in the tracking application service. Immediately, the system accesses the address book to call for help and alerts Jack. The system starts a videoconference and Jack can talk with his father. After some conversation, Peter feels much better and decides to go out of home to buy some things. The tracking application service continues working and the system knows in every moment where Peter is. Jack is 50 kilometres away from his father's house and in this moment he is working so it is impossible for her to visit his father. However the tracking application has a web based interface with a map (i.e. provided by an API of Google Maps) where he can follow his father's location in real time, plotted in the map. Thanks to that tool Jack is calm because he knows in every moment where his father is and where to find him in case of an emergency.</p> | | | |

UC 259-01: universAAL - IT provider view

General

| Name of Use Case | | | |
|--------------------|-------------|----------|-------------------------------|
| ID | Domain Role | Function | Name of Use Case |
| 259 | - | - | universAAL - IT provider view |
| Version Management | | | |

| Changes / Version | Date | Name Author/Editor(s) or Committee | Approval Status draft, for comments, for voting, final |
|--|---|--|---|
| 01 | 2013-12-06 | Rölker-Denker | Initial |
| 02 | 2013-12-31 | Axel Helmer | Draft |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| Generic, Regional or National Relation | | | |
| - | | | |
| Further Keywords for Classification | | | |
| #stakeholder:tertiary; #self_care:eating; #neuromusculoskeletal:muscle; #key_enabling_technology:vital_parameters; #key_enabling_technology:questionnaires; | | | |
| Scope and Objectives of Use Case | | | |
| - | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>InnovIT is an IT provider which works with other companies in different sectors to deploy IT solutions and services. Recently it was identified that the aging population, the Ambient Assisted Living (AAL) services and solutions for the aging population, are a major area for its growth. To reduce unnecessary redesign and costs, InnovIT decides to use the universAAL platform that is compliant to well known industry standards, as the basis for its AAL-based solutions. This enables easy integration with a wide range of off-the-shelf hardware. In addition, the universAAL platform also provides a huge developer base with numerous applications at uStore, enabling easy deployment of innovative solutions by InnovIT. Furthermore, InnovIT recognises new business opportunities from the upcoming AAL market in becoming a deployer company in AAL domain, offering installation, configuration and maintenance services at people's home.</p> <p>Recently, a well established health insurance agency Insured4Life has contracted InnovIT to deploy a home healthcare solution to its customers. As part of the contract, InnovIT needs to deploy a set of vital signs monitoring, nutritional advice and exercise monitoring services at customers' home. InnovIT is responsible for deciding the appropriate hardware and associated application from uStore, establish network capability through telecom providers, and finally install and configure the system at the user's home.</p> <p>InnovIT with its previous knowledge on such projects is aware of numerous applications on uStore that can</p> |

provide these functionalities. However to identify the best application InnovIT checks the user-opinions on the uStore to find applications that satisfy certain criteria like reliability, ease of configuration, privacy controls, usability for elderly people etc. Additionally it also checks for user opinions of reliable and cost effective vital signs monitoring hardware (blood pressure monitors etc). Based on this feedback it selects and purchases the hardware and software components to be deployed. InnovIT makes sure that easy to use mechanisms exist to access user's data by health professionals, nutritionists and gym instructors that the insurance agency has contracted to work with. To comply with data privacy legislation, InnovIT creates and maintains the identity, consent and access management systems.

The final deployment at the customer's home involves ensuring network connectivity, installation and configuration. InnovIT makes a contract with the local telecom provider to enable a costeffective network connectivity of the universAAL system from the user's home to its central server. For installation of the universAAL system (which consists of few vital sign monitors and a central hub for connectivity to the central server) InnovIT decides to send the required hardware by post with easy to install instructions. Additionally InnovIT has a call-centre and few local personnel to assist if customers face some problem. For configuration, InnovIT decides to perform remote configuration of the system after it is installed by the user. The user is additionally asked to decide on how their personal data needs to be handled and give consent.

After the system is deployed and running, InnovIT receives a request from the healthcare insurer for additional information about the usage by its customers and any comments for improvement. InnovIT creates a multi-modal dialogue to ask customers whether they liked the experience and whether the service was useful. The results of the questionnaire are sent to the healthcare insurance agency. The feedback also helps InnovIT to adjust and provide better services to the customers.

UC 260-01: universAAL - Maintenance providers view

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 260 | - | - | universAAL - Maintenance providers view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |

| Generic, Regional or National Relation | |
|--|--|
| - | |
| Further Keywords for Classification | |
| #stakeholder:tertiary; #self_care:eating; #key_enabling_technology:vital_parameters; | |
| Scope and Objectives of Use Case | |
| - | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Tom is working for the InnovIT company as a part of its maintenance team for several years now. InnovIT works with other companies in different sectors to deploy IT solutions and has started using universAAL platform as the basis for its AAL based solutions recently. The company uses uStore not only because of large number of various AAL hardware and software solutions that could be found, but also to advertise as technical service provider (a deployer) responsible for installation, configuration, customization, and orchestration of integrated AAL solutions at people's homes. As a member of the InnovIT company maintenance team Tom's responsibilities are related to the process of modifying a software system or component after delivery to correct faults, improve performances or other attributes, or adapt to a changed environment.</p> <p>In the very beginning of working with AAL solution based on universAAL platform, Tom participated in a training session in order to familiarize himself with the usage of uStore and to learn about maintainability aspects of the platform. Of course, the most important knowledge is related to the installation, configuration and deployment of actual AAL services, but using the platform eases this process.</p> <p>Tom's recent assignment includes the maintenance of a home healthcare solution deployed by his company as a part of a contract with the health insurance agency Insured4Life. This solution includes a set of vital signs monitoring, nutritional advice and exercise monitoring services delivered to a number of Insured4Life's customers. During this period there was only one case of adaptive maintenance. A customer moved to another house and the service required reconfiguration due to the new environment. Furthermore, there was only one case of a sensor malfunction. However, due to prompt action by Tom and his team, the sensor was replaced and there were no consequences for the system. There was no need to perform any other unscheduled corrective maintenance to keep the system operational. Also, one developer company published an updated version of a software component used in the deployed solution. Such maintenance is seamless when solutions developed on top of universAAL platform are used, which makes Tom's work much easier.</p> |

UC 261-01: universAAL - Retirement residences view

General

| Name of Use Case | | | |
|--------------------|-------------|----------|---|
| ID | Domain Role | Function | Name of Use Case |
| 261 | - | - | universAAL - Retirement residences view |
| Version Management | | | |

| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
|--|---|--|---------------------------------|---|
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #localization; #stakeholder:secondary:professional_care; #key_enabling_technology:communication_functions; #purpose:safety:alert_detection; #stakeholder:tertiary; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>The Rytterkaserne residence in Odense is very interested in AAL services because they think that these services could help nurses in their work.</p> <p>In this case they want to solve a particular emergency situation. One month ago, Paul, an elderly (81-years-old) with dementia unknowing left the residence. Because of his illness, nurses were very worried and spent over an hour looking for him, fortunately somebody found him in the middle of the street completely lost. The residence wants to avoid future situations of this type and they think that a tracking application could be very useful.</p> <p>For this reason the retirement residence administration searches in the online uStore for a suitable tracking AAL service. On the right side of the portal there is a list of available tracking services that are selected by uStore as suitable for the concrete conditions specified by the residence workers and the residence environment. The site has user reviews and ratings on services.</p> <p>The retirement residence administration detects a service that allows for users 24/7 tracking in indoor and outdoor environments. Besides, the service sends notifications to caregivers (in this case to nurses as formal caregivers) when a patient is in a risky situation or when he/she leaves out of a predefined secure</p> |

area. Nurses have a web based interface for each patient they attend. This interface allows nurses to modify the protocol that is followed by the system in case of emergency. Nurses have the possibility to configure the triggers of the service. The triggers will indicate nurses when a user is potentially at risk. After each trigger, a nurse can select the next actions from a library of actions available for that single user depending on the installed infrastructure (e.g. devices, sensors) inside the residence. For instance, in the case of Paul and other patients with dementia, if they go out of the room, then the system must send a message to the screen of the nurses; if they go out of the secure area then the system must start a phone call to the nurse head or the nurse responsible of that specific patient.

Once the order is received, a technician from the service delivery provider brings the tracking devices and installs them at the residence. This service will allow elderly special needs patient to be monitored on a full time bases, inside and outside of the residence. This provides nurses a peace of mind since the patients are controlled and they can check their location through the web at any time. Besides users are more secure than before thanks to this service.

Since uStore provides users with the option to give their comments on the specific services so that other users could benefit from them, hence, nurses give their opinion about tracking application(s) in their residence.

UC 262-01: universAAL - Health insurance companies view

General

| Name of Use Case | | | | |
|---|---|------------------------------------|--|--|
| ID | Domain Role | Function | Name of Use Case | |
| 262 | - | - | universAAL - Health insurance companies view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |

| |
|---|
| #stakeholder:tertiary; #purpose:safety:disease_prevention; #key_enabling_technology:vital_parameters; #neuromusculoskeletal:muscle; #key_enabling_technology:questionnaires; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| Complete Description |
| <p>Insured4Life is a health insurance company that has been known to provide innovative insurance packages for its customers. A recent study done by Insured4Life showed that the average age of their customers is getting older and the medical costs have been increasing mostly related to managing chronic diseases like cardiovascular and diabetes. The study concluded that they would have serious financial problems if they do not reduce medical costs due to its aging customer base. One of the recommendations from the study was that a lot of illness and its onset can be reduced by proper preventive care like regular monitoring of vital signs and exercise. Additionally, a lot of money was being wasted due to customers visiting the hospital to check their vital stats and for small health complaints.</p> <p>Based on this study, Insured4Life decides that it is the right-time to innovate in its business strategy and provide preventive health based insurance. This would involve working with their customers to identify possible chronic disease development in early stages and encourage lifestyle changes like exercises. It has heard a lot about the universAAL platform to enable easy deployment of home healthcare solutions that would enable easy vital-signs monitoring of patients at home, provide nutritional advices and monitor people to adhere to exercise programs.</p> <p>Insured4Life checks if local laws and regulations allow them to provide such a service and what steps need to be taken based on data privacy legislations. It also does a survey with its customers to identify if they are ready to accept such new innovative solutions. The results of the survey showed that its customers welcome a preventive health strategy that also allows them to prevent or delay any illness and have a better quality of life.</p> <p>Insured4Life by itself has very less IT knowledge and personnel at present to deploy this solution. For that reason they search in the uStore for someone who can deploy this service. The result of the search shows that InnovIT has experience deploying this kind of service. As part of the contract, InnovIT will deploy a set of vital sign monitoring, nutritional advice and exercise monitoring services to its customers. InnovIT is responsible for deciding the right hardware and associated application from uStore, establish network capability through telecom providers, and finally install and configure at the user's home. Insured4Life additionally makes contracts with health care professionals to check vital signs, nutritionists to provide food recipes, and gym instructors to manage exercise regimes. Finally, to adhere to data privacy legislations, it makes sure strict access controls are in place that governs access and usage to the data. During the deployment phase, customer consent is asked along with the details about how his personal data needs to be managed.</p> <p>After deployment, Insured4Life would like to get some feedback about how well the system is being used by its customers and if they have any particular complaints. InnovIT performs analysis on the usage logs to provide statistics of the usage of the system. Additionally InnovIT sends an online questionnaire to identify user feedback and complaints. Based on this Insured4Life can continuously provide an excellent service to its customers and reduce costs by having a welladhered health conscious customer base.</p> |

UC 263-01: universAAL - Social service department view**General**

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 263 | - | - | universAAL - Social service department view | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| universAAL: Reference Use Cases for AAL (D1.1-B) (FP7) | http://universaal.org/images/stories/deliverables/d1.1-d.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #stakeholder:secondary:non_medical_services; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Ben is working for a national public welfare organization in a social service department. The main responsibility of his organization is to promote the basic well-being of individuals in need. With the growing challenge of an aging population, his department has found itself in a lot of problems in the last several months. The number of people who require financial, social or health care has increased dramatically but there is a lack of funding and personnel dealing with this problem.</p> <p>Ben understands that in order to reduce the problems of the social service department, related to the growing number of elderly people who ask for social and health care, a market for AAL solutions must be</p> |

created. Once such a market is created, more elderly people will solve their problems by ordering AAL services, so less people will ask help from the social service department and the burden on the department will be reduced. In order to create a thriving market, a platform that would be convenient for end users on the one hand and for developers and service providers on the other hand is needed.

Recently, attending a conference on the AAL topic, Ben came to know about the universAAL platform. He gets additional knowledge about universALL from uStore and organizes a meeting with several company representatives involved in development and provision of AAL services using the universAAL platform.

After a more detailed analysis of the platform, Ben concludes that this open platform could truly reduce barriers towards the adoption of innovative ALL solutions and would help in promoting the development and widespread uptake of such solutions.. As this will bring benefits to end users, developers, assistance providers and society in general, Ben recommends to the local government to mandate the usage of universAAL platform for development and provision of AAL services.

Since the local government has promoted the use of universAAL platform and their services the social service department burden has been reduced considerably. Now Ben shares this experience in the uStore discussion forum because it could help others in the same situation or simply because it could be interesting for somebody. Furthermore the uStore provides a way for collecting the users' appreciation of the consumed service, comments and ranking of the service and/or provider. This information is collected only with user's consent. This helps Ben in making the recommendations for certain service or provider.

UC 264-01: VERITAS- Car interior accessibility development

General

| Name of Use Case | | | | |
|---|--|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 264 | - | - | VERITAS - Car interior accessibility development | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| 02 | 2013-12-31 | Axel Helmer | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| VERITAS: Final version of VERITAS Use Cases and Application Scenarios (D1.7.1.a) (FP7) | veritas-project.eu/wp- content/uploads/.../VERITAS_D1.7.1_final .pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |

| |
|---|
| |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #stakeholder:tertiary; #sensory:seeing; #sensory:hearing; #life_areas:work; #work:system_scope:communication |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Complete Description |
| <p>Paul is having a very difficult time, especially these years of economic crisis, to find and pay all these beneficiaries in order to get measurements to implement in his models. The needs of the users are changing and in order to catch up, he has to update his models constantly. In order to create and simulate his designs, Paul is using CAD files in RAMSIS environment. As a RAMSIS subscriber, he gets lots of information about the news in this market. Specifically in the latest newsletter of RAMSIS, he read about an application-add on to RAMSIS, which includes user models with disabilities and elderly. Paul was excited, since he understood from the very beginning that this was exactly what he was looking for. Paul downloaded VERITAS and opened RAMSIS software. He loaded VERITAS user model file with upper limb impairments by entering the specific parameters that he was asked for from the application, loaded the task file/s for getting in and out of the car as well as accessing the storage compartment, loaded VERITAS Simulation model file for Automotive and finally he opened the CAD file with his design. Paul realised that the model was corresponding perfectly in the environment and it was executing the task like the real users he was doing pilots with all these years. The —black spotsll of his design were immediately identified from VERITAS and presented to him during the simulation, as well as in an EARL report in the end.</p> <p>John and Paul know each other for many years, since they have studied together in the University. John's concern about integrating accessibility in the car interior design guided him to call John, in order to get assistance for the accessibility features of a car, and be introduced into the accessibility domain of the automotive sector. Paul, who is already familiar with VERITAS, recommended John to use this application, which would assist him in creating accessible interiors and since he already uses both CAD and RAMSIS, it would be a piece of cake to handled. After Paul's advice, John decided to try assessing the accessibility of an old design he had done with VERITAS. Due to his recent experience with his father, John was more interested to see how an elderly, like his father, is experiencing some basic driving functionality, like the tuning the central rear view mirror and lateral mirror, activating and deactivating the hand brake and changing gears. To this end, John opened the RAMSIS software, activated the VERITAS add-on in RAMSIS, loaded VERITAS elderly user model file by entering the specific parameters that he was asked for from the application, loaded the task file/s that he wanted his model to realise, loaded VERITAS Simulation model file for Automotive and finally he opened the CAD file with his design. As soon as John started the simulation, he couldn't believe that the model was actually executing all the tasks he wanted to assess, exactly like his father would, having the same difficulties and constraints. Every time the user model had an issue with the task that was executing John was notified and in the end the system also provided him with an EARL report. John had ready started fixing his design and run the simulation again!</p> <p>While John was —playingll with VERITAS simulation assessing almost all his old designs, Katia entered his office. When she saw VERITAS simulation she was amazed and eager to try it on her own designs. Katia</p> |

and John decided that when he had the optimum design for his (meaning his target beneficiaries) needs he would ask from Katia to embed the navigation system that she is working on the last year. Two days later, Paul appeared, excited with the fact that he was able to come to an optimum design so quickly and asked from Katia to come to his office. The two of them embedded Katia's design in John's car in a CAD file. Katia, in contradiction to John was more interested in seeing how people with mild visual and hearing impairments would experience the system she has designed. John liked that idea, because he had never considered these user groups as his targets before. As the simulation was running, Katia realised that although she had devoted so much time and effort to her design, many accessibility issues were occurring during the simulation, which she could have avoided if she had started using VERITAS from the beginning of the design process.

John proposed to Katia to try the immersive simulation, in order to understand better the constraints of the beneficiaries. Katia agreed. After having the permission of their administrator and being sure that they have all the interaction tools they needed John and Katia were ready to try the immersive simulation. First John wore all the interaction tools and wanted to act like an elderly user with slight upper limb impairment. During the simulation he tried to tune the central rear view mirror and lateral mirror, activate and deactivate the hand brake and change gears. No accessibility barriers occur and he was very proud of his design. Continuing, John wanted to try a more severe situation of the upper limb and realised that some tasks were impossible for him to realise. Then, Katia started another simulation as a user with slight hearing and visual impairments. She tried to dial an address on the on-board navigation system and to use the information displayed by the navigation system to reach a destination. She understood that some audit information from the navigation were not clearly perceived by her and that the system was out of the field of vision for a person with a reduced peripheral field of vision.

UC 265-01: VERITAS - Motorcycle handling accessibility development

General

| Name of Use Case | | | | |
|--|--|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 265 | - | - | VERITAS - Motorcycle handling accessibility development | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| VERITAS: Final version of VERITAS Use Cases and Application Scenarios (D1.7.1.a) (FP7) | veritas-project.eu/wp-content/uploads/.../VERITAS_D1.7.1_final.pdf | | Public | |

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| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) |
| |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #life_areas:work; #work:system_scope:communication |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Mark is very worried about how to embed the needs of the young elderly in the design of the motorcycles. As a designer he has limited knowledge about the needs, wants and abilities of the specific target group. So, he and his team have started a thorough research about how they can achieve this target. During their research they read about VERITAS system and find out that it can be easily embedded in the programs and applications they already use for the design of their products. In order to avoid the costly and time consuming method of including users in their design process, they decided to try VERITAS, which since it is open source it would not have sufficient cost to their firm. Mark wanted to try this first and then share it with the rest of his team, so he downloaded VERITAS and opened RAMSIS software. He loaded VERITAS young elderly user model file and tried first to simulate the tasks that he believes the most basic for a motorcycle rider. So, he decided to check the accessibility of the riding position, as well as the accessibility of putting the motorcycle on the central stand, for an old design of his. Mark loaded VERITAS Simulation model file for Automotive and finally he opened the CAD file with his old design. Mark saw that the simulation was of a very good quality, showing all the constraints that the user model of the young elderly was facing while it was executing the task. The simulation and its results were a very good start for Mark and his team to start developing a new design of an accessible motorcycle. The iterative evaluation of this design would lead them to the optimum solution with the minimum cost.</p> <p>As a motorcycle designer, but also a rider, Mark is very consistent about the safety while designing a motorcycle, issue which rises also in the case of young elderly riders. In order to understand the way the elderly riders handle the motorcycle while riding in risky situations he decide to simulate the riding on bumpy roads task with VERITAS. Executing this simulation, Mark realised that this user group, lacking of strength, acts differently than the typical riders in such conditions. To this end he decided that the interaction of the rider with the motorcycle should be further studied by him and his team, through a variation of designs which would be simulated with VERITAS.</p> <p>In another office of the same building there was George, who had more or less the same worries with Mark. As George was trying to create an accessible design for the ARAS/OBIS devices, he considered that his design would be more efficient if he collaborated with a motorcycle designer. This triggered him to go and visit Mark. When George visited Mark and shared his thoughts with him, Mark was excited. Mark presented VERITAS to George and enhanced him to work with his team in order to embed ARAS/OBIS in the initial design of the motorcycle for the young elderly. George agreed and a couple of weeks later they had an initial integrated design. George was very interested in the Collision Avoidance System he has developed which is very innovative and also in the Navigation system for motorcycles. With VERITAS</p> |

George had the opportunity to simulate how the user would interact with the CAS and the navigation system, even if he was suffering from various slight disabilities.

UC 266-01: VERITAS - Smart living places & workplaces & domotics & collaborative tools

General

| Name of Use Case | | | | |
|--|--|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 266 | - | - | VERITAS - Smart living places & workplaces & domotics & collaborative tools | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| VERITAS: Final version of VERITAS Use Cases and Application Scenarios (D1.7.1.a) (FP7) | veritas-project.eu/wp- content/uploads/.../VERITAS_D1.7.1_final .pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:system_scope:communication; #stakeholder:tertiary | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Robert is used to design accessible building, as this is introduced from the relevant legislation about all the building designs that have to be designed and constructed fully accessible for all groups of citizens. While |

standard measures and design concept are known to Robert, he is using VERITAS into the office common practices for a year now. After several trials with VERITAS it proved that errors in the design were drastically reduced and that potential bottlenecks were highlighted even before blueprints were produced. The entire architecture and design group makes use of AutoCAD. This programme has VERITAS integrated, thus ensuring that the staff did not have to acquire new skills, but could continue working with their familiar programs. Since applying VERITAS, modifications afterwards hardly occurred. And if they did occur, then they were relatively minor changes that did not touch the overall building concept. Another benefit has been that the time from first rough design to final design has been substantially smoothened and streamlined, while also shortened considerably. In addition, it has given his office a good reputation, thus getting an increasing number of contracts. Robert and his team have used VERITAS desktop and immersive simulation many times in the past to simulate an elderly or a disabled navigating in the building they have been designing.

Additionally to his typical design, this time Robert had to design and assess the accessibility of domestic applications like the dishwasher, the fridge, the oven and the washing machine. To achieve this Robert had to collaborate with Anna, who is a designer of white goods. Anna gave to Robert her designs so he could embed them to his initial designs and assess their accessibility and usability with various user groups. Robert run the simulation of the integrated design with beneficiaries who are elderly, have upper limb impairments, lower limb and visual impairments, executing task like opening the dishwasher door, opening the fridge door, programming the oven, etc..

Robert finally had to design some spaces for socializing, both in real time and remotely. To this end, Robert designed one big space with desks, computers, couches, printers, closets and storeroom for which he was inspired from the design of buildings he had design for workspaces. Robert run the simulation of the integrated design with beneficiaries who are elderly, have upper limb impairments, lower limb and visual impairments.

Margaret was asked from Robert to install some collaborative tools in the rehabilitation centre he is designing, after its construction. Margaret was very positive on this proposal but she decided that accessibility features should be also embedded in her collaborative tools, in order to be accessible for the elderly and disabled that would use them. To this end she used VERITAS simulation in her designs in order to identify accessibility barriers. Margaret thought the most useful tools that she could start with are the distance collaborative working and the teleconference tool. Thus, Margaret would also benefit since she would increase the target group of her company and she would contribute in making the workplaces more innovative and more accessible to all ages and abilities so that everyone can contribute at an equal level.

During the design process Robert decided that it would be helpful for him and his team to realise also immersive simulation of their design with VERITAS project. To this end, Robert created an integrated design with all the components that are needed for his scope, including the building design, the workplace design and the domotics design. He thought that even if he did not have a VR lab, constructing one and buying all the interaction tools he needed for the simulation, would cost him less than including real users to test his construction and even less if he had to implement changes to his design after constructing it.

UC 267-01: VERITAS - Infotainment

General

| Name of Use Case | | | |
|--------------------|-------------|----------|------------------------|
| ID | Domain Role | Function | Name of Use Case |
| 267 | - | - | VERITAS - Infotainment |
| Version Management | | | |

| Changes / Version | Date | Name Author/Editor(s) or Committee | Approval Status draft, for comments, for voting, final |
|--|--|--|---|
| 01 | 2013-12-06 | Rölker-Denker | Initial |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | Conditions (limitations) of Use | |
| VERITAS: Final version of VERITAS Use Cases and Application Scenarios (D1.7.1.a) (FP7) | veritas-project.eu/wp- content/uploads/.../VERITAS_D1.7.1_final .pdf | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| | | | |
| Generic, Regional or National Relation | | | |
| - | | | |
| Further Keywords for Classification | | | |
| #life_areas:work; #work:system_scope:communication | | | |
| Scope and Objectives of Use Case | | | |
| - | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Karen and her team, in order to achieve the task for —visiblell and —distinguishablell game for visually and hearing impaired people, as well as for people with slight cognitive impairments, she decided to embed VERITAS in the design process, enabling her team of developers to have a good idea of how their interfaces are perceived by the target user groups. After designing a first prototype of the game, Karen run a simulation of it in the VERITAS simulation platform to get a first glance on how the target users would perceive the UI design, the application control and feedback and the 3D metaverse environment navigation. After detecting design deficiencies Karen utilized the multimodal interfaces manager to present the content in different forms better perceivable by the users with disability and then test the game in the VERITAS simulation platform with a set of virtual users that cover a wide range of the target user groups. Using VERITAS, the team of developers only compiles a draft version of the game when they have been able to address all issues identified by VERITAS, and this for the different disability groups.</p> <p>Karen has recently discovered VERITAS when she was asked to design a collaborative game for elderly. When designing this game for elderly she also had to check the physical disabilities of elderly in controlling the game. So, Karen simulated the accessibility of the game controls, the game display settings and the multiplayer mode.</p> |

UC 268-01: VERITAS - Healthcare**General**

| Name of Use Case | | | | |
|--|--|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 268 | - | - | VERITAS - Healthcare | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| VERITAS: Final version of VERITAS Use Cases and Application Scenarios (D1.7.1.a) (FP7) | veritas-project.eu/wp- content/uploads/.../VERITAS_D1.7.1_final .pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:system_scope:communication | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| James had to fulfil the tasks that he was asked to do and for that he used VERITAS, because otherwise this would have been a cumbersome task, with considerable demanding time and additional testing. Using VERITAS, James simulated how the users would handle the mobile device, interact with the touch screen and interact with voice, features that he considers prerequisites for an accessible design. Additionally, he also simulated the interaction of the user with the Health Coach application that he has developed, simulating how the user would exchange messages with the doctor, search for medical news and give warnings to the beneficiaries. By using VERITAS, James and his team developed an auditory guidance with a simple interface that makes the device accessible to a variety of users, including those who have visual |

impairments, are deaf and those how have motor deficits.

UC 269-01: AALIANCE1 - Person-Centred health management

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 269 | - | - | AALIANCE1 - Person-Centred health management | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:ambient; #key_enabling_technology:body_area; #self_care:looking_after_ones_health; #key_enabling_technology:mobile_devices; #key_enabling_technology:vital_parameters; #key_enabling_technology:health_information; #stakeholder:secondary:professional_care; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #localization:outdoor; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| At some time in the future, a person (if he or she so desires and their conditions demand it) will be surrounded by virtual, real(time, around(the(clock health and medical assistance through various wearable, mobile, and implanted sensor devices. These devices will be connected to an intelligent software virtual |

agent (Personal Health Application [PCA]) that is designed to support optimum health and acute/chronic treatment and will probably be implemented on some mobile constantly connected device. This mobile device contains a summary of the person's medical records, containing e.g. current treatment, chronic diseases, allergies, current medication, which is easily accessible in emergency situations and can easily connect to: in(body, on(body, stationary and environmental sensors giving an up(to(date status of health and potential risks based on physiological processes, biological processes and environmental situation within and surrounding the person; medical databases with historical patient information as well as current diseases and treatments, which include genetic profiles, clinical information; non(medical databases with current as well as historical information about e.g. level of activity, performance information from fitness equipment and eating habits; analysis services, which use patient information and information from certified medical knowledge from the different databases to give personalized advice.

The application empowers the person with the relevant knowledge and with online support allowing him or her to take more responsibility for their own health. Their full state of health (including historical information) consisting of genetic, biological, physiological and environmental information as well as the information stored at systems from professional care givers will be available and combined with access to the relevant medical knowledge, personalized advice will be given for self(treatment or referral to proper professional support with the adequate relevant information at hand, using decision(support tools based on an ongoing analysis and synthesis of medical evidence. An important part of self(management is related to the prevention of diseases which can be based on the genetic and molecular warning signs before a disease exposes itself and also on the data collected by non(medical services such as activity management, fitness equipment, eating habits, supporting a person in keeping to a healthy lifestyle. Monitoring medication intake and e.g. exercise programs allows checks of adherence to treatment (and react when this is not so), combined with monitoring their status, which provides indications on whether the treatment needs to be adapted.

The application also acts a virtual nurse(doctor who knows the person's status and needs and is on call at any time and in any place, to guide and support the person. This application acts as a knowledge source, a personal decision(support system, health and fitness coach, personal dietician, and much more, giving instantaneous feedback to the user, raising an alarm or informing professional or informal care givers when needed. This is. important for managing people suffering from e.g. chronic diseases, detecting relapses, before they become dangerous, based on monitoring, trend analysis, and raising the alarm and initiating appropriate action like calling a person, or visiting when needed. This will also include the possibility for action related to behavior management by giving relevant education information and checking adherence to treatment programs (medication or exercise).

If a real emergency happens, it will be detected by the application automatically: it informs the emergency service of all the relevant medical data and the exact location of the patient because one of the environmental sensors is of course a GPS sensor. Knowing that this will be done when necessary also increases the self(confidence of the patients.

The application also communicates with the person' s network of medical professionals who are involved in current treatment plans and link the person to diagnostic and treatment services. All care providers and their supporting facilities like radiology, laboratories and pharmacies use electronic health(record systems that are connected to a secure health(information(exchange network which enables easy access to the relevant data using a role(and task(based access(control system that is in line with the consent rules controlled by the patient. In this way, they all have constant access to up(to(date patient information, which is of course important in emergencies.

UC 270-01: AALIANCE1 - Mobile Support for Care Givers**General**

| Name of Use Case | | | | |
|--|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 270 | - | - | AALIANCE1 - Mobile Support for Care Givers | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:system_scope:mentoring; #stakeholder:secondary:professional_care; #key_enabling_technology:health_information; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #key_enabling_technology:ambient; #key_enabling_technology:telemedicine; #localization:outdoor; #work:sector:service_industry:care | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| If a situation arises where a care giver is unsure about what to do, an expert can be consulted. Or referral to proper professional support with the adequate relevant information at hand, using decision(support tools based on an ongoing analysis and synthesis of medical evidence. An important part of self(management is related to the prevention of diseases which can be based on the genetic and molecular warning signs before a disease exposes itself and also on the data collected by non(medical services such as activity management, fitness equipment, eating habits, supporting a person in keeping to a healthy lifestyle. |

Monitoring medication intake and e.g. exercise programs allows checks of adherence to treatment (and react when this is not so), combined with monitoring their status, which provides indications on whether the treatment needs to be adapted.

The application also acts a virtual nurse(doctor who knows the person's status and needs and is on call at any time and in any place, to guide and support the person. This application acts as a knowledge source, a personal decision(support system, health and fitness coach, personal dietician, and much more, giving instantaneous feedback to the user, raising an alarm or informing professional or informal care givers when needed. This is. important for managing people suffering from e.g. chronic diseases, detecting relapses, before they become dangerous, based on monitoring, trend analysis, and raising the alarm and initiating appropriate action like calling a person, or visiting when needed. This will also include the possibility for action related to behaviour management by giving relevant education information and checking adherence to treatment programs (medication or exercise).

If a real emergency happens, it will be detected by the application automatically: it informs the emergency service of all the relevant medical and the exact location of the patient because one of the environmental sensors is of course a GPS sensor. Knowing that this will be done when necessary also increases the self(confidence of the patients.

The application also communicates with the person's network of medical professionals who are involved in current treatment plans and link the person to diagnostic and treatment services. All care providers and their supporting facilities like radiology, laboratories and pharmacies use electronic health(record systems that are connected to a secure health(information(exchange network which enables easy access to the relevant data using a role(and task(based access(control system that is in line with the consent rules controlled by the patient. In this way, they all have constant access to up(to(date patient information, which is of course important in emergencies.

UC 271-01: AALIANCE1 - Personal activity management

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 271 | - | - | AALIANCE1 - Personal activity management | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |

| |
|--|
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) |
| |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #mental; #general_tasks:daily_routine; #key_enabling_technology:ambient; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #key_enabling_technology:vital_parameters; #purpose:security:access_control; #stakeholder:secondary:relatives; #stakeholder:secondary:professional_care |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>Jim is 87, and suffers from a relatively mild form of Alzheimer's disease. The effects of the dementia on his behaviour are kept under control by drugs, and drugs also allow a fairly good functioning of amnesic functions.</p> <p>Nevertheless, quite often Jim is not able to correctly develop and fully carry out plans for his tasks, so his ability to successfully conclude many activities of his daily life would be seriously compromised without a good cognitive support system.</p> <p>But his home knows what he is doing, at any moment in the day:</p> <p>The home knows Jim's world, his habits, his preferences, the way he usually does things; it has been learning this through observation and recording for years, even since before Jim developed Alzheimer's.</p> <p>The home knows what Jim is doing right now: it knows where he is, if he's standing or sitting, if the TV (or any appliance (is on or off, if he's using it or not, what objects he is handling. By comparing observation and stored information, the home is able to recognize (with some likelihood (which activity Jim is performing, and subsequently the expected outcomes, the risk factors associated to that activity etc.</p> <p>The home is thus also able to actively support the correct execution of the activity, by seamlessly comparing the execution flow with a "normal" one (a "model" stored as a result of past observation), and by guiding Jim through a safe and effective sequence of steps, by means of ubiquitous audiovisual support.</p> <p>Jim is usually alone during the day, while a care giver stays at his home for the night: his children don't live in the same area of the town, and they are at work almost all day long. But they worry about Jim's wellbeing and safety and are always ready to intervene in case of need.</p> <p>They know that they can rely on Jim's AAL system, on its capability to keep the situation under control, and to inform them when something goes wrong.</p> <p>Jim likes to go out for a walk in the neighbourhood, to the park, to the main square, or to the nearby grocery</p> |

to buy some food. When he does this, the system automatically sends a message to Jim's relatives and/or to the care giver. This message is nothing alarming; it is a normal event, but it is good that they know that he's gone out. The same kind of message is sent when Jim comes back home.

But two hours is probably a little too long. A new message, telling them that he hasn't come back, could help. Just to let them know, so that they can try and contact him to see if everything's OK.

Similarly, the assisted(cognition system is able to detect other critical situations (e.g. panic or delirium), by interpreting a number of distinct pieces of information related to activities and to physiological parameters. When such a situation is detected, three distinct groups of action can be taken:

- reinforcement of the safety measures inside the home (e.g. lock of the exit door and of the windows; lock of the pieces of furniture where dangerous items and substances are stored);
- calls to relatives or to care givers;
- targeted stimulation with stimuli that are known to capture Jim's attention and to calm him down (e.g. pictures of family members or other images, or music).

UC 272-01: AALIANCE1 - Services for remote social activities

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 272 | - | - | AALIANCE1 - Services for remote social activities | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #community:recreation; #human_communication; #key_enabling_technology:games; | | | | |

| Scope and Objectives of Use Case |
|----------------------------------|
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Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| A woman who is confined to bed at home plays cards with three of her friends who are seated in a recreational centre. To play they use a special platform made of touch screens and monitors embedding webcams that are remotely and wirelessly connected between them. In the recreational centre, each friend has their own touch screen showing their own cards and on the table stands a monitor that shows the cards at stake. The subject at home has a touch screen showing her cards and a monitor that displays both the cards at stake and her friends. Thanks to the real(time communication between the different components, the four friends can talk and discuss, see gestures of their companions and interact positively. |

UC 273-01: AALIANCE1 - Accessing information

General

| Name of Use Case | | | | |
|---|---|--|-----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 273 | - | - | AALIANCE1 - Accessing information | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:education; #sensory:hearing; | | | | |
| Scope and Objectives of Use Case | | | | |

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Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Each older person can use his or her digital television or a facilitated computer to choose the kind of information he or she is interested in, e.g. politics, sport, news or cultural events, and also the geographical area of interest, local, national, continental, or intercontinental. Such information is described using a comprehensible language (primary and secondary education should be sufficient to understand the news (and should be expressed with video (using large characters) and audio tracks (with advanced signal processing for compensation of hearing loss, e.g. noise reduction and dynamic compression). For each item of information, the user can express judgements, remarks and opinions by means of both a facilitated keyboard or voice(recognition software, and such judgements are sent directly to the main subjects that manage the information or event. |

UC 274-01: AALIANCE1 - Physical access to services and activities

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 274 | - | - | AALIANCE1 - Physical access to services and activities | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |

| |
|---|
| #neuromusculoskeletal:movement; #human_communication; #domestic_life:shopping; #stakeholder:secondary:non_medical_services; #community:recreation; #life_areas:economic_life |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| People who have motor deficiencies cannot move from their houses but can remotely access services or events. Using digital television or a facilitated computer connected to biometrical recognition systems (fingerprints, voice, optical) they can be identified and gain remote access to a specific service (e.g. a post office or a register office) and talk with employees and workers. They can also use the same system to buy tickets for particular events and watch them on the television or computer screen. |

UC 275-01: AALIANCE1 - Hobbies

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 275 | - | - | AALIANCE1 - Hobbies | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #sensory:seeing; #key_enabling_technology:home_automation; #sensory:hearing; #key_enabling_technology:ambient | | | | |

| Scope and Objectives of Use Case |
|----------------------------------|
| - |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Many older people like to read books or magazines. The reading ability depends not only on visual health but with increasing age also on the actual constitution. Thus the person should have the choice to select the medium by which the content is communicated to him. Feeling mentally or visually tired user should be able to hear the audio version of his/her preferred book. To this end subject is able to ask his/her home entertainment system by a vocal interface for the preferred book. If he/she had already started to read the paper version of the book, user requests to start reading the audio version at a defined position. The home entertainment system selects the optimal audio device regarding the room the person is in and plays the audio book applying advanced signal processing for compensation of hearing loss, e.g. noise reduction and dynamic compression |

UC 276-01: AALIANCE1 - Supporting individual physical mobility

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 276 | - | - | AALIANCE1 - Supporting individual physical mobility | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |

| |
|---|
| #vital:cardiovascular, #vital:respiratory, #key_enabling_technology:mobile_devices; #localization:outdoor; #key_enabling_technology:environmental_parameters; #localization:indoor; #domestic_life:shopping; #community:recreation; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Angela is 72 years old and is very active. She has many friends and likes to go out regularly. As she lives in the city centre, she finds it convenient to walk, as she always has. She is, however, suffering from angina and asthma which makes walking, although beneficial for both conditions, more of a challenge. This makes her planned trip to meet her friend Rosemary at the Science Museum more complex than it was five years ago.</p> <p>But in time a single piece of technology has revolutionized Angela's life: the "smart" mobile phone. She has used a mobile phone for some years but found the previous model difficult to use due to the small size of the keys. Recently she purchased a new(generation phone with larger keys, a larger display, and comprehensive functionality including adjustable colour contrast, adjustable text size, zoom functions, digital maps, GPS, wireless and near(field communication (NFC), and different methods of output (text, pictograms and audio).</p> <p>It has been many years since Angela visited the Science Museum (Galileo was still a scientist and astronomer rather than a satellite system at that time), so she does some pre(trip research about its location using the Internet. Then she pre(sets the location of the Science Museum into her smart phone. Once she leaves her house, she is able to consult her satellite(based positioning and route guidance system. She is informed audibly of the directions to take via an earpiece, which means she can leave the phone (and digital map) in her pocket. This is more reassuring to her as it enables her to focus on the route ahead rather than a device in her hand. Because the digital map is highly detailed and regularly updated to take account of things like road works or re(modelled pedestrian crossings, or even re(sited street furniture, she is able to rely on the audible output.</p> <p>Halfway through her journey she receives an audible warning that the presence of ozone is above the recommended level in that area. To avoid a possible asthma attack, she accesses a web(based journey planner on her smart phone to adjust her route to avoid the environmental problem.</p> <p>Soon Angela arrives at the museum. Upon entering, her smart phone switches seamlessly from satellite(based navigation to wireless(based, as the museum is equipped with a dense wireless network. As the phone is NFC(enabled, she is able to pay her concessionary entry fee by swiping the phone a few centimetres from a reader, with the fee automatically deducted from her credit.</p> <p>She has arranged to meet her friend Rosemary in the café on the third floor. To find the café she consults the map of the museum on her phone display and plots out an appropriate route based on her personal profile. This route will include some stairs to provide beneficial physical exertion. The map is able to display multi(floor visual representations of the museum and alternative routes between amenities and exhibits when required; Angela is able to click on features of interest, and in this way soon locates the café. She is also able to access information about the café's menu and services. Within a few minutes she has met up with her friend. Angela is happy that the powerful functionality of her smart phone combined with satellite</p> |

and mobile technologies, and the wireless and sensor networks deployed in the city, have helped her enjoy a hassle-free and health-beneficial trip.

UC 277-01: AALIANCE1 - Public transport

General

| Name of Use Case | | | | |
|--|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 277 | - | - | AALIANCE1 - Public transport | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #sensory:seeing; #mobility:transportation; #community:recreation; #domestic_life:shopping; #key_enabling_technology:mobile_devices; #key_enabling_technology:environmental_parameters; #relationships; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Pete is 70 years old. Due to a worsening eye condition, he finally gave up driving two years ago, but since then has found it difficult to maintain his previous social life. After several decades of relying on the car, he feels he has “forgotten” how to use public transport. Moreover, he has been put off by stories of complex fare structures, unreliability and anti-social behaviour. He has lost his confidence in public transport. However, tonight Pete is due to attend a concert at the SAGE venue in Newcastle, and he decides to set |

himself a challenge: to attend by public transport.

First of all, Pete carries out some pre(trip planning. Using the Internet he accesses details of the railway timetable; he needs to take the train in order to travel from his suburban town to the city centre (Central station). He knows that Central Station isn't very close to his final destination, but from his research he discovers that the "Quaylink" bus departs from just outside the Central station and takes him to the quayside area and so within walking distance of the SAGE venue.

Reassured by this pre(trip planning, Pete sets off for his local station. His first step is to purchase his ticket using the smart card that he originally obtained for use in his local library, but which also has a transport application through an arrangement with the local transport operator. The smart card automatically deducts the cost of the ticket from Pete's smart card balance. By swiping his NFC(enabled mobile phone against an information point, he receives an audio message that informs him of the time of the first available train and its time of arrival at Central station, plus additional information about the frequency of the train service.

On his journey, Pete realizes he will travel through the village where his friend Graham lives. Having not seen Graham for over a year he decides it would be a great idea to stop off briefly for a cup of tea. He calls Graham on his mobile and arranges to meet at the station café.

After an engrossing conversation, Pete realizes he risks being late for the concert. His fear is worsened by an automatic alarm on his mobile phone that is triggered when he misses the next train. Because the system knows Pete's current location and the time, it notifies him that there is not another train for half an hour, but the number X11 bus runs from the adjacent bus station in ten minutes. This service will arrive at the main railway station in time for him to connect to the Quaylink service. All this information is relayed to him in audio form because of his poor eyesight. On boarding the bus, Pete uses his smart card to pay the fare. Meanwhile the onboard information system informs him that his bus will arrive at bus stop R, whilst the Quaylink service will depart from bus stop T within five minutes of his arrival. He is advised that the walk between the two stops should take only two minutes. Pete discovers that his train ticket will also be valid on the Quaylink bus due to an arrangement between the operators.

Suddenly aware that he has never visited the SAGE before, he remembers comments from friends about how large the venue is and how many stairs there are to negotiate. He decides to find out more about the physical access of the building by accessing a point of interest database on his mobile phone. Reassured that there are plenty of lifts – and assistance if required (he goes ahead and books a beer at the bar for the interval using the SMS service implemented by the venue.

Pete enjoys the show and feels that he will be much more comfortable using public transport in the future due to the assistance, convenience and reassurance that technology was able to provide for him.

UC 278-01: AALIANCE1 - Marie's working day

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---------------------------------|--|
| ID | Domain Role | Function | Name of Use Case | |
| 278 | - | - | AALIANCE1 - Marie's working day | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for |

| | | | | |
|--|---|---------------|---------------------------------|---------------|
| | | | | voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #stakeholder:secondary:relatives; #purpose:safety:alert_communication; #mobility:transportation; #life_areas:work; #work:location:workplace; #work:system_scope:ergonomics; #key_enabling_technology:robotic; #neuromusculoskeletal:movement; #sensory:hearing; #voice_and_speech; #human_communication; #work:system_scope:communication; #key_enabling_technology:vital_parameters; #key_enabling_technology:home_automation; #key_enabling_technology:ambient | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>Marie, aged 60, is informed via an interactive screen as she was about to leave for the office that her elderly mother has had a fall. The screen also alerts her to the fact that the ambulance has been called and that they are arriving at her home. The emergency services assure her via interactive mobile that she is OK and has minor injuries. The doctor advises that her mother should not be left alone for the following 48 hours. Marie's mother will be monitored with a help of seamless technology and by nurses throughout her recovery.</p> <p>Marie is now able to go to work without any concerns. Her boss and the transport services had been alerted via mobile messaging service that she was running late. Due to her reduced mobility, an accessible public transport service is now waiting outside to take her to work.</p> <p>As she walks through her office door, a sensor automatically notes and logs her time of arrival, adjusting the computer, desk and chair according to her ergonomic needs.</p> <p>As she sits at her desk, the intelligent computer system/software indicates her top priorities for that day. Coffee is brought to her by "robo(rob)" at the times that she has pre-set.</p> |

Marie has arthritis, so voice recognition, touch screen and an automatic typing system have been installed in her computer to allow her to compose and send email messages. A video (recording and image system) is also available should she wish to make more personalized messages. She can communicate with her co(workers) via accessible networks on her computer screen. Thereby, all audio signals presented are processed to compensate for her hearing loss and to increase the intelligibility of speech.

The window automatically opens and shuts and room temperature is regulated according to Marie's body temperature and her preference for warmth.

As it is now time for lunch, she can choose whether to walk to the office canteen, use an intelligent transport system to take her to the local restaurants or call on the services of "robo(rob)" for a sandwich according to her dietary requirements.

The day has now come to an end and as she leaves the office, all the systems are automatically switched off in response to her voice. The office automatically locks behind her and her time of departure is registered by the sensor.

UC 279-01: AALIANCE1 - Interaction of Wheelchair with Working Space

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 279 | - | - | AALIANCE1 - Interaction of Wheelchair with Working Space | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #neuromusculoskeletal:movement; #mobility:body_position_and_carrying; | | | | |

| |
|---|
| #mobility:walking; #key_enabling_technology:ambient; #localization:indoor; #purpose:safety:orientation; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
| Complete Description |
| <p>Tom is 60 years old, works in a post office and is quadriplegic. He uses a smart wheelchair to move about in his working space. The post office where he works is an AAL environment: the building recognizes the position of each piece of furniture, each object and each person. When Tom arrives at the entrance to the post office, his smart wheelchair shows him the map of the post office on its control screen: Tom specifies to which room he would like to go. Through the wireless system, the wheelchair starts to interact with the control core of the post office to plan the pathway to move along in order to reach the place Tom has selected. The control core sends real(time information about the position of furniture, steps, obstacles and people in the working space to the wheelchair and so it plans the safest and quickest path to follow. Sensors placed in the post office recognize the presence of the wheelchair and sends information to the control core, elaborating the data of the sensors and the pathway planned by the wheelchair, actuating the opening of doors, lifts and other tools. Thanks to the smart environment and interaction with the wheelchair, Tom can arrive at his workstation easily and safely.</p> |

UC 280-01: AALIANCE1 - Work Assistant Robot

General

| Name of Use Case | | | | |
|---|---|--|----------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 280 | - | - | AALIANCE1 - Work Assistant Robot | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |

| |
|--|
| - |
| Further Keywords for Classification |
| #life_areas:work; #work:sector:handicraft; #key_enabling_technology:robotic; #key_enabling_technology:ambient; #work:location:workplace |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|---|
| Narrative of Use Case |
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| Complete Description |
| <p>José is 62 years old. He is an electronic technician and works in the Repairs Office of a company that makes microwave ovens.</p> <p>His business has adopted the AAL approach for organizing documents, goods and working activities: its environment is full of sensors that constantly monitor and recognize the positions of workers, documents and objects. A smart assistant robot has also been adopted for moving objects.</p> <p>José has two workstations available to him: one with a PC and the other with mechanical and electrical tools to work on microwave ovens that are sent to him for repair. The tools include an electric soldering iron, screwdrivers and an oscilloscope.</p> <p>When a broken oven arrives at the warehouse, a message is sent to José and he calls the smart assistant robot to move the system from the warehouse to his office.</p> <p>Thanks to sensors set on the smart assistant robot and in its surroundings, the robot is able to move safely around in the company space, recognizing the presence of people and avoiding any obstacles in its path.</p> <p>When the robot arrives in José's office, he sets up a code for the object to be taken: the robot examines wirelessly the core server of the AAL environment to find out the actual position of the broken oven. With this information, the assistant robot moves to a certain location, and uses its robotic arms to grasp the oven and take it back to José's office with the system to be repaired, leaving it on his workstation.</p> <p>In order to repair the system, José needs to mend the electric circuits so asks the robot to recover the dossier from the archives (which is at the last set of stairs of the building), setting its code.</p> <p>The robot moves to the archives; the smart filing cabinet recognizes the presence of the robot, issues the request for the dossier and provides the file to the robot. The robot then comes back to José: he can now work and repair the oven.</p> <p>When José finishes his work, he instructs the assistant robot to move the microwave oven from his office to the warehouse in order for it to be sent back to its owners.</p> |

UC 281-01: AALIANCE1 - Working Environment and Workers' Health Monitoring

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 281 | - | - | AALIANCE1 - Working Environment and Workers' Health Monitoring | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE1: Ambient Assisted Living Roadmap (FP7) | http://www.aaliance2.eu/sites/default/files/RM2010.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #digestive:metabolism; #life_areas:work; #work:sector:handicraft; #work:system_scope:employees_health; #key_enabling_technology:body_area; #key_enabling_technology:vital_parameters; #key_enabling_technology:ambient; #purpose:safety:alert_detection; #purpose:safety:disease_prevention | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Antoine is 64 years old and he is working in the painting sector of a business that produces furniture for offices. He suffers from diabetes mellitus.</p> <p>His company has adopted an innovative AAL solution to monitor the health status of its workers that is based on various environmental sensors which measure surrounding parameters. These parameters include temperature, humidity, level of foul air, excessive presence of chemical agents in the air, and</p> |

acoustic noise level. Smart watches are worn by company employees, which measure temperature, pulse and blood oxygenation of the specific subject and identify each worker and his or her position in the working environment.

In Antoine's case, the company has provided him with a specific smart watch that also measures the glucose level present in his blood. When Antoine starts to paint an office desk, the environmental processor recognizes:

1. the specific tool he is using for painting;
2. his location in the sector;
3. the level of paint particles in the air.

According to the last parameter, the processor directs the activation of the air conditioner to change the air in the sector.

Sometimes, when the level of paint particles in the air is far too high and the air conditioner is not effective enough, the processor alerts the manager of the sector who then directs the employees to stop work, giving them a break so that they can leave that area allowing enough time for the air conditioner to change the air.

Further, in Antoine's case, if his smart watch measures a level of glucose that is beyond the optimal range, the system sends an alert to him and to his manager in order to remind him that he must have a break to take insulin.

The parameters related to temperature, pulse and blood oxygenation of Antoine and his colleagues combined with data about the tasks they are carrying out and the duration of these activities are information that is used to recognize the actual welfare of each worker, agitation states, and reduction of attention level. If any of these events is identified in a worker, his or her manager is alerted to monitor the status of the employee and take any necessary action. In a similar way additional breaks are introduced if loud noises last over a longer period.

Thanks to these smart working environmental systems, preventive actions to support workers like Antoine are able to preserve their state of health. In this way, the onset of diseases among employees of the company is greatly reduced and the quality and productivity of workers are guaranteed with consequent increase in the company's efficiency and profitability.

UC 282-01: AALIANCE2 - Prevention @ Work

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|-------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 282 | - | - | AALIANCE2 - Prevention @ Work | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-06 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|--|---|---------------------------------|
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #life_areas:work; #digestive:metabolism; #work:system_scope:employees_health; #work:sector:handicraft; #key_enabling_technology:body_area; #localization:indoor; #work:system_scope:activity_recommendations | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Bob is 62 years old. He works in company as specialized workers. He has to supervision the job made by other workers following the production of mechanical part of the motorbike the company produce. He suffers from diabetes mellitus and he had a hernia when he was younger, so it is better if he doesn't spend too many times standing.</p> <p>The company which Bob is working for has adopted an innovative solution for monitoring the health status of its workers, based on several environmental sensors. This monitoring system measures parameters such as temperature, humidity, level of foul air, excessive presence of chemical agents in the air and acoustic noise level. On the other hand through smart watches worn by employees is possible to measure temperature, blood pressure, pulse and blood oxygenation of the specific employee knowing also where he or she is.</p> <p>In the case of Bob the company has provided a special watch that can also measure the glucose present in the blood. Furthermore he has a special band to be put around his back that is able to measure the load acting on his back. In this way Bob glycaemia is taken under control and whenever Bob back is supporting a too high load, the band gives an alert to him so that he can go and have a rest at his desk keeping on working from there.</p> <p>Thanks to all of these sensors, also the environment where Bob works is kept safe. Indeed when there is a high level of chemical agents in the air it is given an alert so that everybody can stop working for a while, allowing the conditioner to change air.</p> <p>Thanks to this smart monitoring system, preventive actions to support workers like Bob are done so to preserve worker state of health. In this way, the onset of diseases among employees of the company is greatly reduced and the quality and productivity of workers are guaranteed with consequent increase in the</p> |

company's efficiency and profitability.

UC 283-01: AALIANCE2 - Fall prevention

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 283 | - | - | AALIANCE2 - Fall prevention | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #purpose:safety:fall_detection; #purpose:safety:fall_prevention; #purpose:safety:alert_communication; #key_enabling_technology:ambient; #key_enabling_technology:robotic; #domestic_life:household_tasks; #general_tasks:daily_routine; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Helena is 80 years old. She lives alone in her flat. She really likes to do all the housework by herself, but she is scared about falling down in her own place. In her apartment is installed a monitoring system that follows her during her daily activity to make sure that nothing happen or in case the system can make sure that Helena is ok and eventually call for help.</p> |

Today she wants to clean the apartment and in particular she would like to wipe the shelf on which she keeps all the books. In order to clean she decides to use DOMO, her assistant robot. By wearing a special dress she can tele-operate DOMO while it is doing the entire job and thanks to special glasses she can see what DOMO see even in the highest shelf. By simulating the movements she controls the arm of DOMO so that it cleans the entire shelf by first removing the things there. In this way she can do all the things that she need without being scared of falling.

After mopping up she would like to take a little snack from the kitchen, but before going she asks the smart system if the floor is dry in order not to slip. The system recognizes a wet place and immediately sends roomba to dry it.

Helena can go in the kitchen and have a snack without the danger of slipping on the floor.

UC 284-01: AALIANCE2 - Parkinson's disease

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 028 | - | - | Remote physical training of older adults at home by specialised coaches | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-09-03 | Eichelberg | | Initial |
| 02 | 2013-12-02 | Marco Eichelberg | | Draft |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Remote Home-Physical Training for Seniors (MOTION) Project Proposal (AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:muscle, #domestic_life:household_tasks, #stakeholder:secondary:relatives, #stakeholder:secondary:doctors, #purpose:safety:disease_rehabilitation, #key_enabling_technology:ambient, #key_enabling_technology:communication_functions, #purpose:safety:fall_prevention, #general_tasks:handling_stress, #vital:cardiovascular, #vital:respiratory, | | | | |

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|---|
| #localization:indoor |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| Complete Description |
| <p>Sonja has 77 years old. Although some time before she was diagnosed with Parkinson's disease and all the care were started, she still lives alone in her house because her house is "smart". The house is provided with sensors that follow her in daily activities. It is able to understand when there are some problem and give an alarm to the caregiver who, first of all can ask Sonja what is happening and if she needs any help.</p> <p>She has to take every day the drug necessary for the disease and furthermore she has to do some daily exercises in order to maintain her physical capacity and her natural movements. She wears her special tracksuit and starts doing the exercises that the physiotherapist and her doctor agreed. Thanks to the tracksuit her movement are taken under control that means that the range of her movements and the tremor are measured and sent to the physiotherapist that can evaluate possible change in her capacity and consequently the therapy.</p> <p>After the exercises Sonja has to prepare herself. In fact she has an appointment with her friends for an online card game. Playing cards with her friends make her feel good, because of the chatting during the game and because of the fun.</p> |

UC 285-01: AALIANCE2 - Alzheimer's disease

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 285 | - | - | AALIANCE2 - Alzheimer's disease | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |

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| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) |
| |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #mental; #localization:outdoor; #key_enabling_technology:body_area; #purpose:safety:alert_detection; #key_enabling_technology:home_automation; #stakeholder:secondary:relatives; #key_enabling_technology:vital_parameters |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Marcus is 78 years old he has got only one son (Peter), he lives alone in his house in the countryside close to his son's house. The doctor has diagnosed to Marcus the early stage of Alzheimer's diseases, so he is quite worried about this situation because during the night Marcus could wake up and go outside without any control.</p> <p>In order to prevent this bad situation Peter has bought a technological gift to his father: WHERE, a smart sensorised ring, which Marcus could easily remember to wear. WHERE could communicate the real position of Marcus to the smart system of the house and consequently to the son. WHERE is completely immerse in the environmental sensor network and provides information about the status of Marcus, even physiological. Further, thanks to the active collaboration between different agents, it could autonomously recognize if there is abnormal situation occur and immediately avert Peter. In this way Peter could track the position of Marcus even during the night.</p> |

UC 286-01: AALIANCE2 - Prevention of Dementia

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 286 | - | - | AALIANCE2 - Prevention of Dementia | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / | Link | | Conditions (limitations) of Use | |

| Literature | | |
|---|---|--------|
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aalliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #mental; #key_enabling_technology:home_automation; #key_enabling_technology:ambient; #purpose:comfort:lighting; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #purpose:safety:disease_prevention; #stakeholder:secondary:relatives; #stakeholder:secondary:doctors; #key_enabling_technology:games; #community:recreation; #relationships | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Niels is 80 years old. He lives alone, but his children are quite worried about what the physician told them about some sign of a starting mild cognitive impairment. They are worried about their father health, but they want to let him enjoy his independency as far as possible. Addy, the smart environment system, follows Niels in his daily activity: it can understand if there is something wrong or if his habits are changing and keeps track of every day activity. In this way the doctor can analyse the situation and understand if he is getting worse or not.</p> <p>After lunch Niels has a rest on the bed. When he lies down on the bed the system automatically recognize if there is too much light in the room and consequently close the window shade. After half an hour Niels wakes up, the room is dark and the Addy automatically switch on a set of light that enlighten his way to the door. When Addy “realize” that Niels don’t want to sleep again it opened again the window shade.</p> <p>After making a tea, Niels is ready for playing his favourite game. He sits on the sofa with his touchpad and contacts his friends. Today is time for them to solve a crime all together. Along the game they will find all the proof and they have to put them together and find the criminal.</p> <p>They enjoy really much playing together and at the same time they keep their brain active!</p> |

UC 287-01: AALIANCE2 - Modular and adaptable point of care

General

| Name of Use Case |
|------------------|
|------------------|

| ID | Domain Role | Function | Name of Use Case | |
|--|---|--|---|---|
| 287 | - | - | AALIANCE2 - Modular and adaptable point of care | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #key_enabling_technology:home_automation; #key_enabling_technology:ambient; #self_care:looking_after_ones_health; #key_enabling_technology:medication_dispenser; #key_enabling_technology:telemedicine; #key_enabling_technology:vital_parameters; #vital:respiratory; #stakeholder:secondary:doctors; #digestive:metabolism; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Jessica is waken up from her smart home system. As soon as she wake up the tooth reservoir implanted some time before releases the right dose of drug necessary for Jessica to keep her thyroid under control. Her smart home checks the correct release of the drug and remembers her to drink some water and to wait the time necessary for the drug to be correctly assimilated. In case the drug is not correctly released or the reservoir is almost empty, the tooth implant send a message to the point of care that immediately advise her physician.</p> <p>This morning before having breakfast Jessica has to do blood analysis and other check up. She goes to the point of care that has all the things necessary to do all the control. First of all she put her finger on the biometric scan, so to identify her. Then the oxygen saturation is evaluated: due to her difficulties in breathing</p> |

it is necessary to control it. While controlling the saturation a little sample of blood is taken and all the required analysis are made. The physician knows the days in which Jessica has to do her analysis and can plan and set which analysis are necessary that day on the point of care with remote operations. As soon as the analysis are ready the results will be sent to the physician who can check the results. Then her heart rate and blood pressure are checked. After finishing the check up she can reach her husband Amos and have breakfast together.

Amos has diabetes so soon after breakfast he has to check the glycaemia. He goes to the point of care and, once identified the level of sugar in his blood is checked without taking a sample of it. After the control of glycaemia he check the blood pressure and heart rate. Then his eye pressure is measured so to keep it under control because of his high risk of developing glaucoma.

Also all these results are sent to the physician that can have a check on the daily health of his patients. Afterwards Jessica and Amos can start enjoying their day.

UC 288-01: AALIANCE2 - Healthy Living

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 288 | - | - | AALIANCE2 - Healthy Living | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #vital:cardiovascular; #digestive:metabolism; #domestic_life:household_tasks; #key_enabling_technology:home_automation; #self_care:looking_after_ones_health; #self_care:eating; #key_enabling_technology:body_area; #key_enabling_technology:vital_parameters; #key_enabling_technology:mobile_devices; #localization:outdoor; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #stakeholder:secondary:professional_care; | | | | |

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|--|
| #purpose:safety:disease_rehabilitation; #human_communication |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| Complete Description |
| <p>Seth is 75 years old and is now retired. He used to work in an office, spending all day sitting at the desk. During his life it didn't practice any sport and didn't care about the diet. Because of his work he has not time and he often eat in a non healthy way.</p> <p>Some years ago his physician told him that it was better for his health (cardiovascular disease and diabetes) to start decreasing his weight and practicing some physical activity in order to decrease the risk of some diseases.</p> <p>The morning when he wakes up Kitty, his intelligent kitchen, tell him what is going to expire soon in the fridge and in the cupboard and suggest him some nice and interesting recipes for cooking healthy. Kitty knows what Seth should eat during the week according to his diet and has got notes of what Seth eats every day, so it can suggest him the best things for him to eat also linked to what he has in the fridge. Kitty also knows the expiry date of all foods that Seth has, so it can suggest what to eat and what to buy. After breakfast and reading the news, he prepares himself for the training; he doesn't need wear anything special, because thanks to the special sensor put under the skin of his wrist all the physiological parameters are under control during the activity. He just need to take with him his Smartphone in case he goes outside for a walk in order to know his position, so to have the possibility to find him in case something goes wrong. Thanks to the Smartphone he can also be in touch with Marcus, his personal informatics trainer, that can in this way follow him during the walk suggesting exercises or rest. Marcus suggests Seth the exercises he should do today according to his personal training program. Marcus, because of the long walk made two days before, suggests him to do some exercises to improve the strength and the balance enjoying the fitness class. But the weather outside is horrible, it's raining a lot, so Seth does not feel like going to the gym. So he wears some special sensors and special glasses that allow him to project himself like an avatar in the gym where he can follow the trainer and join the class with some friends.</p> |

UC 289-01: AALIANCE2 - Air quality @ work

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 289 | - | - | AALIANCE2 - Air quality @ work | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|--|---|---------------------------------|
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| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #life_areas:work; #work:system_scope:employees_health; #work:sector:handicraft; #key_enabling_technology:ambient; #key_enabling_technology:home_automation | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Thilo is 60 years old. He is a chemist and works in a chemical industry since he was 25 years old. He isn't afraid of COPD because the owners of the company decided to install a smart network composed by sensors, actuators and friendly interfaces. The distributed sensors network are able to measure the level of occupational dust, vapours and fumes and act consequently, such as open the windows and activate air cleaners autonomously. Moreover a voice reminder suggest to Thilo to go out of the laboratory when the level of dust or other are considerate too dangerous. |

UC 290-01: AALIANCE2 - Air quality management in Smart City

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 290 | - | - | AALIANCE2 - Air quality management in Smart City | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|--|---|---------------------------------|
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:environmental_parameters; #key_enabling_technology:health_information | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| Complete Description |
| Peccioli is a smart city. Here, the major has just approved a regulation concerns the reduction of pollution and bad emission. The whole community has decided to work to develop a new way to produce, manage and use energy. New solar and wind implants have been build in the countryside or where there is enough space to install them intelligently, such as above firm's and school's roof. In the city distributed sensors monitor the emission, inform in real-time the citizen about the level of pollution and provide suggestion to reduce the emission; in worst case the system could act autonomously to prevent high level of emission, such as avoid having a bad distribution and use of resources within the community. |

UC 291-01: AALIANCE2 - Diabetes prevention

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 291 | - | - | AALIANCE2 - Diabetes prevention | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / | Link | | Conditions (limitations) of Use | |

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| Literature | | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aalliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #digestive:metabolism; #key_enabling_technology:vital_parameters; #key_enabling_technology:body_area; #key_enabling_technology:health_information; #key_enabling_technology:mobile_devices; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #stakeholder:secondary:doctors; #relationships | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| Deborah is 75 years old. She's suffering from diabetes and needs daily to measure the level of glucose. She has got an implantable sensor under the skin which measures the physiological level of glucose and insulin. This sensor transmits the data to Deborah's smart watch, SMARTCH, thanks to wireless connectivity. In this way SMARTCH can give to Deborah the correct insulin dose, information and suggestions to maintain an healthy life style. Furthermore SMARTCH can access to internet, in this way can communicate to the doctor in worst case and inform Deborah about Social-Health initiatives within the community. |

UC 292-01: AALIANCE2 - Smart home

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 292 | - | - | AALIANCE2 - Smart home | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |

| Source(s) / Literature | Link | Conditions (limitations) of Use |
|---|---|---------------------------------|
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aalliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #key_enabling_technology:ambient; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #key_enabling_technology:home_automation; #stakeholder:secondary:professional_care; | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Arthur has 85 years old. His wife passed away some years ago. Since then he lives alone in their house. He doesn't want to leave his house even if it is not near to the city centre. His children agreed to leave him there, but with the agreement to improve the environment in order to allow the caregiver and them to check Arthur conditions and call for help each time is needed.</p> <p>First of all some sensors were installed so to prevent damage due to gas losses or fire. In case there is a loss of gas in the house the system can recognize it and alert Arthur. The windows will be immediately open and the caregiver will be called.</p> <p>A system of cameras control Arthur while is cooking, the smart system can individuate if there is a situation that can end up in fire and try to avoid it by indicating it to Arthur or sending an alarm.</p> <p>This system is also able to recognize Arthur habits. This morning Arthur didn't have breakfast because he was not feeling very good. The system noticed it and sends a first warning to the caregiver. The caregiver contacted Arthur and suggest him to do some test, like measuring the blood pressure and heart rate. Nothing was wrong, but Arthur kept on feeling not so good.</p> <p>Late in the morning the smart home environment noticed that Arthur was lying on the sofa instead of preparing his lunch, so asked him if he keeps on feeling wrong. When Arthur answer positively saying that he had a pain chest, the system immediately send an alarm to the caregiver and to the hospital. The caregiver contacted Arthur through the system and monitored him through the monitor present in the house. He asked him what the problem was telling him that the doctor was on his way. Mean while the system sent an alarm to Arthur children in order to let them know what was happening. The ambulance came and the doctor decided to bring Arthur to the hospital. From the blood analysis it was then sees that he was going to have a heart attack.</p> |

UC 293-01: AALIANCE2 - Monitoring and Assistant**General**

| Name of Use Case | | | | |
|---|---|--|--------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 293 | - | - | AALIANCE2 - Monitoring and Assistant | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #key_enabling_technology:telemedicine; #key_enabling_technology:home_automation; #key_enabling_technology:ambient; #key_enabling_technology:vital_parameters; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #key_enabling_technology:medication_dispenser; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| Mr.Smith, 87, is married for 60 years. His wife is 88 years. Together they have three children and seven grandchildren. In 1983 he retired. His wife needs care (personal hygiene etc.) Since 2002 she has Alzheimer's disease. She is waiting for a place in a nursery home. When his wife is in a nursery home he can do his 'own things' again. He likes to read a lot and restarted his hobby again: Everyday he is going out for a walk or bike ride. "Just to stay active", as he says. Twice a week a good acquaintance is cooking some meals, do some cleaning and having a chat with him. When his wife will move to the nursery home, once a |

week a nurse will pass by to assist him while taking a shower and monitor him. Like she is doing now. Smiling: "Just to see if I'm still behaving, wearing clean clothes en doing well!"

His wife is in a nursery home since April 2011. It is about half an hour drive from his house. To be more independently there is a telecare system introduced into their home. Together with sensor technology for monitoring and alarming, smart technology in fridge and a medication dispenser. Because he is used to work with modern equipment he is enthusiastic to start. He also uses telecare several times in case of emergency during the period his wife was still at home. He alarmed via the touch screen and "It al worked perfectly. In the middle of the night they came and helped me. It was really great. Once a general practitioner had to come to see my wife who had severe pain. I asked for help via the care contact centre."

Mr. Smith uses 'planned telecare' in the morning. Before the call at 08:30 the nurse of the care contact centre is checking the sensor technology system. It will tell her if everything is still going conform his own lifestyle schedule. She will ask him about his condition and reminds him for the medication he has to take. They also have a short chat. He really likes it. It gives him a save feeling he can make contact any time when it is necessary. His children think about it the same. Together with his children he is thinking about the near future. Is it possible to stay here or does he has to move? He likes to move to an apartment nearby the nursery home where his wife lives. He hopes he can live as long as possible independently, but he realizes he cannot plan the future.

UC 294-01: AALIANCE2 - Personal Management of Chronic Diseases

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 294 | - | - | AALIANCE2 - Personal Management of Chronic Diseases | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
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| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |

| |
|---|
| - |
| Further Keywords for Classification |
| #digestive:metabolism #stakeholder:secondary:non_medical_services; #stakeholder:secondary:professional_care; #key_enabling_technology:telemedicine |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Mr. and Mrs. Summerset (87 and 84) are married for 55 years and live in a new apartment building for senior people. It is a safe and social environment, where they both enjoy to live. Together they have two daughters and seven grandchildren. "Luckily they live nearby, they do a lot for us. In times it did not went well with me, one even slept here every night." They. are independent, take care of themselves. Every week they go to the nearby city for shopping or to have a beer. Twice a week they receive an assistance for cleaning. They are using the service 'meals-on-wheels', but Mr. Summerset doesn't like it, so Mrs. Summerset often cooks meals for him. Furthermore she has a lot of hobbies: painting, modelling, making dolls, writing poems. Now Mrs. Summerset is fine, but last year she had a terrible experience. "I have a mild form of diabetes, but no one ever told me you can have a 'hypo'. Two years ago my husband found me unconscious in my bed. Since that time I started to feel very, very anxious. I didn't dare neither to go outside my house nor even to have guests!" She had to start to use insulin. She injects herself twice a day. A nurse passes by twice a day to teach her how to inject.</p> <p>Telecare is introduced to guide and support her while injecting herself, because she is so uncertain while she is doing it. First she was hesitant for this new technology, but the nurse convinced her to try it out. Now she is really happy with telecare. "I can call in, whenever it is necessary, when I feel hypoglycemic and so on. It gives me a safe feeling. The homecare nurse still comes, but now only for the blood sugar tests once a week. All the other days of the week, I have telecare. I am happy with it, I can help myself. And I'm no longer anxious. For my husband it is also a reassurance. Even when he is sick they take care of him. So nice! I have no longer trouble in going to sleep, anxious not waking up. I would have no problem in moving to a nursery home, but my husband wants to live here as long as possible. I think with telecare it is possible." New technology will be introduced to assist her and her husband, like sensor technology for fall prevention.</p> |

UC 295-01: AALIANCE2 - Daytime management

General

| Name of Use Case | | | | |
|--------------------|-------------|--|--------------------------------|--|
| ID | Domain Role | Function | Name of Use Case | |
| 295 | - | - | AALIANCE2 - Daytime management | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for |

| | | | | |
|--|---|---------------|--|----------------------|
| | | | | voting, final |
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| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
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| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #sensory:pain; #key_enabling_technology:ambient; #key_enabling_technology:telemedicine; #stakeholder:secondary:professional_care | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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| Narrative of Use Case |
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| Complete Description |
| <p>Mrs. Young (60) had an accident six years ago. A car hit her while she was crossing the crosswalk. Due to severe brain injuries she had to recover in a nursing home and had to learn again how to walk and to speak. Her character changed, emotionally she is moody, her short term memory is most of the time 'out of order', like she use to say. She trained hard to go home and after a 18 months she managed to do.</p> <p>For support and assistance she is dependent of her family nearby and of homecare. Every day the homecare nurse comes to assist her in showering and dressing. She can do it herself but she is very afraid to fall. The nurse also applies the daily tense-meter for the pain in her head.</p> <p>She learned how to drive an electric wheelchair to go to her work. She is really happy she can work for a couple of hours a day. But her job is taken a lot of her energy. She insist to work to feel a bit useful to society.</p> <p>She has a little dog. Her pet forces her to go out for at least four times a day. The little dog gives her a lot of love. He comforts her when she is sad.</p> <p>Her family assist her in financial matters and in shopping. They also keep an eye on her by passing by every evening. To learn to get more independent she is coached by a specialized nurse. She passes by three times a week. They talk about all dealing with daily life. The nurse also coaches her when she is upset or overwhelmed about what had happen to her.</p> |

Mrs. Young is thinking about quitting her job and to move to a nursery home, because it is hard to live on her own with all her fears. But to relinquish the dog is not debatable.

With telecare, smart and sensor technology in her whole house the world changed completely for Mrs. Young. She is now much more capable of being independent. She still has the nurse every morning passing by to apply the tense-meter, but during the day she can call in whenever she feels to do. It helps her not to get totally upset. The nurse helps her – just with a short talk – to put everything into perspective. She quit her job to have more energy to do her daily life. After more than 4 years she can finally sleep in her bedroom again instead of the sofa in the living room. No longer afraid to fall and no fear for the long and anxious night. She is able to do some shopping herself in the neighbourhood instead of waiting for her family. Her family don't need to pass by every night because now she has contact with them every evening. With all the technology she can stay in her own home, no need to go to a nursery home, no need to relinquish her pet. She is very happy, despite her disabilities.

UC 296-01: AALIANCE2 - Support in Driving

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 296 | - | - | AALIANCE2 - Support in Driving | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
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| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #neuromusculoskeletal:movement; #mobility:transportation; #key_enabling_technology:vital_parameters; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #localization:outdoor | | | | |
| Scope and Objectives of Use Case | | | | |

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Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Anna is 88 years old, she likes to use her own car to go alone to the grocery store and to the church like she uses to do since she was young. In this way she feels more independent and, in certain way, she maintains control over her life. Unfortunately her physical and cognitive capabilities is not the same as 10 years ago, so her sons are worried about the security of their mom and other persons. Anna wants to use her own car instead of public transport because it is more comfortable. For all these reasons they decide to buy her a present: CARA, a beautiful and innovative smart car to assist Anna during driving sessions. CARA has been designed taking into account the elderly needs. CARA monitors the road condition and warn Anna about any obstacles present (both static and dynamic). Furthermore while Anna is driving a smart sensors system is able to recognize Anna's attention and any abnormal variation of motion in order to alert CARA which provide a sort of adequate "drive assistant".</p> <p>Moreover CARA has got an efficient localization system which is directly connected with the Anna's sons' smartphone, so in case of stop or accident an automatic notification to family and to the nearest garage is sent.</p> |

UC 297-01: AALIANCE2 - Rehabilitation assistance

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 297 | - | - | AALIANCE2 - Rehabilitation assistance | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |

| |
|--|
| - |
| Further Keywords for Classification |
| #vital:cardiovascular; #neuromusculoskeletal:movement; #purpose:safety:disease_rehabilitation; #key_enabling_technology:games |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>Giorgio is 75 years old. Some months ago he had a stroke and after some period in the hospital and some in a care structure now he can come back living at his own place with her wife Carla. Due to the stroke Giorgio has some difficulties in doing some movements like walking and also in grasping and he has to do some rehabilitation in order to improve.</p> <p>When he was in the care structure, every day a physiotherapist helped him in doing some exercises to improve his mobility. Now that he is at home is difficult for him to go everyday to the structure in order to keep on doing these exercises, but he would like to keep on doing physiotherapy as much as possible, because he saw the improvements after the exercise.</p> <p>So after breakfast he starts with the rehabilitation exercises. Because it is a sunny day he decided to do them outside. He tool then his special bike. It is a special bike that allows Giorgio to sit and cycle also by making some movements he is no more able to do, by forcing a little the situation, while going around through the streets. As a matter of fact he cannot do the complete movement of pedaling, so the smart system is passive in the movements he can do on his own and become active by helping him in completing the circle. When he arrives in the city centre he found some friend in the square and just stop for chatting a little. Then he come back home. Once arrived there we wears a special glove that helps him with the hand rehabilitation. He connects the glove to the television and starts doing some exercises while playing at the videogame.</p> <p>In this way Giorgio can do the rehabilitation while going around and playing.</p> |

UC 298-01: AALIANCE2 - Security @ Home

General

| Name of Use Case | | | | |
|--------------------|-------------|--|-----------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 298 | - | - | AALIANCE2 - Security @ Home | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |

| Basic Information to Use Case | | |
|--|---|---------------------------------|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #neuromusculoskeletal:movement; #purpose:security:intruder_alert; #purpose:safety:fall_detection; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #key_enabling_technology:home_automation; #key_enabling_technology:ambient; #key_enabling_technology:communication_functions; #human_communication | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Liz is an 86-year-old woman. She is living alone in her house. She is not afraid of many things. But as she is living alone and feels her strengths going down, she is increasingly afraid to be attacked by a an aggressor who would come during the day or at night. She was already robbed in her house but fortunately she was not there. She is afraid that it happens again when she is there, and would have nobody to help her if she is attacked. To feel more secure, Liz could benefit from a natural voice recognition alarm system she could call anywhere in the house if an aggressor enters. The alarm system could automatically contact her neighbours and emergency services and be used if she falls on the floor without being able to stand up again. Some sensors could also be included in her house to ring a bell when someone passes the floor of her house. Many years after, Liz could also benefit from support of emergency services which could activate at a distance a small flying camera (a small drone) with a microphone available in all houses.</p> <p>When her son Thomas lost his job and divorced, Liz proposed to host him in her house to help him. But Thomas, who is 54 years old, has many difficulties to find a job again and 3 years after he still needs to stay at his mothers' house. He is more and more asking for financial support from his mother and feels depressed and sometimes angry. When Liz had a first serious health problem, Thomas took care of her and helped her in her daily activities. But when he asked again for some money and she refused because she needs it for her health problem, he started to get angry. He attacks her first verbally. And one day, after a second refusal, he hit her. Liz was disappointed. She didn't know how to react to the situation. She was afraid calling the police would make things getting worse for her son. She called her friend Anna who proposed her to get connected to the online integrated platform of health and social services of her municipality, where all information is available in these cases. The online platform is very easy to use and</p> |

included even the possibility to ask avatars some questions on the situation she faces. It reassured Liz and convinced her to call through the online platform a case management person who would analyse and follow her situation and coordinate social and health services to offer an adequate response.

UC 299-01: AALIANCE2 - Safety

General

| Name of Use Case | | | | |
|--|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 299 | - | - | AALIANCE2 - Safety | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aalliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #human_communication; #self_care:looking_after_ones_health; #relationships; #general_tasks:daily_routine; #purpose:safety:fall_detection; #purpose:safety:alert_communication; #life_areas:education; #key_enabling_technology:home_automation; #key_enabling_technology:ambient; #key_enabling_technology:mobile_devices; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| Few years ago, Lars chose to retire in a remote area to enjoy nature and provide his grand children with a nice house for holidays. To ensure his autonomy, he let installed various devices at home to easily maintain |

contacts with his relatives, monitor his health and support his daily activities. Most of all, as he felt his balance was worsening year after year, he wanted to be sure he will get help in case he falls badly inside or outside the house. First a bit anxious to feel overwhelmed with all these technologies, he followed a series of trainings to use the devices and be able to cope with potential basic failures. These trainings were provided by a customer service which was available on the Internet and on telephone.

When he moved in about 10 years ago, such devices were very simple. For instance, he was given a medical alarm necklace to wear all the time. Lars disliked very much this device, considering it obtrusive and degrading. Moreover, he felt such device would not be systematically efficient in case of falls. Would he be always able to reach the button? What to do if the alarm gets broken when he falls? Therefore, Lars is awaiting new kind of devices which would ensure his safety while being invisible and non-invasive. He believes detectors embedded in the environment would be more suitable for him but still looks for solutions for the outdoor environment.

For the moment, he chose to buy a smart scale able to detect any balance-related problems and to send the information directly to Lars' GP. Doing so, Lars hope that any risk will be prevented and he felt secured to know that his GP is continuously kept informed about his health condition. All data is accessible via his health record on the internet. This portal also links the data to give him useful recommendations for his diet, muscle strength, and drug dosage.

However Lars remains worried about the assistance he would get if he falls. In another 10 years time, he would strongly benefit from avatars or hologrammes which would appear in case of falls, transmit the right instructions and easily ensure the connection with the alarm centre and health professionals.

UC 300-01: AALIANCE2 - Keeping Social Contact

General

| Name of Use Case | | | | |
|---|---|--|------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 300 | - | - | AALIANCE2 - Keeping Social Contact | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |

| Generic, Regional or National Relation |
|---|
| - |
| Further Keywords for Classification |
| #mental; #key_enabling_technology:mobile_devices; #localization:outdoor; #mobility:transportation; #key_enabling_technology:vital_parameters; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #human_communication; #community:recreation; #relationships; #domestic_life:shopping; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>James enjoys very much attending the activities his botanical club regularly organises, which implies many travels around his county. However, he increasingly feels reluctant to participate to these activities as he feels that driving becomes difficult for him as he ages. He thinks this it is due to an increasing lack of concentration and some memory problems. As his friends all live quite far, he started using GPS systems more than 10 years ago but did not have the opportunity yet to catch up with the latest technical developments to benefit from a better support.</p> <p>The smartphone he just bought could be of great help. On demand, its integrated GPS system can indeed memorise a large numbers of journeys and is provided with a powerful search engine able to find where activities take place and calculate the directions to drive to them. Moreover, it makes James already feel safer as the smartphone is able to process information regarding any accident around, send alarms to inform him and recalculate the journey to avoid the area concerned. Such applications can be more easily personalised to better suit James' needs and expectations and provide different levels of support and guidance.</p> <p>But the greatest help for James would come from a system providing self-service automatic cars on demand. In 10 years, James would be indeed able to benefit a lot from such car as it would automatically drive him safely to the right place once James indicated the destination through voice recognition system and GPS technology. It would be of great help as many activities organised by the botanical club are not accessible by public transport.</p> <p>Doing so, it would reassure James when using his car and increase his willingness to participate to the activities, as it would guarantee him a safer ride by overcoming his concentration difficulties when driving. Moreover, thanks to interoperability of the car and the smartphone communication systems, the car would be able to send information regarding traffic, car's status and even James' health condition to the smartphone which would then trigger the adequate alarms to James and if needed call trustworthy persons indicating the exact position of the car.</p> <p>At the same time, in such a car, James would have more time to keep his brain fit and social networks active by preparing the botanical activities, checking the weather and getting in contact with the other participants in the car before he arrives. Thanks to his smartphone's geolocalisation system, he would also be able to identify the other colleagues who are in the neighbourhood and could benefit from the car. The smartphone would then send the information to the car which would then adjust the journey to pick them up.</p> |

Once the day finished, the car could connect to James' smartphone to locate him and drive to the right place to pick him up. Payment for the journey could be made through each participant's smartphone, based on the distance and the number of users the car itself detected.

James would greatly appreciate such system, as it would be safer, provide him assistance if needed, let him save money and spare more time for activities he prefers to do.

UC 301-01: AALIANCE2 - Avoiding caregivers isolation

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 301 | - | - | AALIANCE2 - Avoiding caregivers isolation | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #stakeholder:secondary:relatives; #work:sector:service_industry:care; #key_enabling_technology:mobile_devices; #key_enabling_technology:communication_functions; #relationships; #human_communication; #work:type:voluntary; #localization:outdoor; #life_areas:work | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |

| Complete Description |
|--|
| <p>Sonia cares for her father Paul who was diagnosed Alzheimer's disease 3 years ago. The situation evolved very quickly and they decided the best solution is that Paul comes to live in Sonia's home. Sonia retired one year ago and therefore can devote time to her father.</p> <p>After two years, she feels however exhausted. She feels she has no good tools to help her cope with the daily challenges of her father's illness. Furthermore, she's losing contacts with her good friends because she has to refuse many activities she was doing before. She feels isolated and would need some guidance.</p> <p>Thanks to the online platform she can access on her tablet, she can benefit from personalised training and support to take care of her father. When needed, she can ask an avatar to answer some specific questions and issues rising, and can provide her information on recent activities she and Paul can participate to. The avatar actually informed her she could have access to some activities like Alzheimer's café where family carers and their relative with Alzheimer's disease can meet. The online platform helps her to meet easily with other people in her area who are in the same situation as hers. Therefore both her and Paul can share their experience with others and also speak of many other subjects. She can also benefit from the online platform of respite care for night or day thanks to volunteer families in her neighbourhood so she can also go to external activities and make sure Paul is not left alone. In that case she makes sure Paul has taken a GPS sensor with him, so even if he goes out the home and get lost, she can find him easily.</p> |

UC 302-01: AALIANCE2 - Having Fun

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 302 | - | - | AALIANCE2 - Having Fun | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |

| |
|---|
| #neuromusculoskeletal:movement; #mobility:body_position_and_carrying; #key_enabling_technology:mobile_devices; #localization:outdoor; #community:recreation; #mobility:walking |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

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| Narrative of Use Case |
| Complete Description |
| <p>Alice has always been a good walker and excels in trekking. It is the way she enjoys the most travelling around the world since she is retired. But since she had a bad hip fracture, she experiences many difficulties when walking long distances as her strength has decreased and as it has become challenging to make some movements. After her rehabilitation, she was very worried not to be able to travel again.</p> <p>Luckily, she has been provided with a new version of exoskeleton which supports her legs. Thanks to recent improvements, she only has to carry a small bag. Few years ago, it would have been impossible due to the quantity and weigh of material to carry with. She still regrets that the exoskeleton takes some place and might be a bit obtrusive and stigmatising but she counts on the provision of thinner and less pervasive models in few years time.</p> <p>Maria also extensively uses her Smartphone to get help. Thanks to the 4G, she can easily connect to the web wherever she is, even when trekking in remote areas, to find information places around which are easy to access for her. Another great tool for her is the online database of memories and experiences. For many years now, people have uploaded their memories and let them accessible to new inhabitants and tourists. Maria enjoys a lot this app as it gives her unusual, often fascinating, and for more exciting than the one in visit guides, information about the places she visits. Such apps are now feed into by a large community of users and thus provide comprehensive data for fun, smart and accessible tourism around the world.</p> |

UC 303-01: AALIANCE2 - Aging-Friendly Environment

General

| Name of Use Case | | | | |
|-------------------------------|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 303 | - | - | AALIANCE2 - Aging-Friendly Environment | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_201 | | Public | |

| | | |
|--|-----------------------------|--|
| Roadmap (first version) (FP7) (D2.3) | 30422_0.pdf | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #neuromusculoskeletal:movement; #work:type:voluntary; #mobility:transportation; #key_enabling_technology:mobile_devices; #localization:outdoor; #life_areas:work | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Despite she feels her functional capacities are decreasing, Teresa is willing to keep as much autonomy as possible in her daily activities. Hence she counts on supportive environments, or at least on environments which do not exacerbate her physical limitations. Luckily, although it is located in mountainous area, the city she is living in has been well planned to meet everyone's needs and many technologies bring valuable support.</p> <p>Teresa has always been very active in her community, providing support in various charities. As many of her activities she does are now accessible via Internet, her children tried to persuade her to stay active, but from home, so that she avoids any risk of falling and getting injured on the street. Although she understands her children's worries, Teresa always refused to stay at home as she prefers human contacts and wants to be physically active as much as possible.</p> <p>She can count on many services the city provides to ease everyone's activities. Walking through the city is not difficult despite the hills thanks to numerous and adequately located elevators and automated stairs. Indeed, Teresa always finds one suitable for her without much detour and appreciate that they have been well-designed to fit in the environment and style of the city. The city council looks also carefully after them to avoid any failure and provide assistance to users when needed.</p> <p>Today, Teresa wishes to participate to a conference which takes place just outside of the city. She has to use public transport, i.e. a bus to reach the train station and then a small train for two stops. As she is already running a bit late, she sends via her Smartphone an alert to the bus central system to ask her bus to stop at her station to pick her up. As the station is really close to her house, pavement accessible and pedestrian crossings well adapted for people with reduced mobility, she can quickly be there. Once in the bus, she connects her Smartphone to the public transport platform to buy a single ticket for both the bus and the train and calls the train station service to book a sit. Then, the city's public transport system sends her immediately information on the walking distance to reach her vehicle, on the accessibility of the way and the train, and on the time she has left to reach the train. If needed, she can reply to the message either through call or text message to ask for assistance.</p> |

She has always been very satisfied with the services her city offers, particularly for people with reduced mobility. This comes from a close and fruitful collaboration between the city council, the older people assembly and the businesses providing the technologies and services. This has led to efficient trainings and awareness raising activities on user needs which now support the provision of adequate, well-planned activities, services and infrastructures for all.

UC 304-01: AALIANCE2 - Keeping control over life and decisions

General

| Name of Use Case | | | | |
|--|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 304 | - | - | AALIANCE2 - Keeping control over life and decisions | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aalliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #general_tasks:daily_routine; #self_care:eating; #self_care:drinking; #key_enabling_technology:home_automation; #key_enabling_technology:ambient; #community:recreation; #relationships; #key_enabling_technology:games; #stakeholder:secondary:professional_care | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|-----------------------|
| |
| Complete Description |

Miranda is 92 year old and was detected Alzheimer's disease 5 years ago. Her daughter Anna, who helps her in her everyday life, feels she cannot continue to come everyday to her mother's home, as she feels it is more and more difficult to care and work at the same time. Unfortunately Miranda cannot live at home alone anymore. Therefore Miranda moves to a community-based services building, where she can live more independently thanks to a flat adapted to her needs which is connected to professional carers. The flat is partly publicly funded, and partly individual funded, which enables to pay a limited price. The flat is an 'intelligent' flat. It helps her a lot in her everyday life, especially as Miranda has difficulties to structure her day. She forgets to eat. She forgets to drink. She's not really good at getting up on time, or going to bed when needed. Her house helps her to face her difficulties. For example, the meals she selected and that are prepared for her for the whole week are being cooked everyday by the oven. The smell makes her think about eating time. A message written on the oven will remind her to take a glass of water and reminds you of the different steps to do it.

Besides this, the flat has a lot of possibilities to spend good time, alone or with friends, and to contribute to some activities in the neighbourhood. In the house, a night and day calendar reminds her at some points in the day which activities she can participate during the day, in her building or in the local community. If she wants to participate to some activities the day after she can benefit from a range of local services to help her find her way to go to these activities, and to come back home. The carers are informed on these moves so they can organise their day. Miranda can play games that stimulate her by speaking about the daily news, about some memories she or friends of her recorded, she can listen to music, see images; she really enjoy to do these activities with other people in the building where she lives. All these activities held in the smart home can indirectly help to measure change in Miranda's health status, and can be a useful and non-invasive monitoring tool.

UC 305-01: AALIANCE2 - Senior citizens at work

General

| Name of Use Case | | | | |
|---|---|--|-------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 305 | - | - | AALIANCE2 - Senior citizens at work | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aalliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |

| Generic, Regional or National Relation |
|--|
| - |
| Further Keywords for Classification |
| #life_areas:work; #neuromusculoskeletal:movement; #work:system_scope:lighting; #work:sector:handicraft; #work:location:workplace; #mobility:body_position_and_carrying |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Maria has been working in the art painting restoration field for many years now. This a highly-demanding job in terms of art knowledge but also in terms of dexterity, concentration and visual acuity. Nevertheless, Maria always enjoyed it and is now well-known for the quality of her work.</p> <p>Last year, she started to experience some difficulties when performing her tasks. She indeed felt her movements were a bit less precise than before, her back was more and more hurting when staying in the same position for many hours in a row and she had to use extra light to see the paintings' details. As she was worried to see her work deteriorating, she convinced her Art Institute to provide her with devices to help her carry out her tasks. Today, she cannot do without them.</p> <p>Now she works on a new ergonomic workstation equipped with different features. To address her visual acuity difficulties, she now uses a high quality camera which continuously films the painting and automatically transmits the data to a large tablet computer, on which Maria can zoom in on the areas to repair. She can adjust the contrast, the light and the image quality to obtain the best overview possible of the area.</p> <p>When a precise action is needed on the canvas, Maria now gets support from an early model of exoskeleton she can put on her arm and hand. It gives her better strength and most of all allows her greater precision. She feels such devices are of great value for her as it is becoming difficult to maintain her arm and hand up for long period of time. However, she hopes to benefit in few years time from a better model, with improved performances and better design to more adequately fit with her thin body and declining physical strength.</p> |

UC 306-01: AALIANCE2 - Telework for caregivers

General

| Name of Use Case | | | | |
|--------------------|-------------|--|-------------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 306 | - | - | AALIANCE2 - Telework for caregivers | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |

| | | | |
|--|---|---------------------------------|---------|
| 01 | 2013-12-09 | Rölker-Denker | Initial |
| Basic Information to Use Case | | | |
| Source(s) / Literature | Link | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | |
| | | | |
| Generic, Regional or National Relation | | | |
| - | | | |
| Further Keywords for Classification | | | |
| #vital:cardiovascular; #neuromusculoskeletal:movement; #mobility:body_position_and_carrying; #life_areas:work; #stakeholder:secondary:relatives; #work:location:home_office; #key_enabling_technology:ambient; #key_enabling_technology:body_area; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #key_enabling_technology:mobile_devices; #key_enabling_technology:vital_parameters; #human_communication; #mobility:walking | | | |
| Scope and Objectives of Use Case | | | |
| - | | | |

Narrative of Use Case

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| Narrative of Use Case |
| |
| Complete Description |
| <p>John and Pearl live together for more than 40 years. When Pearl had a stroke and lost the function of her legs, John felt ready to cope with all the difficulties that might arise. Apart from adapting her home thanks to local public subsidies, Pearl needs to use an automatic wheelchair which helps her move inside and outside her home independently.</p> <p>John doesn't have problem to manage between work and his new care responsibilities. First, his employer lets him telework part time so he can manage activities with Pearl. He still participates to meetings at a distance, and even to coffee breaks thanks to the screen installed in the coffee machine. But when he is at work, he also feels well. Thanks to sensors at home and a good monitoring tool, he can be alerted if there is a drastic change in the attitude of Pearl indicating a problem or an emergency. If needed, Pearl can also use an exo skeleton to gain mobility and go alone to the garden to take some fresh air or meet neighbours and friends. John is happy to be able to continue to work. Without this, it would be difficult financially especially with Pearl's problem, but also to keep social contacts. His company actually provided financial support to pay for the exoskeleton and the installation of sensors.</p> |

UC 307-01: AALIANCE2 - Dependability of technology**General**

| Name of Use Case | | | | |
|--|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 307 | - | - | AALIANCE2 - Dependability of technology | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| AALIANCE2: AALIANCE2 Roadmap (first version) (FP7) (D2.3) | http://www.aaliance2.eu/sites/default/files/files_list/AA2_D2.3_Roadmap_rev4.9_20130422_0.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #key_enabling_technology:robotic; #general_tasks:daily_routine; #mobility:body_position_and_carrying | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Sebastian is 72 years old and suffers from a severe form of arthritis. Ten years ago his wife passed away and from that time he lives alone. To be more independent at home he is helped by Bat-Bot, his assistant robot, that helps him in taking care of the house and also in other tasks. Bat-Bot is a good help in daily life because it can transport and manipulate also heavy objects, actions that Sebastian cannot carry out because of the arthritis.</p> <p>Because of a lightning during the night storm, one sensor of Bat-Bot arm is damaged and so Bat-Bot cannot properly grasp objects. Bat-Bot is designed to be dependable and so it is able to recognize this problem.</p> |

The morning after the storm, Bat-Bot informs Sebastian about its malfunctioning that impedes it to manipulate properly and safely objects and also alerts him to have requested the technician intervention for the restoration of the sensor. Few hours later the control centre calls him to agree an appointment with the technician.

UC 308-01: Goldenworkers - Nurse in a hospital

General

| Name of Use Case | | | | |
|---|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 308 | - | - | Goldenworkers - Nurse in a hospital | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Goldenworkers: Future Scenarios of Ageing at Work (FP7) (D2.1) | http://www.goldenworkers.org/images/deliverables/goldenworkers_scenarios.pdf | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #life_areas:work; #work:sector:service_industry:care; #key_enabling_technology:robotic; #purpose:safety:alert_detection; #purpose:safety:fall_detection; #mobility:body_position_and_carrying | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| Helga has been working in a big hospital for more than 30 years now. She is 59 years old and been around |

the block in her profession. Younger colleagues have fewer difficulties with the physical part of a nurse's work but appreciate her experience and knowledge in a lot of complicated situations. Helga has had trouble with her back frequently in her long career as a nurse. After having been operated on the hip she has to cut back on physical work and is very happy about the technical support she's getting in her everyday work.

It is part of Helga's work to coordinate the hospital ward schedule and to provide for the necessary beds and equipment as soon as a patient is admitted. The automatically moving hospital beds are a great help for Helga, since they are particularly big and difficult to move around. She simply has to choose the kind of bed she needs and enter a location into the ward's computer (her own ward and the room number) and the bed drives from the stock room to its destination all by itself without Helga having to move it around manually. This is a great relief for Helga, since she has not to walk all those distances and therefore has more time to care for her patients.

After everything has been prepared for the new patient Helga has to strip the released patient's bed off its used linen and put new ones on it.

This kind of work is very strenuous for her back, since she normally would have to remove the pillow case, the duvet cover and the fitted sheet manually. For some time now she has had an automatic linen container, which saves her time and distances she would have otherwise to walk. After having stripped the bed off the linen she only has to throw the linen into the container and press the right button. The container then automatically leaves the patient's room for the laundry room and a signal is released that calls another container with fresh linen. As soon as the container has entered the rooms it is automatically hoisted up to a height that is comfortable for Helga to take out the linen. This technical support helps her in many different ways: it spares her distances she would have to walk otherwise and she does not have to bend in order to take the linen out of a container or to push it around manually. All this leaves more time for the patients.

Helga has been called to an emergency. A still weak patient has fallen in the corridor and does not get up again by himself. A surveillance robot has identified the fallen, unconscious patient and alerts the nursing staff. The nursing staff comes to help the patient. They arrive simultaneously with the lifting assistance robot. This robot has been developed to assist in lifting people and heavy objects and has been called to the emergency by the surveillance robot. The mobile lifting assistance robot carries the patient back to his bed and Helga is free to see to the patient's wellbeing. The automatically called robot spares her the carrying of the patient, the calling of help to do so or the calling for a lifting assistance device.

Then Helga wants to check on an elderly woman and control her health status. Upon entering the room she sees the woman deep in conversation with her son. Since the elderly patient has made a good recovery, Helga allows her to take a short walk in the corridor with her son. It is very convenient for Helga that she does not have to put the patient in a wheelchair for this, since the bed has a new function she can use. After the patient has pushed a button on the bed it splits up into different parts and transforms itself into a functioning wheelchair. The patient and her son leave the room while Helga is already on her way to her next patient.

Right in the next room there is a patient who Helga does not know yet, since he has been admitted during the night shift. To get an overview over his condition and status Helga uses the tablet computer attached to the wall. With the computer she has access to the patient record and all relevant data. She can add commentaries or directions to the patient record via voice recognition. Helga finds this feature particularly useful, since she does not have to go to the nurses room in order to get all the data from the patient record but has it right there in the hospital room. This speeds up the documentation of the recovery process in particular and leaves Helga time to bond with the patient.

Now Helga is being called on her work mobile phone and told that it is time to take the girl who was admitted

in the morning to her x-ray exam. Since Helga has not seen this patient either, she goes to the room, where the patient is supposed to be according to the ward schedule. To make sure she is dealing with the right patient and this patient really has an x-ray appointment Helga checks the tablet computer above the hospital bed. She takes the computer off the wall and scans the RFID chip on the girl's patient bracelet with it. This bracelet contains all the patient's data and opens the patient record via a digital signal. Now Helga can be sure that she is dealing with the right patient and can check the necessary examinations.

Again the alarm on Helga's phone goes on. A short glance at the phone tells her that an elder patient in the next room needs a new infusion. The alarm on Helga's phone has been set on by the patient's bracelet because the data on it indicates the necessity of a new infusion. After having administered the new infusion Helga updates the data on the patient bracelet with the help of the tablet computer. This way Helga will get notified when the liquid in the infusion runs low. This kind of data can be accessed via the RFID patient bracelet and, which is particularly useful for Helga, can be adjusted and timecoded. Thus a necessary infusion or any other procedure cannot be forgotten or has to impair the patient longer than absolutely necessary.

Back at the nurses room Helga checks the progress of the healing of a wound of a young boy in the ward. He had needed frequent bandage changes and special wound treatment by the nursing staff for some time, which has been documented meticulously in written and in visual form. Helga can now follow the healing progress on the ward's computer in 3D-images, which are interactively connected with all the relevant documentation and doctor's reports. These 3D-images are visible without any of these old fashioned 3D-glasses. That's good because Helga already wears glasses during her everyday work. Helga can see that the little boy can be released soon since, according to the images and the data, the recovery is going very well. She can rotate and zoom 3D-images in an intuitive way just with her hands before the screen.

Now Helga notices that in her workplace on the computer there are still documents that need to be worked on. A request from social services, a necessary order of meds at the pharmacy or a letter to a patient's physician – all this Helga can do at the same computer in the nurse's room. The new system makes Helga's work a lot easier and can be operated intuitively, which gives her even more time to spend with „her“ patients.

UC 309-01: Goldenworkers - Public Administration

General

| Name of Use Case | | | | |
|---------------------------------------|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 309 | - | - | Goldenworkers - Public Administration | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Goldenworkers: Future Scenarios of | http://www.goldenworkers.org/images/deliverables/goldenworkers_scenarios.pdf | | Public (permission to publish the use case received from the original authors) | |

| | | |
|--|--|--|
| Ageing at Work (FP7) (D2.1) | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #life_areas:work; #work:location:workplace; #work:system_scope:lighting; #work:system_scope:ergonomics; #work:location:home_office; #work:system_scope:training; #sensory:seeing | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Anna has been working in a public administration for more than 30 years now. She's feeling quite young and healthy. Only her eyes have some problems.</p> <p>Over the last 30 years society has changed dramatically because of demographic developments. The government has been able to catch up with the high expectations of the citizens and fulfills a key role in the provision of eServices, using state of play technologies. The public administration provides all-inclusive services in order to fulfill the expectations of the citizens. It changed from a bureaucratic organization that often demands a lot of information and documents from its citizens into a comprehensive service provider understanding and managing individual existences, developments and challenges. Citizens are now customers and Anna is proud of it and her job.</p> <p>Her office changed from dark caves with isolated desks to a bright open communication area with single workplaces in quite niches. The lighting in the office is very natural and adapts itself to the lighting outside. This makes the work more comfortable and less tiresome.</p> <p>Now she can help people in a much more comprehensive way, in depth and detail, in a differentiated, but integrated, connected and related way. Even though all different parts of the regional authorities are connected and integrated in an overall seamless system there is still enough work for her to do. The most standard processes for the majority of the people like application and registering for public services e.g. school or pension are now done electronically. Thanks to the eID, most information is acquired only once and in an electronic way. The most citizens use their eID also for signing electronic documents and confirming information from home. A few years ago the authority started the personal electronic document safe. Now the citizens can store and update a lot of current administrative information and documents in this safe. The authority has the key to access a part of these current documents and information whenever it's needed. The standard processes now run fast and smooth. Only sometimes, when the consistence check that runs in the night detects some anomalies in a data set, she has to look at it to decide if it's just a curiosity of life or somebody wants to fraud.</p> <p>On a usual day, Anna can concentrate on the more complex cases. In the past she worked on more than 20</p> |

files every day. This was stressing. Today she works only on 2 or 3 cases. But these are the hard nuts with a nonstandard background. In the past these cases often got stuck in the middle of a process for weeks, months and some forever. She likes to focus on these cases in detail to help people in difficult situations. The authority appreciates her knowledge and longtime experience. Her boss knows about the complexity she has to deal with. He also agreed that she got one of these new ergonomic workplaces with two big 3D Screens, one big vertical screen and a second horizontal screen integrated into her desk. With this new desk she can scale the displayed documents to a comfortable size and arrange a few documents side by side and in depth to check the consistence of all data and information. She does this with her hands in front of the 3D screens without touching them. This is very helpful because she doesn't has to switch back and forth between different documents. On this new desk she can arrange the electronic documents with her hands like real documents on a real desk. Of course there are only electronic documents in the process. All incoming paper documents are scanned at the post department of the authority. Anna receives digital copies of them minutes after their arrival. The system also helps her to keep track of all processes and their current states. It informs her if a needed information or document arrived and it provides context sensitive additional information from other public authorities that could be helpful to solve a problem. This could be a land development plan or information about a planned new school.

Despite the electronic connection with administrations from other countries, trough ongoing mobilization and globalization the number of difficult cases decreased only a little. She learned to deal with the complex cases and her boss supported her with a lot of further education courses. He also agreed when she asked to reduce her working time to 70%. The combination of her current knowledge with her longtime experience makes her very valuable for her younger colleagues. Often they ask her how to solve a specific problem. She also talked to her boss, if she could work one day per week from home next year. With the new smaller telepresence systems she could support, assist and consult her colleagues and even citizens from home.

Today the authority and she herself is very appreciated by the citizens that contact or visit the public service center.

Her health is quite well. Only her eyes make problems. Because her vision has deteriorated month by month, she is currently thinking about those new retina eye implants. The latest generation is very slim and maintenance free because it is powered only by the body temperature. Her doctor said, it will improve her vision dramatically and there is no alternative in two years, because she will be nearly blind then.

UC 310-01: Goldenworkers - Factory worker

General

| Name of Use Case | | | | |
|-------------------------------|-------------|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 310 | - | - | Goldenworkers - Factory worker | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|--|---|--|
| Goldenworkers: Future Scenarios of Ageing at Work (FP7) (D2.1) | http://www.goldenworkers.org/images/derivables/goldenworkers_scenarios.pdf | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #life_areas:work; #work:system_scope:employees_health; #work:sector:handicraft; #work:location:workplace; #key_enabling_technology:robotic; #vital:cardiovascular; #key_enabling_technology:vital_parameters; #key_enabling_technology:body_area; #work:system_scope:training; #work:location:home_office; #stakeholder:secondary:relatives; #purpose:safety:alert_detection; #purpose:safety:alert_communication; #purpose:safety:fall_detection; #key_enabling_technology:mobile_devices | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
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| Complete Description |
| <p>Georg has been working for a big car manufacturer since nearly 30 years now. But over the time his work changed dramatically. After school he did a vocational training as a mechanical engineer. When he started working, the company manufactured the most parts of the cars itself. In the beginning he worked on machines like molding presses, punching machines and rotary cutters. Then, very soon the CNC machines have been introduced. He did a further education in programming these machines. His work moved from operating the old machines into programming, preparing and maintaining the new machines. Once programmed, he just had to adjust the work pieces. The rest was done automatically. With the rise of the robots even this work went to the machines. This reduced the physical work for Georg. Now he was responsible for the installation, setup and mechanical maintenance of the robots. This is an interesting and not so monotonous work. But he had to be careful. Many people underestimate the speed, power and range of industrial robots.</p> <p>Over the time the company was forced by the cost pressure through international competitors to reduce the in-house production depth and increase the outsourcing to third party and supplier companies. First only national companies appeared on the list of suppliers. Later a lot of them have been replaced by international suppliers. He became responsible for the quality check of the supplied parts and materials and the resulting components. And even the work with the robots became safe, because the newer robots had a lot of sensors and an overall monitoring systems is now watching and ensuring the security of the workers. When it detects a dangerous situation, it immediately stops the robot to avoid accidents. Georg was saved two times by this system. Also the autonomous moving platforms are integrated into this system. These platforms can be used to move materials, parts and even the workers.</p> <p>Georg uses the platforms to go faster to the other building, when there is a problem with one of the robots. So he is still well known as the fastest and best "robot emergency repair service".</p> |

The reduction of hard physical work came at the right time. 5 Years ago his doctor told him, that he should take care of his heart. The first thing he did, was to buy a smart health monitoring watch. He's wearing it during work but even in his leisure time.

Now the manufacturing processes change again fundamentally. Until now, many parts have been produced by computer controlled power-driven machine tools, such as saws, lasers, lathes, milling machines, and drill presses to physically remove material and achieve a desired geometry. To achieve this, skilled machinists used sharp cutting tools to carve objects from metal wood, plastic, ceramic, and composites. The new methods Georg's company introduced are called direct digital additive manufacturing. Now parts are produced by melting successive layers of plastic, metal and other materials based on 3D models - adding materials rather than subtracting them. This allows creating complex objects without any sort of tools or fixtures. Georg likes to work in this new part of the factory. The new additive processes are ecological and better for the health of the workers because they don't produce much noise or any dust or waste material.

This new manufacturing environment needs a lot of 3D designers and people who can operate and maintain sophisticated computer-based equipment. And even Georg's tasks evolved in order to deal with the greater complexity. He is still responsible for the quality checks, the mechanical maintenance of the remaining robots and he's a valuable practical advisor for those theoretical design geeks that work only with virtual objects. These guys rely on him, when they ask him about the mechanical demands of certain parts and components.

Georg is still a very much appreciated expert with a long time experience and a nearly up-to-date technical knowledge because never stopped learning. He did it in special courses but he also used the available electronic learning systems that supported him in learning on the job and learning by doing. Especially those augmented reality learning glasses help a lot because it provides him the right advice in the right situation and he could use his hands for the work.

Thanks to the knowledge sharing and collaboration system of the company he is now a wellknown practical expert. He can answer a lot of questions and solve a lot of problems posted by his younger colleagues. That's why his boss agreed that Georg can work one day of the week at home, only answering those questions.

His company puts a lot of effort in a good image through sustainability. That and the good cowork in teams with younger colleagues are the reasons, why he did not moved to the competing company a year ago, even though they offered a better income. Georg is happy with his work, because it's an inspiring exchange with his younger colleagues where both sides could learn a lot.

His father is now 80 years old but still active and of good health. Nevertheless, last year Georg and his father decided to install one of those ambient monitoring systems in the flat of his father. Just to be sure, that Georg is informed soon, if something is wrong with his father. Until now they had only one situation where the alarm was sent to his smart assistant by the system, when his father slipped in the bathroom and couldn't help himself because of the wet floor.

UC 311-01: Goldenworkers - SME

General

| Name of Use Case | | | |
|------------------|-------------|----------|---------------------|
| ID | Domain Role | Function | Name of Use Case |
| 311 | - | - | Goldenworkers - SME |

| Version Management | | | | |
|---|---|--|--|---|
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Goldenworkers: Future Scenarios of Ageing at Work (FP7) (D2.1) | http://www.goldenworkers.org/images/deliverables/goldenworkers_scenarios.pdf | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:system_scope:training; #work:location:workplace; #work:sector:handicraft; #work:system_scope:communication; #key_enabling_technology:mobile_devices; #sensory:hearing | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Bastian, 61 yeras old, have been working in his own print shop since nearly 20 years. He's quite active in his job and somebody who is always looking for business opportunities. He's very interested in new technologies and an early adopter, because he knows that he has to be ahead of the completion to find innovative customers. He likes his job and his business because he can decide for himself, when he's working and when not. That circumstance became more important in the last years when his daughter and her husband got important jobs in their companies. Both are very busy in their jobs. They have to travel a lot and have to work occasionally at unregular times. Bastian and his wife have to take care of the kids then. For them it's not a burden. They like to spend the time with their grandchildren. This keeps him young. Only his ears remind him on his age.</p> <p>Bastian did a vocational training in print design. He worked in a big PR and marketing agency for a few years. But because he never studied design at a university he never got one of those really attractive jobs with a lot of freedom, creativity and responsibility. In this company he always had do things that have been conceived by other people. Someday he decided that it's better to be his own boss. He started his own business with a small print shop. That's now 20 years ago.</p> <p>Bastian started with standard printing and plotting equipment. Because he didn't had a big organization, he</p> |

could deliver in short response times and soon had a lot of projects. Sometimes the work became stressing, because he had to deal with a big number of short-term orders to achieve a reasonable income. He spent some nights in his office. The Internet print shops didn't made his life easier because they increased the cost pressure for standard print jobs.

So Bastian focused on high quality and high volume jobs. While he did the high quality jobs in his own small company, he found a few partner companies for the high volume jobs, that he couldn't handle with his own equipment.

Over the years he saw a decrease of print production because more and more communication, PR and marketing went to electronic channels. With the appearance of the first affordable 3D printers Bastian early realized that this could be a big chance and a nice addition to his 2D printing services.

He had to learn a lot about 3D modeling of virtual geometries and the required tools. Therefore he did a few distant learning and training courses.

The business grew up very fast because he was one of the first companies a service for 3D printing of single objects. After two years he also offered to produce small series of objects and additional materials.

Today he gets most of his orders through contract malls. Companies put their orders in the pool of a service market place and all service providers can apply with their own conditions and offers.

His smart mobile assistant informs Bastian every time when a company is looking for a single 3D object to "print" or if somebody is looking for a service provider who is able to produce a small series of objects smaller than a cubic meter. These are the dimensions that can be handled by his machines. His assistant also informs him, when a very complex printing job is finished or when running job is stopped because of a problem. With these services he can do a part of his business from wherever and whenever he wants.

Three years ago he hired Jose as his first employee because of the good situation of his business and also to have more time for himself and his family. Jose was a great help because he was very familiar with state of the art information technology. Bastian learned a lot from Jose, even if he didn't understood everything in detail. Jose established the connection of their 3D printers directly to the infrastructures of their regular customers. Now these good customers can start 3D printing whenever they want, even at night.

Most people don't know that Bastian is wearing cochlea implants. His sense of hearing started to fade 10 Years ago. But with these high definition implants it does not make a difference to his former hearing experience.

UC 312-01: Goldenworkers - Golden Manager Scenario

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|--|
| ID | Domain Role | Function | Name of Use Case | |
| 312 | - | - | Goldenworkers - Golden Manager Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for |

| | | | | |
|--|---|---------------|--|---------------|
| | | | | voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Goldenworkers: Future Scenarios of Ageing at Work (FP7) (D2.1) | http://www.goldenworkers.org/images/deliverables/goldenworkers_scenarios.pdf | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #digestive:metabolism; #purpose:comfort:lighting; #general_tasks:daily_routine; #key_enabling_technology:medication_dispenser; #key_enabling_technology:vital_parameters; #life_areas:work; #key_enabling_technology:telemedicine; #stakeholder:secondary:relatives; #human_communication; #relationships; #work:location:workplace; #work:system_scope:ergonomics; #work:system_scope:communication; #work:sector:service_industry:general_office_work; #key_enabling_technology:communication_functions; #key_enabling_technology:home_automation; #work:type:voluntary; #life_areas:education | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Marie Carière felt happy about her life. She was in her early seventies expecting to live another thirty years. After the 2009 crisis, the welfare state was significantly revised and Marie knew that she could not rely on the public pension system to live. The retirement age had been removed and a person could choose to work for as long as she wanted. Marie liked this policy because she loved her job. She had worked for three large energy companies since she graduated from engineering back in 1985. Over time, she had been promoted being one of the top executives in her current company. But three years ago, she asked to be assigned to a position with less responsibility to have more flexibility and work part-time. Her objective was to still make money to complement her own savings but have more time for her personal life. The company had adapted to an ageing population and to the new legislation, with policies towards elderly employees such as flexible working time, flexible remuneration, adapted career paths, and life long learning.</p> <p>Marie woke up to a nice spring morning. As soon as she woke up the screen walls turned on to a soft light. Marie said the word “news” and the screens personalized her news from news sources that she had selected. She pointed a heading that looked interesting and the video news came up. On one side of the screen, she could see her biometrics. She had high cholesterol and minor problems with her stomach. Automatic drug delivery systems balanced her chemistry.</p> |

She could also see her schedule. She wanted to spend the morning at the office to work on a new radical new product—a driverless car that would also allow short flights. She was not running the project, but she was part of the group that came up with the idea and got funding from top management. She also wanted to help the manager of the project, a young man that she really appreciated. She decided to skip afternoon meetings on competitors' analysis, she could always see the video summary later on. Instead she coordinated with her friends for a tennis game and dinner. All of it was done through voice recognition. Meanwhile the light had gone up sensing she was more awake.

A car was waiting for her outside her home to drive her to work. During the trip, she checked her messages and had a video conference with her daughter; she also video conferenced with her mother who was in her late nineties; she also had on her screen a complete real time picture of her mother's health. Her mother was living alone with a caregiver who helped her during the day. She also watched a confidential report on what other companies were doing on her new concept. Half way to the office, the car picked up one of her co-workers and a good friend of hers (the car would never pick up people that were not recognized as being good friends).

The office she was using that day recognized her and adapted to her. She used her company avatar to return a message from the manager in India; he was available and had a virtual 3D meeting. She then went to see one of old timers to discuss something that was worrying her. The data indicated that quality problems had gone up in Sweden and the decision support suggested that the cause was a change in legislation that put more stress on the car.

Then she went to the flying car meeting. She sat with the local team and the avatars from people in remote locations joined. She was still amazed at how real those 3D avatars looked like. The early virtual prototypes were been tested with real customers who sat on the simulation. The feedback was encouraging, but biometric data showed that the take off scared some of them.

Half way through the meeting she received a message from her home. The refrigerator suggested purchases required and asked for approval.

After the meeting, she decided to go back home. On her way back, she made a couple of video calls and read more carefully on the car's screen the news of the day. The government was changing retirement legislation again, reducing pensions and extending the retirement age. Marie was involved in a local non-profit organization that was supporting these elderly that the government was leaving behind. She taught engineering to those elderly interested. She used material from the best universities with a very practical approach. Her students had learned to build quite sophisticated products for their homes and even some of them had become golden entrepreneurs spotting opportunities that nobody else had seen before.

UC 313-01: Goldenworkers - Golden Entrepreneur Scenario

General

| Name of Use Case | | | | |
|--------------------|-------------|-----------------------------|--|-------------------------------|
| ID | Domain Role | Function | Name of Use Case | |
| 313 | - | - | Goldenworkers - Golden Entrepreneur Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or | | Approval Status draft, for |

| | | Committee | | comments, for voting, final |
|--|---|---------------|--|-----------------------------|
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Goldenworkers: Future Scenarios of Ageing at Work (FP7) (D2.1) | http://www.goldenworkers.org/images/deliverables/goldenworkers_scenarios.pdf | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #purpose:safety:disease_rehabilitation; #life_areas:work; #work:location:home_office; #key_enabling_technology:body_area; #key_enabling_technology:vital_parameters; #work:system_scope:communication; #work:system_scope:training | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| |
| Complete Description |
| <p>Claire Polak woke up to a windy fall morning. She had been running her own accounting company since she was laid off from a government department that was closed. It happened five years ago. Claire was then 52 years old. Her department was merged into a larger one ran from Paris. New database analysis software allowed centralizing the work that was previously done in 20 departments around France. The work that previously 55 people had done was now done at a lower cost and higher quality by a group of six highly specialized people. Claire had been in that job for 15 years. Before then, she had worked in the administration department of a hospital. She was let go from there when it was taken over by a large hospital conglomerate.</p> <p>As a government employee, she received a reasonable severance package and a small pension. But it was not enough. Her parents were old and needed support and she had divorced ten years ago. Her daughter was unemployed and needed also economic assistance. Claire had back problems.</p> <p>Claire was one of the few people laid off that decided to start her own business. She did try to find a job, but with no success. Companies still showed a significant bias against older workers. The unemployment level was significant and organizations could choose among many applicants for the type of jobs she could do. Her co-workers in their fifties were all unemployed except for a lucky one who had found a job; they had no alternative but to reduce their standard of living to live on their pensions. Claire was more ambitious and she</p> |

thought she could start her own business.

First thing in the morning was to exercise to keep back problems at bay. Her partner helped her with the exercises. Biosensors tracked the session until biometrics reached the appropriate level. She always felt much better after exercising.

She ordered her digital assistant to turn on using her voice. The screen on the wall turned on and all Claire's relevant networks and customers were on the screen. She quickly checked for updates on her information networks. The golden entrepreneurs' network of her city was having a dinner with the founder of a famous startup in a few days. Then she went more carefully into her working networks. She often worked with two large auditing companies as a subcontractor for audits in public sector organizations. The night before she had worked until late to update her part and she could see the reaction of the company who was happy about it. As she moved to her home office, she video called her only employee—a younger woman with accounting experience in for-profit organizations. She worked from her home also and they were almost partners.

During the morning, she had a couple of meetings with smaller customers and she spent some time in a training course about new accounting policies. All of these happened on-line. She had lunch at home with her partner. Even if they had decided to take the afternoon off, she got a text message from one of her customers. The CFO did not understand a couple of issues and Claire decided to visit the company to explain it face-to-face.

On her way home, she took a taxi to pick up her grand-daughter from school. Her son had sent her a text asking for the favor. As she accepted the text, her calendar was updated and a taxi booked. She loved to pick up her grand-daughter; it was good to see her and realize how much education had changed since she had been at school. There were no books and flexible screens were as common as pieces of paper. On their way back, her grand-daughter who was 15 years-old showed her some amazing networking tools that she was using to collaborate on projects.

Back to her home office, she spent some time following up new potential customers. She also checked whether the afternoon customer had added comments to her digital profile to enhance her positioning on the web. When she was ready to go out for dinner with another couple, a flag came up on her screen indicating that a customer had entered an unusual transaction. Her husband left and she promised to catch up as soon as possible. She went into the customer's ERP system to see what was going on. After looking at it, she was not too sure whether the transaction was accounted correctly, so she asked her digital assistant to search the web to find information on the issue. She left for dinner with the idea of closing the issue when back at home.

UC 314-01: Goldenworkers - Golden Employees Scenario

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---|--|
| ID | Domain Role | Function | Name of Use Case | |
| 314 | - | - | Goldenworkers - Golden Employees Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for |

| | | | | |
|--|---|---------------|--|----------------------|
| | | | | voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Goldenworkers: Future Scenarios of Ageing at Work (FP7) (D2.1) | http://www.goldenworkers.org/images/deliverables/goldenworkers_scenarios.pdf | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:location:workplace; #work:system_scope:ergonomics; #work:system_scope:training; #work:system_scope:communication; #work:sector:service_industry:general_office_work; #key_enabling_technology:robotic; #key_enabling_technology:games | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Susanne Smith woke up to a hot summer day. Today was her 48th birthday at the government's tax department. She was turning seventy and since she turned 62, she had used the ageing workers' policies that public administration had in place. Now she worked about three hours a day and she often went to the office, even if working from home was also possible. At the office she could meet her friends and socialize. Policies also gave her flexibility in terms of when to do the time.</p> <p>Susanne and her husband James had married 45 years ago. James worked for the water company of the city and had a similar deal as Susanne. Both of them were high-school graduates and had taken several courses as part of their jobs. Susanne really enjoyed learning and she did not go to the university because she needed to make a living when her father passed away. Their salaries were modest but they were enough to have a good life. Their two kids were in their thirties and living abroad. Susanne's health was good although she had some arthritis. James' was not as good and they had an assistant robot at home to help him with some of his home duties.</p> <p>Susanne's morning was one of her typical mornings. She walked down with James to the bar downstairs to have breakfast and chat with their friends. Then, she took the driverless bus (the lack of driver still amazed her) and went to her work. During the commute, she played with a computer game that gave her points to meet her brain exercise work programme at the company. At work, she chose a desk at the training centre that adapted to her needs when recognizing her. She logged on a training programme that she had chosen</p> |

to do on financial management for goldenworkers. She found it very interesting and she enjoyed the other participants. At that time, the avatar of a friend of hers working in another city was also in the classroom and she took the opportunity to chat with her during the course.

After the training session, she went to a working desk. She checked on the computer who needed some help that she could provide. She found two people that needed her type of skills, so she went to the digital work room and after a brief video-conference started to work. Two hours later, the workers in that work room decided to take a coffee break and met downstairs at the bar. During the break, she received a text message from James who needed her to help him with some stuff at home.

The afternoon was devoted to family and social activities. At six o'clock, she was reminded of her exercises. She needed to do them to get points for the company and maintain some of her benefits. She decided to stay home and use the entertainment robot-device to exercise. It was a fun game—catching colour balls before they hit the ground.

Before going to bed, she checked the wall screen to see the events scheduled at the company for the rest of the week. Then, she turned on a 3D movie that she watched with James.

UC 315-01: Goldenworkers - Golden Work Seeker Scenario

General

| Name of Use Case | | | | |
|--|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 315 | - | - | Goldenworkers - Golden Work Seeker Scenario | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Goldenworkers: Future Scenarios of Ageing at Work (FP7) (D2.1) | http://www.goldenworkers.org/images/deliverables/goldenworkers_scenarios.pdf | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #digestive:metabolism; #human_communication; #life_areas:work; #domestic_life:shopping; #key_enabling_technology:robotic; #key_enabling_technology:telemedicine; | | | | |

| |
|---|
| #key_enabling_technology:vital_parameters; #work:location:home_office; #work:system_scope:communication; #work:system_scope:training |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Complete Description |
| <p>Marta Gutierrez woke up to a cold winter day. She was in her late sixties and not yet eligible for retirement. She was born in the mid sixties to a hard working but uneducated family. She did not finish her high school rather preferring to start working and earn a living. She did not believe she was made for studying, so her decision was consistent. Early on, she found a job as assistant in a large bank but lost the job in one of the mergers that happened in the nineties in the Spanish banking system. Those mergers were done to gain economies of scale through ICT. From there on, she had long periods of unemployment with short periods of work, often in summer months in the service sector. Luckily, government subsidies had been coming regularly because of her unemployment. Since the crisis of 2008, jobs were harder to find and ageing did not help. Her husband, with similar characteristics, followed a similar fate. Because of her eating habits she developed obesity and various chronic diseases associated with it.</p> <p>The family's economy was dependent on government subsidies and a few weeks of work that the couple could find. Their job history did not make for a substantial pension and found it hard to make it to the end of the month, often using non-profit organizations. In her mind, her unfortunate situation was the result of a badly designed society that did not offer her the opportunities that she deserved and a government that did not support enough those in need.</p> <p>Because of her health problems, the public health system had assigned her an assistant robot to help her around the house. She also used an intelligent wheelchair to move around the city. The public system also offered telemedicine solutions to her diseases and she was constantly monitored remotely. Yet the sensors were not fully automatic and she had to devote some time in the morning and afternoon to perform her health checks.</p> <p>Marta considered herself to be good at internet. After her healthcare checks and some exercise that the health system required her to do to be eligible for support, she went on-line to do grocery shopping delivered home. She used software to identify deals and special offers. Then she explored the job offers around the web. She had a search and recommendation software that listed jobs available to her and automatically sent her CV and the benefits associated with hiring her to potential employers. Because of her physical limitations most of the work she did was telework: telemarketing, telemailing, data input, data clean up, etc. Her husband was able to do some physical work, most of it summer jobs in bars and restaurants for tourists.</p> <p>She had a couple of flexible screens to do her work. Even if she had eyesight limitations, the software available was good but not fully customized to her needs. She preferred voice commands and some movement recognition input interfaces.</p> <p>The days she had a job, she would spend the rest of the morning working. Training for the kind of jobs she did took no more than 30 minutes and the interfaces were easy to understand and use. She had often considered learning new skills and had registered in various programmes to learn video editing that was a highly sought job. But there was always an excuse not to go past the first hour. She always remembered</p> |

she was not made to study. Coordination with employers was through the software and she seldom sought human help relying on the Q&A databases. When doing telemarketing, she uses company's avatars. She supervises them and intervenes whenever the avatar tells her that the potential customer wants a human voice.

When she had no job, she spent her time with her friends, mostly on-line but also some of them will visit or she will visit them. If needed, she uses public transportation that is adapted to her physical needs. She uses video communication with her friends.

She uses little knowledge management directly, although she is profiled in various job sites. These job sites often use dynamic pricing to allocate the jobs. So she may one day do the work for a very different salary than another day. It depends on the "market" and her willingness and need to work.

Afternoons start with healthcare related activities and exercising. Her doctor and government appointments (mostly through internet) happen in the afternoon. If work permits, she spends the afternoon and evening socializing face-to-face with her local community. The evenings are devoted to video conferencing with her son and other relatives that live in other cities.

UC 316-01: HERMES - Facilitation of episodic memory

General

| Name of Use Case | | | | |
|---|---|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 316 | - | - | HERMES - Facilitation of episodic memory | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HERMES: Scenarios and Use Cases (FP7) (D2.3) | http://www.fp7-hermes.eu/uploads/media/publications/HERMES_D23_ScenariosAndUsecases_final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #relationships; #key_enabling_technology:ambient; #key_enabling_technology:mobile_devices; #localization:indoor; | | | | |

| Scope and Objectives of Use Case |
|----------------------------------|
| - |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>It is 2 PM and Maria is at home having a little nap after lunch when the doorbell rings. She awakes at the second ring and goes to the door to see who's there. Through the door viewer she sees that it is Anna, her friend. She opens the door and leads Anna to the living room excusing herself for a few minutes. Her friend takes a seat on the sofa in Maria's living room while Maria is freshening up.</p> <p>The HERMES system asks Maria whether she considers the event important enough to be permanently stored on the hard disk for processing and future retrieval. The system gives Maria 5 minutes to decide; during that time the outputs of the sensors are temporarily buffered by HERMES.</p> <p>In this case she decides that she wants to store the event, she presses the corresponding button on her remote control before she is off for the bathroom. The HERMES system stores the buffered data and continues recording and saving the recording.</p> <p>Anna sits there on the sofa waiting and reading one of the magazines that are lying on the couch table in front of her. Not much action is going on in the living room. The HERMES system is still recording following Maria's categorization of the event as important, since the visual processing indicates at least one person present in the room.</p> <p>Because Anna is a friend of Maria and has been at Maria's place more than once the HERMES system recognizes her face. So later when Maria is searching for conversations with Anna the name is available in the system.</p> <p>Maria is coming back from the bath room with some cookies and coffee. She takes a seat near Anna and they start to talk about this and that.</p> <p>At about 5 pm Anna realizes that she has to return home. Maria escorts her to the door. The HERMES system notices that both are leaving the room and stops recording the event.</p> <p>The HERMES system has stored the whole event from the first door bell ring to the exit of the two persons from the living room of Maria's home. Also some contextual information, namely primary contextual cues were stored during the capture of the event. These are date, time and location of the event.</p> <p>From this scenario, the on-line processing that needs to be performed is:</p> <ul style="list-style-type: none"> - Detection of possible event onset: Audio recognition of doorbell ring, or some communication of the doorbell with the system. - Presence of people: Visual face detection in room and/or visual tracking of people. - Detection of event end: Somehow the system must understand that the visitor has left, and stop recording, even if Maria remains in the room! <p>In the post processing – that starts right after the end of the event – secondary and if possible tertiary contextual cues are being generated by the HERMES system. These are:</p> <ul style="list-style-type: none"> - Emotion in voice and/or face. |

- Identity of people present.

- Transcription of the conversation

These annotations simplify the browsing and the retrieval of unique events from Maria's life.

About two weeks later Maria is a little desperate. She knows that her friend Anna has been here but is not able to remember the topic of their conversation. So she consults the HERMES system and types in Anna's name. She gets all conversations she had with Anna and chooses the right one upon the date. Maria can choose to either watch portions of the conversation or to read the conversation.

UC 317-01: HERMES - Cognitive training

General

| Name of Use Case | | | | |
|---|---|--|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 317 | - | - | HERMES - Cognitive training | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HERMES: Scenarios and Use Cases (FP7) (D2.3) | http://www.fp7-hermes.eu/uploads/media/publications/HERMES_D23_ScenariosAndUsecases_final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #general_tasks:daily_routine; #key_enabling_technology:games; #key_enabling_technology:questionnaires; #key_enabling_technology:mobile_devices; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|-----------------------|
| |
| Complete Description |
| |

Maria has been recording appointments of different nature with the HERMES portable device. More specifically, she recorded the following appointments with her own words:

- I have an appointment with the doctor Martinez on the 26th at 3 am.
- Remember to call my friend Sandra on Wednesday because it is her birthday.
- Appointment with my daughter on Sunday at 11 am. We'll go for a walk.

When she is back at home, she is sitting in front of the HERMES interface and the following screen appears on the HERMES interface: "Welcome, Maria!! If you enjoy playing cognitive games, then you will improve your memory and your attention, and you will keep your brain trained!! I just wanted to remind you that you haven't played with HERMES yet today. Do you want to play now?"

Maria answers "YES". Then the system says: "I am going to present you some information you recorded related to health, family, shopping and other appointments. You have(three) recordings. Listen:" (HERMES presents the recordings made by Maria (replaying Maria's voice)):

- I have an appointment with the doctor Martinez on the 26th at 3 am.
- Remember to call my friend Sandra on Wednesday because it is her birthday.
- Appointment with my daughter on Sunday at 11 am. We'll go to go for a walk.

The system asks Maria the following: "I am going to ask you some questions about your (first) recording":

- What kind of appointment do you have (health, family, shopping, other)?
- What day of the week do you have it?
- On what date do you have it?
- At what time do you have it?
- Who do you have it with?
- Where do you have it?
- Maria can also store additional information which could be helpful for helping to reinforce her retrieval of appointments information. With the medical appointment she records the following: "I have to be on time with the doctor, in order to have time to go to the hairdresser's afterwards".

Maria answers to each specific question. If she did not give specific information to one question (example: where she had the appointment), she can add it now. In this way, Maria's speech is turned into HERMES speech. If she does not answer or does not know how to answer to a specific question, the system does not store any information for that specific tag.

[figure]

After answering to these questions, the system presents Maria the following task: "Here you have the details of your first recording". Maria can choose to get information about 0 to 4 specific tags, depending on the difficulty level assigned in the HERMES settings. For example: "Please, choose 3 tags so you can get some information about the appointment. Then you will have to answer to the rest of the tags.

[figure]

Maria chooses 3 tags on the device.

[figure]

The System presents Maria the following information by voice and text:

- Where: Hospital
- What time: 3 p.m.
- What date: the 26th of May

The system says: This is the information you already know:

- Where: Hospital
- What time: 3 p.m.
- What date: the 26th of May

The system says: And this is the information left to know.

[figure]

The system says: Choose a tag. Maria chooses "DAY OF THE WEEK". The system says: While the light of the tag square is on, give an answer:

[figure]

Maria answers.

Usecase 1: Maria gives a correct answer:

- Maria says: Monday
- The system says: Very good. Now, there is still [two] more tags.
- Maria chooses another tag. When the last tag is correctly answered, the system reproduces the whole appointment
- - You have a [health] appointment, the day of the week is[Monday], the date is [the 26th of May], the time is[3.00 p.m.], the person is[Doctor], the place is [Hospital]. And additional information is [I have to be on time with the doctor, in order to have time to go to the hairdresser's]
- The system says. You still have [number]recordings to play with. Your score is[points], which means that your memory today is [excellent/very good/good/you need to practice more]
- The system says. Do you want to play with another recording?
- When there are no more recordings, the system says. You have no recordings left. Well done!

Usecase 2: Maria gives an incorrect answer:

- Maria says: Tuesday
- If Maria fails, the system says: The correct answer is Monday. Now, there are [number] tags left.
- [figure].
- The procedure follows the same way as in case 1. When 2 consecutive wrong answers are given, the system provides the information and allows Maria to follow with the game.
- If more than 2 consecutive incorrect tags are givenby Maria, the system says:
- "I think we should listen to the recording again" and the game restarts.

Justification for this game

- Maria's exposition to her own recordings is alreadyan attention and memory task.
- Maria can train herself in categorizing information.
- The system offers Maria a way to create an agenda that helps her train her own memory without feeling dependent on the device.
- It is an errorless learning approach, so neither interference nor confusion is created.
- The system can store tags, so the information is contextualized and, thus, there will not be problem for the subsequent application of the rest of the games suggested in the document.

UC 318-01: HERMES - Advanced activity reminding

General

| Name of Use Case |
|------------------|
|------------------|

| ID | Domain Role | Function | Name of Use Case | |
|--|---|--|--------------------------------------|---|
| 318 | - | - | HERMES - Advanced activity reminding | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HERMES: Scenarios and Use Cases (FP7) (D2.3) | http://www.fp7-hermes.eu/uploads/media/publications/HERMES_D23_ScenariosAndUsecases_final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #general_tasks:daily_routine; #localization:indoor; #key_enabling_technology:ambient; #purpose:security:access_control; #localization:outdoor; #key_enabling_technology:mobile_devices; #domestic_life:shopping | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Setting a reminder at home</p> <p>Maria has become a bit forgetful in the last few years. It has happened to her more than once that she forgot an appointment with a friend or with somebody else. Because of this she now stores every appointment in the Hermes system. To do so she simply has to press "New Entry" on the Hermes interface and a wizard is taking her through the steps of storing entries. Maria knows that next week she has to see the doctor on Monday at 11, so she stores this appointment in the Hermes system.</p> <p>It is Monday and Maria has to see the doctor today at 11 o'clock. She wakes up at 8 and prepares herself a breakfast and then thinks that it is such a wonderful day and she could begin to read a little bit in her book that she just bought the other day, before going to the doctor. Maria loves reading detective stories – Raymond Chandler is her favourite author. So after making her ready for the day she sits on her favourite chair in the living room, puts on some background music and starts to read.</p> |

At about ten she checks the clock and thinks that there is still enough time to read for another half an hour and then go to the doctor's appointment. The doctor is not so far away from her house so starting half an hour earlier is more than enough. Well, the book is so fascinating that she really feels a little puzzled when at halfpast 10 a voice coming from the HERMES system is reminding her that on the calendar today at eleven an appointment with the doctor is set.

Maria hurries up, checks the entry and still has enough time to go to the doctor.

The reminder issue can either be triggered by the calendar alone, or as a result of the calendar entry together with the HERMES system understanding that she is still at home. The second approach requires an on-line mechanism to understand who is at home. Identifying people entering is easy with the proposed camera configuration. The event of a person leaving can also be detected by visual tracking. The identity of that person is not known, as the face is not offered to the camera views of the proposed configuration. A method for identifying people leaving is still sought.

Setting a reminder on-location

Maria is in a hurry because it rains. She has an umbrella with her but her left foot is already getting wet and she is afraid of getting a cold like she did last year when she found herself in exactly the same situation.

She had been in the city for a walk when it started to rain. She had her umbrella with her and thought "no need to go home" just because of the rain. Well that was last year...

Today she has been in the city to look for some birthday present for her dear friend Anna. Anna is getting 77 in a week. Maria does not like to shop birthday presents because it seems so hard for her to find something nice.

As she is walking home she comes by a traffic light and has to wait because it is red. It is then when she sees something nice that could be what she wants. Maria thinks about going into the shop and check the item out, but decides to not risk a cold. She decides to do something else. She always has the HERMES PDA in her bag. So she takes it out to make a little note. It is fast and easy, she just has to select the category "location reminder" and press "Here" to specify the location she is now. Additionally she records some words to remind herself what she wanted to do in this location. The HERMES device stores the location together with the spoken note and creates a reminder for Maria that is triggered when she next time passes this location.

Setting a shopping-reminder

Maria has become a bit forgetful in the last few years. It has happened to her more than once that she forgot things that are important to her, things she wanted to buy, things she wanted to do and she even sometimes forgot to meet with friends. Because of this she now stores notes of every important thing in the HERMES system. She also uses the system to make shopping-lists. To do so, she simply uses the HERMES interface, where a wizard takes her through the required steps for storing all entries.

Maria is in the kitchen and wants to prepare herself coffee. She sees that she is running out of it soon, so she decides to enter a quick note in the HERMES system. To do so she uses the HERMES PDA. More specifically, the system gives her the ability to categorize and store notes and to define new categories. So far Maria has categories for food, clothing, medical stuff and diverse. To generate an entry for "coffee needed", she navigates to the food category and chooses between different suggestions. Coffee is one of them. In case she needs some new kind of food that is not already in the food-category she just types it in once and the next time it is there.

After she chooses coffee, it is added to the shopping list. She has the possibility to activate each entry on the shopping list. When she does that, it means that the thing is important and really needs to be bought

soon. She will be reminded by the system to buy these activated things on the shopping list whenever she passes the shopping mall next to her.

The system does remind Maria based on GPS data. Because she defined the shopping mall as the point where she shops the HERMES system now alerts her whenever activated items are on her shopping list and she is close to the shopping mall.

A few days later Maria passes the shopping mall in her neighbourhood when the HERMES PDA starts ringing and vibrating in her bag. She first thinks that someone might be calling her but when looking at the screen of the PDA she sees the shopping list with coffee written on it. The moment is good, she has time so she goes into the shop and buys coffee.

Details

| Actors: People, Systems, Applications, Databases, the Power System, and Other Stakeholders | | | | |
|--|---|-------------------------------------|----------------------------------|------------------------|
| Actor Name | Actor Type | Actor Description | Used Technology | |
| - | - | - | - | |
| Issues: Legal Contracts, Legal Regulations, Constraints and others | | | | |
| Issue - here specific ones | Impact of Issue on Use Case | Reference – law, standard, others | | |
| - | - | - | | |
| Referenced Standards and / or Standardization Committees (if available) | | | | |
| Standard needed for | Standards have to be considered in the Use Case | Relevant Standardization Committees | Standard Status/ Current Version | Link to Standards Wiki |
| - | - | - | - | - |
| Relation with other known use cases | | | | |
| Known use case | Source | UC Status | | |
| - | - | - | | |

General Remarks

UC 319-01: HERMES - Conversation support

General

| Name of Use Case | | | | |
|--------------------|-------------|--|-------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 319 | - | - | HERMES - Conversation support | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |

| Basic Information to Use Case | | |
|--|---|---------------------------------|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| HERMES: Scenarios and Use Cases (FP7) (D2.3) | http://www.fp7-hermes.eu/uploads/media/publications/HERMES_D23_ScenariosAndUsecases_final.pdf | Public |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #mental; #key_enabling_technology:games; | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Maria and her friend Anna are having a conversation at Maria's place. They both like to speak about the time when they were younger. Maria often forgets things that happened a few months back. Both of them like memories, resulting from photographs taken long time ago or listening to music that was en vogue when they were younger.</p> <p>Today they speak about the last time when Maria had invited a couple of their friends for dinner. They use the HERMES system because it provides them with material from this event. Maria and Anna love to sit on the couch eating cookies and browsing the HERMES system for all kinds of memories. Maria has stored videos from birthdays, conversations that happened long time ago, photographs, entries she has made and other memories. Here and then they also like to play some cognitive game together, something that they love the HERMES system for.</p> |

UC 320-01: HERMES - Mobility support

General

| Name of Use Case | | | | |
|--------------------|-------------|--|---------------------------|--|
| ID | Domain Role | Function | Name of Use Case | |
| 320 | - | - | HERMES - Mobility support | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for |

| | | | | |
|--|---|---------------|--|----------------------|
| | | | | voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HERMES: Scenarios and Use Cases (FP7) (D2.3) | http://www.fp7-hermes.eu/uploads/media/publications/HERMES_D23_ScenariosAndUsecases_final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #general_tasks:daily_routine; #key_enabling_technology:mobile_devices; #mental; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

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|--|
| Narrative of Use Case |
| |
| Complete Description |
| <p>On a beautiful Wednesday in May Maria is in the city enjoying the first rays of the sun. On her way to the center she meets a friend of her. They begin to talk and decide that they could go for a coffee. So they go to their favorite coffee shop and take a seat outside to enjoy the sun. After having a coffee they decide to part because each of the two still has something to finish today. But they agree to meet again on the weekend. Maria uses her HERMES mobile device to set the date and the time.</p> <p>A few days later the HERMES system reminds Maria that she has an appointment with her friend Anna. Happy to meet her friend again Maria prepares herself and goes out. It's then when she realizes that she is not sure whether she remembers the topics of their last talk in the coffee shop correctly. So she is not able to remember what they had planned for their next get-together. This makes Maria a little angry. But Maria knows herself very good and she has recorded a few notes when she made the entry. So Maria retrieves the entry from the HERMES system and decides to listen to it.</p> <p>Now that she knows again she is ready to meet with Anna.</p> |

UC 321-01: HERMES - Facilitation of lexical access to people's names

General

| | | | |
|-------------------------|--------------------|-----------------|-------------------------|
| Name of Use Case | | | |
| ID | Domain Role | Function | Name of Use Case |

| | | | | |
|---|---|--|---|---|
| 321 | - | - | HERMES - Facilitation of lexical access to people's names | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HERMES: Scenarios and Use Cases (FP7) (D2.3) | http://www.fp7-hermes.eu/uploads/media/publications/HERMES_D23_ScenariosAndUsecases_final.pdf | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #general_tasks:daily_routine; #mental; #key_enabling_technology:mobile_devices; #key_enabling_technology:games; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| |
| Complete Description |
| <p>Maria has met Rosario this morning in the grocery and they decided to go for a walk together this evening. They have been neighbours and friends for a long time, especially since they both became widow, but lately Rosario has been out taking care of their grandchildren in another area.</p> <p>So Maria introduces the Appointment into HERMES System and, in the evening, she is on time at the meeting point. She feels good because she has always liked to be timely. Along the walk, they both enjoy pretty much the conversation about old times in their neighbourhood. When Rosario asks Maria about her current activities, she explains her some changes in her life, such as her new HERMES System or about a new doctor at the Health Centre who is very helpful with her bone problems.</p> <p>Disgustingly, when Maria wants to say aloud the name of this very kind doctor, it does not come up to her mind. She feels a very active sensation of emptiness, because she perfectly knows the doctor and has used his name quite many times, but in this precise moment she cannot remember it at all. This is a very annoying feeling for Maria, in particular because in this state a lot of incorrect names pop-up in her mind and she hardly can continue with the conversations.</p> |

Fortunately, her new doctor is very concerned about memory constraints of the elderly people and he has signalled the consent for been part of Maria's HERMES System database and now Maria can record her conversations with the doctor. So Maria explains herself and shows HERMES portable device to her friend. "Let me just one second to search for my doctor's name in my new HERMES system", and Maria looks for people in the database in the category of "Health". She can access to his name through his picture easily because there are not many persons into that category, and finally tell it to Rosario.

Later this evening in her apartment, Maria is happy because of the meeting with her friend but still a little bit annoyed with her forgetful experience. So when HERMES asks her to play cognitive games to strength her memory, she selects to play with "My Who is Who".

In this game, two pictures of two different persons from Maria's HERMES database are presented in her HERMES device, and also some cards with personnel information including family names, surnames, occupation and other personal information used by HERMES. Some of these cards with personnel information match with the first the picture and some with the second one. Maria has to drag and drop the cards beside the right picture. She pretty likes this game because she feels involved in it, like a participant in a TV quiz, so she can check her knowledge about their most important persons without those annoying feelings of blocking with proper names.

At the end of this part of the game, HERMES asks Maria: "Well Maria, do you know these two person's names already? Please type it". If Maria knows the name after the game, which is very expected a healthy older adult, HERMES congratulates and proposes her to play one more time: "Congratulations Maria! As has just seen, when you think on what you know about people, retrieving their names is much easier. Now, would you like to play with three persons?" Simultaneously, three pictures are shown in the screen, clearly indicating an increase of difficulty. Because Maria feels pretty empowered, she selects the Yes option on the multi-touch and the game starts again in a little bit harder mode.

UC 322-01: HERMES - Searching for common-use objects. Helping to remember where objects have been left

General

| Name of Use Case | | | | |
|------------------------------------|---|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 322 | - | - | HERMES - Searching for common-use objects. Helping to remember where objects have been left | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| HERMES: Scenarios and Use Cases | http://www.fp7-hermes.eu/uploads/media/publications/HE | | Public | |

| | | |
|--|---|--|
| (FP7) (D2.3) | RMES_D23_ScenariosAndUsecases_final.pdf | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #mental; #key_enabling_technology:games; #general_tasks:daily_routine; #key_enabling_technology:questionnaires; | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>This morning, Maria has gotten up early, she has eaten fruit and milk with bread for breakfast and she has clean up the apartment for a while. Now, she wants to go out for her daily shopping as she usually does – just to buy some fresh fish for dinner and some tomatoes for a salad. She really enjoy this part of the day because she usually meets other women of her age at the stores in the neighbourhood.</p> <p>Nevertheless, this morning she cannot find the keys. It has become a common situation in her life since she has been having some memory losses in these days. After a brief evaluation, her doctor explained her that these memory failures are common of her age and she should not be disappointed about it, but keep active and do some cognitive exercises. Anyway, she cannot help being furious with herself when these losses happen.</p> <p>Fortunately, she has HERMES installed at home so she selects the search video function and, inside it, she looks for the video recorded immediately after she arrived home last evening. In the video, Maria can see herself putting the keys not in the sideboard as usual, but in the pocket of her coat. So she can finally arrange minor tasks at home and go out for shopping.</p> <p>Because HERMES system has detected that Maria has looked for one video-recording that belongs to the category “3 minutes after the User arrive home”, when she comes back home the system ask are:</p> <p>“I noticed that you have checked out some videos, I hope it has been useful for you. Have you checked out in order to remember something?” (YES/NO, AND AFTER YES RESPONSE:) “Frequently, most of what we name memory losses is in fact distractions. Pay attention may prevent annoying situations”.</p> <p>Maria reads it and agrees, because she has always been very distrustful. Then HERMES asks Maria:</p> <p>“Maria, would you like to play to HERMES Savage Garden game? This game is addressed to stimulate short-term memory and attention... and is quite funny as well”.</p> <p>As Maria is very interested in her cognition performance and she has understood fairly well the importance of attention, she agrees and plays the HERMES Savage Garden for a while.</p> |

One scene with some pictures of common objects is shown. After a while, pictures go into hiding in a background scene representing a kitchengarden consisting of leaves, plants and branches. Afterwards, HERMES asks Maria about objects and Maria looks it through the vegetation. It results tricky, but Maria can cope and find it finally out, so a Congratulation message is displayed and HERMES asks Maria to play one more time. She feels good and reinforced, so she decides to continue playing for a while.

UC 323-01: eEIF/Antilope - Involvement of patient in documentation of his/her specific chronic disease and making it available via personal computer (PC) or web based applications to healthcare provider

General

| Name of Use Case | | | | |
|--|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 323 | - | - | eEIF/Antilope - Involvement of patient in documentation of his/her specific chronic disease and making it available via personal computer (PC) or web based applications to healthcare provider | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| eHealth European Interoperability Framework | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| #digestive:metabolism; #stakeholder:secondary:professional_care; #stakeholder:secondary:doctors; #stakeholder:primary; #key_enabling_technology:telemedicine; #key_enabling_technology:vital_parameters; | | | | |
| - | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| As an example, consider a middle-aged patient who has Diabetes Mellitus Type II. The patient lives an independent life. This patient regularly measures his/her level of glucose. S/he enters this data, and any additional disease-related data, in a personal computer (PC)-based disease management application (i.e., a personal patient diary) or a web based application linked to chronic care management centre or directly transferring the data to a responsible healthcare professional on a daily basis. The information is monitored both by rules-based logic implemented as part of the application and by qualified nurses on an on-going basis. If needed, a physician is informed about any relevant degradation in the patient's health status, so that preventive measures can be taken at an early stage. As a result, the patient enjoys a healthier lifestyle, and any unplanned hospitalisation can often be avoided. |

UC 324-01: eEIF/Antilope - Involvement of patient in documentation of his/her specific chronic disease and making it available via mobile monitoring devices and mobile phones to healthcare provider

General

| Name of Use Case | | | | |
|---|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 324 | - | - | eEIF/Antilope - Involvement of patient in documentation of his/her specific chronic disease and making it available via mobile monitoring devices and mobile phones to healthcare provider | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| eHealth European Interoperability Framework | - | | Public | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |

| Further Keywords for Classification |
|---|
| #digestive:metabolism; #stakeholder:secondary:professional_care; #stakeholder:secondary:doctors; #stakeholder:primary; #key_enabling_technology:mobile_devices; #key_enabling_technology:telemedicine; #key_enabling_technology:vital_parameters; |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| As an example, consider the same patient from use case 8. This is a middle-aged patient who has Diabetes Mellitus Type II. The patient uses the monitoring device to measure his/her blood sugar level. The data is transferred to a smart phone wirelessly and automatically. The mobile phone forwards the data to an application server where it may be retrieved by the patient or authorised medical staff, e.g. via a web-based interface. Monitoring of the data, its classification and potential medical intervention may be organised in a similar fashion as that outlined in use case 8 (here: 323). |

UC 325-01: eEIF/Antilope - For ever-present care outside conventional care facilities, involving the interoperability necessary from sensor devices to monitor activity, e.g., of elderly people

General

| Name of Use Case | | | | |
|---|-------------|--|---|---|
| ID | Domain Role | Function | Name of Use Case | |
| 325 | - | - | eEIF/Antilope - For ever-present care outside conventional care facilities, involving the interoperability necessary from sensor devices to monitor activity, e.g., of elderly people | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2013-12-09 | Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| eHealth European Interoperability Framework | - | | Public | |

| |
|--|
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) |
| |
| Generic, Regional or National Relation |
| - |
| Further Keywords for Classification |
| #purpose:safety:fall_detection; #stakeholder:secondary:emergency_call_services; #key_enabling_technology:ambient |
| Scope and Objectives of Use Case |
| - |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| |
| Complete Description |
| As a single example out of a wide range of possible applications, consider the implementation of sensors in the floor of a flat rented by an elderly person. The sensors can identify specific situations related to an emergency situation where, e.g., the resident may have collapsed or fallen in a part of the flat where s/he is not capable to call for help or to call an ambulance. Sensors embedded in the floor can identify such a specific situation and trigger an emergency call autonomously. |

UC 326-01: Fall prevention and rehabilitation with excercises through serious games

General

| Name of Use Case | | | | |
|--|-------------|--|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 326 | - | - | Fall prevention and rehabilitation with excercises through serious games | |
| Version Management | | | | |
| Changes / Version | Date | Name Author/Editor(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2014-05-08 | Antonio Remartinez | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Game-based mobility training and motivation of senior citizens (GameUp) Project (AAL-JP Call | - | | Public (permission to publish the use case received from the original authors) | |

| | | |
|---|--|--|
| 4) | | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| In preparation | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #neuromusculoskeletal:joints_and_bones, #mobility:walking, #neuromusculoskeletal:movement, #stakeholder:secondary:doctors, #stakeholder:secondary:professional_care, #key_enabling_technology:health_information, #self_care:looking_after_ones_health, #relationships, #stakeholder:secondary:relatives, #purpose:safety:disease_rehabilitation, #key_enabling_technology:ambient, #key_enabling_technology:body_area, #key_enabling_technology:games, #key_enabling_technology:communication_functions, #human_communication, #key_enabling_technology:mobile_devices | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Simon (83) is a member of a senior centre. Every second week he goes there and part of the program is to exercise. Previously they would sit on chairs and perform easy exercises to children's songs. Lately they have started something entirely new that many of the seniors find very fun: they play exergames using the GameUp system. They have a big TV screen on one of the walls and a Kinect motion sensor. In addition they have a set of step counters, and the steps of each user are registered when they meet.</p> <p>The GameUp Kinect exergames are tailored for the seniors. They normally warm up by going through some of the small exercise exergames, and then afterwards they play an apple picking game. While others are playing, the seniors can one by one view the results of the last two weeks' walking exergame with the step. After the Kinect play they all gather to view the results of their common walking and climbing goals – and compare with other senior centres.</p> <p>They have now started two social goals: To collaboratively walk from Copenhagen to Paris and to climb the French mountain "La Tournette". All members wear a Fitbit activity tracker daily to collect data of steps walking and stairs climbed, which is collected every time they meet in the senior centre. Only the users themselves know the individual count, but all know that they contribute to the common goal. When they have reached the goal, they have planned to eat a French meal together at one of the restaurants in town, and the senior centre will provide transport. Another group is also walking from Paris to Copenhagen, and when they meet they will send each other messages maybe including photos. They are competing about which group will first reach their goal.</p> <p>Many of the seniors find that exercising only every second week is not sufficient, even though many of them walk more than they used to, thanks to the common goals in the walking game. They have therefore been offered to get the GameUp Kinect exergames installed at home. This requires that they have a suitable TV screen and enough room in front of it to play. They will also have to get a PC and a Kinect motion sensor to attach to the TV, but the GameUp program is easy both to start and to use, and they often start it themselves at the senior centre. They also need an internet connection to be connected to the portal.</p> <p>Simon is one of the seniors who has GameUp installed at home, and the activator at the senior centre helped to register him via the professional portal and to install the system. While registering they agreed on</p> |

the personal goals of Simon. He is exercising twice a week, both times for half an hour or until he has reached a certain number of scores. He agreed to exercise “together” with two of his friends from the centre, John and Rita. They send each other small “tokens” like smileys, stars or medals. The activator will, via the professional portal, regularly look at their achievements while they look at the walking exergame results, and Simon was very pleased when the activator proposed to level him up since he is performing so well.

UC 327-01: ASSAM - Intelligent Walker 1

General

| Name of Use Case | | | | |
|--|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 327 | - | - | ASSAM - Intelligent Walker 1 | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2014-06-17 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ASSAM: Del. 4.2: Personas, Scenarios, and User Requirements (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #vital:respiratory; #general_tasks:daily_routine; #mobility:body_position_and_carrying; #mobility:walking; #domestic_life:shopping; #domestic_life:household_tasks; #purpose:safety:fall_prevention; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|-----------------------|
| |

| Complete Description |
|---|
| <p>Martha worked her entire life until retirement. With her four sons and grandchildren she always lived a busy family life. This, however, diminished significantly when she became a widow eight years ago. While her sons live only a few hundred meters away and visit whenever they can, Martha still needs more help getting things done. She doesn't dare to go outside much, as she is afraid of falling over, and not being able to get up again.</p> <p>Martha suffers from several age related pathologies; she doesn't move as swiftly as she used to due to arthritis, her balance is off and she tires very easily. Whenever Martha gets dressed or stands up, she needs a few moments to catch her breath. Caregivers from the local help center help her through her daily life; helping with the groceries, household tasks, as well as preparing meals. Although they have recommended a transition to a care home, Martha would rather stay home as long as possible.</p> <p>Martha would like nothing more than to stay at home as long possible. To accomplish this, she would need help in moving indoors, moving from room to room with ease. Furthermore she would really like to be able to get her own groceries and visit her sons with confidence; without the fear of falling over or something terrible happening.</p> <p>Martha didn't get out much. Although her sons live very close, she rarely visited them, and was dependent on caregivers and her family for her groceries. This changed when her caregivers recommend a new walker.</p> <p>With this walker Martha is able to get up in the morning and move around the house with ease. It easily fits through all the doors, and it provides enough support to hold her. Furthermore this new walker has room for her to sit down on and catch her breath when she needs to. Because of this, Martha feels comfortable walking around her house, not needing help when she forgets something in the other room.</p> <p>Martha's new walker also helps her stay in balance, and moves very securely in corners. Because of this, Martha now dares to go out and get her own groceries a couple of streets away. As she is now also able to visit her sons on her own, she has become much happier and self-confident.</p> <p>The biggest joy Martha gets from her new walker is that she is now able to stay at home for much longer; a transition to a care home now seems further away.</p> |

UC 328-01: ASSAM - Intelligent Tricycle 1

General

| Name of Use Case | | | | |
|-------------------------------|-------------|-----------------------------|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 328 | - | - | ASSAM - Intelligent Tricycle 1 | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2014-06-17 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / | Link | | Conditions (limitations) of Use | |

| | | |
|---|---|--|
| Literature | | |
| ASSAM: Del. 4.2: Personas, Scenarios, and User Requirements (AAL-JP Call 4) | - | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| Visionary | | |
| Generic, Regional or National Relation | | |
| - | | |
| Further Keywords for Classification | | |
| #mental; #neuromusculoskeletal:movement; #vital:respiratory; #community:recreation; #stakeholder:secondary:emergency_call_services; #purpose:safety:alert_communication; #purpose:safety:fall_prevention; #purpose:safety:orientation; #localization:outdoor; | | |
| Scope and Objectives of Use Case | | |
| - | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Abel was a successful entrepreneur his entire life. When he retired two years ago he decided that he did not need the big house he was still living in after his divorce anymore and moved to a smaller apartment in the city. Here Abel would have easier access to facilities such as the hospital when he would need it.</p> <p>Abel has two hobbies he enjoys very much: cycling and travelling. As Abel's balance deteriorated slightly the last few years, he has decided to buy a tricycle to overcome this problem. While he used to feel very safe cycling in his old neighbourhood, the big city has made this slightly less so. Abel has light problems with coordination, and he finds that the big junctions are sometimes confusing for him. He knows that, although tourists are usually helped very well, this might become a problem too when visiting other countries.</p> <p>Abel is very technology versed; he has spent his entire life dealing with electronic equipment, and as such knows that there is a solution for the problem he has been experiencing. He would like to be able to cycle as long as possible, as his doctors say it is very good for his asthma. However, it would be very helpful if he could use navigation equipment to help in confusing situations, when travelling abroad with his tricycle, and be able to guide him home quickly when he gets tired due to his asthma.</p> <p>Abel moved to the city not long ago. He used to cycle almost every day when he was a bit younger, and although his balance has deteriorated somewhat, Abel still enjoys cycling very much. To overcome his balance problems Abel decided to buy a tricycle; a sturdy way of cycling, without the fear of falling over. With this new tricycle Abel is able to be physically active for much longer, something his doctors have recommended for his asthma.</p> <p>Being somewhat overwhelmed by the more complex traffic situation when he moved to the city, Abel first</p> |

took his tricycle back to his old neighborhood. After getting to know the navigation help that his new tricycle offers, he decided the city shouldn't be too much of a problem. The navigation help easily guides Abel through the city, and the confidence Abel has in the technology has allowed him to be much more creative when cycling each day, taking new routes as he goes along.

A couple of weeks ago, Abel was suffering from a bad day for his asthma, and halfway through his route he got extremely tired. He simply pressed the 'home' button on his navigation help, and the tricycle guided him home by the fastest route. Also Abel knows that if his asthma is really bad, and he can't go any further, there is a button on his tricycle that allows him to call the help facilities; no more worrying about getting lost, losing balance or being too tired to get home for Abel.

UC 329-01: ASSAM - Intelligent Walker 2

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 329 | - | - | ASSAM - Intelligent Walker 2 | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2014-06-17 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ASSAM: Del. 4.2: Personas, Scenarios, and User Requirements (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #sensory:seeing; #sensory:hearing; #neuromusculoskeletal:movement; #general_tasks:handling_stress; #human_communication; #mobility:walking; #mobility:transportation; #community:recreation; #stakeholder:secondary:relatives; #purpose:safety:alert_communication; #purpose:safety:orientation; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case | | | | |
|---|--|--|--|--|
| | | | | |
| Complete Description | | | | |
| <p>A couple of years ago Jan began noticing that he is starting to forget simple things. While he tried to hide this from his wife, she knew from the beginning that something was wrong; Jan starts suffering from dementia. He and his wife have discussed it, and decided to try and stay together for as long as possible, helping Jan with remembering the vital things each day. Jan furthermore suffers from more general aging pathologies: his eyesight and hearing are getting worse, and his kinetic balance is starting to deteriorate.</p> <p>While Jan's wife is around for most of the time when he is at home, going outside poses a problem. Jan would like to be able to visit museums around town, something that he loves to do. However, small changes in the routes he used to know, and forgetting where he is going causes Jan to become very distressed. When this happens, it is vital that Jan is able to contact his wife, who is usually able to calm him down and help him get on his way again.</p> <p>While Jan is quite clever, he is afraid he won't be able to learn and remember how to use the devices designed to aid him. Furthermore, Jan and his wife think its best to rely on Jan's own memory for as long as possible, not relying on a system to take over completely.</p> <p>Jan began to forget things some time ago, and the routes he took that were once so easy began to fade from his memory. Jan and his wife had some long discussions, and after talking with their local caregivers they decided to buy a new walker for Jan. This walker had the capabilities to help Jan be autonomous for as long as possible. When the walker was delivered, Jan was given some help in getting to know the device, and within a few hours he understood how to use it.</p> <p>With his new walker, Jan easily goes out to visit museums, something that he really enjoys doing. While he was out the other day, Jan forgot where he was heading when he was on the subway. Luckily, his walker reminded him at which subway station to get off, and Jan was able to follow the instructions to be on his way again.</p> <p>When Jan left the subway there was a heavy road construction, and the road his walker told him to go was blocked. Jan doesn't handle changes very well, and became quite distressed. His wife had, however, reminded him to call her whenever he became distressed. Jan pushed the 'call home' button on his interface, and was connected with his wife. Jan is very happy the interface used both visual and audio to explain what Jan is doing or what he needs to do, as his eyesight and hearing are not what they were anymore. When his wife was on the phone, she told Jan how to walk around the road construction, and he was able to reach his destination (the local museum) in a safe manner.</p> | | | | |

UC 330-01: ASSAM - Intelligent Wheelchair

General

| Name of Use Case | | | | |
|--------------------|-------------|-------------------|--------------------------------|-------------------------------|
| ID | Domain Role | Function | Name of Use Case | |
| 330 | - | - | ASSAM - Intelligent Wheelchair | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or | | Approval Status draft, for |

| | | Committee | | comments, for voting, final |
|---|------------|--------------------|--|-----------------------------|
| 01 | 2014-06-17 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ASSAM: Del. 4.2: Personas, Scenarios, and User Requirements (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #sensory:seeing; #neuromusculoskeletal:movement; #sensory:hearing; #voice_and_speech; #stakeholder:secondary:professional_care; #purpose:safety:alert_communication; #purpose:safety:orientation; #localization:indoor; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| |
| Complete Description |
| <p>Julia recently retired and just a few months after was hit by a stroke. While she was able to recover, she is now severely paralyzed on her left side; she can't move her left leg or left arm at all. Next to this, her vision was damaged as well, resulting in a loss of visual field. Furthermore she suffers from severe trouble with speech and while she is able to understand the people around her again, this does take some time.</p> <p>The doctors say that complete rehabilitation is impossible, but that partial recovery of some functions such as speech and movement is quite possible. The doctors encourage Julia to move around as much as possible with the wheelchair she is now permanently sitting in. As much as Julia would want this, she is afraid of driving around when there is not a caregiver in the immediate vicinity. Julia fears she might bump into obstacles or drive off the road, as she cannot see perfectly anymore.</p> <p>If something would happen she would need to contact help immediately, although she doesn't know how she would have to explain where she is.</p> <p>Julia suffered a stroke a couple of months ago, and at first she was not able to move the entire left side of her body, and speech was very difficult. Julia had to adjust to a wheelchair from one day to the next. While at first Julia didn't dare to do anything without a caregiver around, this changed when her family bought her a new 'smart' wheelchair.</p> |

With this wheelchair, Julia is now able to drive around the rehabilitation facility, without a caregiver walking beside her. When driving around the facility the wheelchair steers her around objects laying on the floor, and brakes by itself when she oversees something and might collide.

Last week when Julia was on her way to the entrance of the facility to pick up her friend she got stuck between the doors. With the alarm button on her wheelchair she was able to establish a connection between her and the caregivers. Although her speech is still recovering, and she wasn't able to explain what happened, the caregivers found and helped her within two minutes; they were able to detect where she was in the building, and sent a caregiver to her immediately.

Because Julia is now more confident in moving around, she does so whenever she can. The doctors are very happy with this, as they say her rehabilitation is going much better thanks to the new wheelchair.

UC 331-01: ASSAM - Intelligent Tricycle 2

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 331 | - | - | ASSAM - Intelligent Tricycle 2 | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2014-06-17 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ASSAM: Del. 4.2: Personas, Scenarios, and User Requirements (AAL-JP Call 4) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #mental; #sensory:seeing; #purpose:safety:orientation; #localization:indoor; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Fred is lightly cognitively impaired, and severely visually impaired. He only sees about 12%. He is, however, still able to bring the mail around, with specially developed tools, in the closed environment that he lives in. Fred is very proud of this job.</p> <p>A few years ago, when Fred's eyesight was still a bit better, he used to cycle around the environment whenever he could; using his eyesight and echolocation to find his way. Once he got stuck on the side of the road, which caused him great distress. He wasn't able to get out on his own, and had to call for help. Now, with his worsening eyesight he does not dare to use his bike anymore, afraid that he might get stuck again.</p> <p>Fred would really like to be able to ride his tricycle again without bumping into others or driving off the road. He still hears very well, and would like to use this, combined with what remains of his eyesight to find his way.</p> <p>Fred used to ride his tricycle around the closed environment of his care center without any fear. One day, however, Fred got stuck beside the road, and he wasn't able to call for help or get his tricycle unstuck. This caused Fred great distress, and as his eyesight is now also worsening, he doesn't dare to go outside with his tricycle anymore.</p> <p>One of his caregivers told him there was a solution; there was a new tricycle on the market that could help Fred getting around again. Fred was thrilled with the thought so he decided he would like to purchase such a tricycle.</p> <p>Although Fred is cognitively impaired, getting used to the tricycle was a breeze. His caregiver spent some time explaining how to use the bike, and with some trial and error Fred learnt how to use it. His enthusiasm was tremendous.</p> <p>As the new tricycle explains everything by audio, Fred need not worry about what is going on; he knows exactly what is happening. He now drives his tricycle around the environment every day again, and never gets stuck. This is because the new tricycle helps him keep on track and avoid obstacles. It lets Fred now with a tone when he is nearing the edge of the road, and steers him away when Fred doesn't do so himself. Fred is very happy about the control he has over the tricycle, and that it lets him know when the tricycle is steering him in the right direction again.</p> |

UC 332-01: Care4Balance - Application-based interaction between caregivers and older adults

General

| Name of Use Case | | | |
|--------------------|-------------|----------|--|
| ID | Domain Role | Function | Name of Use Case |
| 332 | - | - | Care4Balance - Application-based interaction between caregivers and older adults |
| Version Management | | | |

| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
|--|------------|-----------------------------|--|---|
| 01 | 2013-06-20 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Care 4 Balance: D1.4 Intermediate description of reciprocal care process Appendix on persona descriptions and pilot scenario's AAL-JP Call 5) | - | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| Visionary | | | | |
| Generic, Regional or National Relation | | | | |
| - | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #human_communication; #relationships; #mobility:transportation; #self_care:eating; #domestic_life:household_tasks; #community:recreation; #stakeholder:secondary:relatives; #stakeholder:secondary:professional_care; #stakeholder:secondary:non_medical_services; #key_enabling_technology:ambient; #key_enabling_technology:communication_functions; #key_enabling_technology:home_automation; #key_enabling_technology:mobile_devices; #key_enabling_technology:questionnaires; | | | | |
| Scope and Objectives of Use Case | | | | |
| - | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| |
| Complete Description |
| <p>Contextualisation and instalment of the C4B system</p> <p>0. Since the death of his wife, Yousuf often feels lonely. He never learned to cook and has mobility problems since he never fully recovered a heavy fall with a hip fracture. He cannot get in and out of bed alone and sits in a wheelchair in the daytime. At the time of the hip fracture Yousuf didn't like being in the rehabilitation centre, and wanted to go home. On the advice of his daughter Fatima, Yousuf agreed with home care help and instalment of the C4B system offered as a service by the home care organisation, called Care@Home. As the C4B system supports to efficiently organize his care and also monitors daily life activities, Yousuf could go home earlier. Yousuf and Fatima chose, in consultation with the home care organisation, for the instalment of a sensor package, based on their needs, with some motion sensors, door sensors and</p> |

additional bed and refrigerator sensors. Yousuf also bought a tablet (in stead of the dashboard with RFID tags) because buying them both, he finds too expensive and he liked the other benefits of using a tablet, such as reading the newspaper, online banking and communicating with his grandchildren, brother and nephew.

1. The C4B app is installed on Yousufs' tablet and via this always-on interactive device he can indicate his care needs. Yousuf can also see the status of the carers in his network (available, only text messaging, not available). The system enables communication and coordination of care tasks. Information is collected through user-generated input and / or via contextual sensor data.

2. Before installation of the C4B system, Yousuf didn't take so often the initiative to make a call to Fatima, his brother or his nephew. He would rather not disturb others en thinks they will call him when they need him. But now, using the C4B app on his tablet, Yousuf can see if people are available to call or not, this could encourage him to make a call. On the other hand, the (in)formal carers in Yousufs' care network get information about amount of visits (sensor data are analysed and visualised on the devices of the care network). The C4B system will prevent/detect social isolation.

Monday 27th of January 2014

3. This morning, after daughter Fatima has helped Yousuf out of bed, she quickly takes a look in the fridge to make sure he has enough in stock. However, she foresees he only has enough for a few days. She tells Yousuf that she will go to the store in the evening. Via the app on her smartphone, Fatima indicates that she finalized her tasks. She can also use the tablet of Yousuf to indicate which tasks are done. Now she is rushed and leaves.

The refrigerator sensors, detect that the refrigerator has not been opened since Fatima left. Also the box with cookies and bread has not been touched. Because the system assumes Yousuf ate nothing this morning, he gets a message on his tablet when it is almost dinnertime. Around 13h Lydia, the home care aide comes to make his dinner for today and the day after.

4. Yousuf complains about missing his family and being bored. Lydia suggests to look via the C4B app for possible activities to do. Based on Yousufs' preferences and his mobility problems, some activities are suggested. One of the questions on the platform are to help with translating the monthly magazine of the nursing home in Turkish, read out stories for audio books for children, join playing at cards as the fourth person in some game or giving someone some private lessons on how to use a tablet.

Yousuf finds all activities somewhat interesting and chooses for now to join playing at cards. He registers and immediately asks for transport in his care network because he can see in his agenda that Fatima can't bring him. The organisation of the activity confirms the registration and the item is added to the agenda.

While looking at his agenda, Yousuf also has a look at the rest of his activities this week and he sees a reminder popping up: Fatima will not be able to visit Yousuf when the garbage needs to be put outside. Fatima has indicated this a few weeks ago but Yousuf still needs to find a replacement. Therefore, he sends a personal message to Charles, the neighbour to ask if he will be able to help him.

Yousuf starts reading his newspaper in a much happier mood.

5. That same evening Fatima wants to go to the store, but her son comes home with probably a broken wrist, after a fall in skateboarding. So she has to go to the doctor with her son. Therefore, she lets the C4B system know that there is an extra task to do and she also indicates that it is an urgent one. All the informal carers in Yousufs' care network receive a message on their mobile device, that there is a new task to do for Yousuf: help him in bed. The neighbour Annet accepts the task, and Fatima can see this while waiting in the

hospital. She is relieved now she does not have to go over when she finally arrives home later. Fatima also indicates on the system that there is another task to do: someone should go to the supermarket because she is not available. The task of the supermarket stays open, but it is not really urgent so nobody worries. The home care aide, who comes tomorrow, will see this.

6. When home, Fatima still remembers the question of Yousuf to get natural yoghurt for breakfast instead of fruit yoghurt. She adds this item to the default shopping list. Yousuf can also add items if he would want to.

Tuesday 28th of January 2014

7. The next day, Fatima helps Yousuf out of bed and joins him at the table to eat a sandwich. She reminds Yousuf that she will bring her children after school and leaves quickly to work.

8. A little later, Yousuf gets a call from the home care organization. Lydia is sick and can't come today but they can arrange a replacement. Yousuf also sees that Fatima needed help with the shopping, so he asks for extra on demand care help for doing those groceries. The home care organisation Care@Home adds via the C4B application an extra assistant to the care network of Yousuf to cope with that demand. Care@Home can also use the C4B agenda system to input tasks or make a dynamic upload/sync from their agenda.

9. Sofie, a home care aide, who has never been to Yousuf before, will come to Yousuf at 13h. Everyone in the network of Yousuf can see this change, which is visualised on their mobile devices and Yousuf also sees the change in his diary on tablet.

10. Before Sofie leaves her previous caretaker, she looks at the key points from Yousuf's file. She immediately sees the exceptional shopping task and gets an overview of all the sensor measurements in the house (Yousuf can also see this).

Due to the extra shopping, she may not have the time to iron. Sofie finds out through his file what Yousuf needs, including the yoghurt. Sofie already confirms that she will do this task and this allows Fatima to see that someone else will go to the store.

11. Out of the overview of the sensor measurements, Sofie concludes that Yousuf probably has skipped lunch (just like yesterday) and she speaks to him accordingly. She clearly shows Yousuf what she put in the fridge. However, Yousuf gets angry because Sofie has bought slightly sweetened yogurt. He gets verbally very aggressive and initially refuses Sofie to cook for him. Sofie can calm him down and still manages to cook within the allotted time and does the dishes. After that, Sofie lets the C4B system know that she could not do the task ironing and lets Yousuf sign off. This information is automatically sent to the administration of Care@Home. On a monthly basis Yousuf has the opportunity to fill in a short feedback questionnaire about the provided care. This ensures that this incident is not pulled out of proportion.

12. When the home care aide Sofie is in the car later on, the incident is too much for her. She calls her colleague to talk about it. She doesn't add the aggressive incident to the file of Yousuf, because she doesn't want to rile him even more, but she still adds "wrong yoghurt" ☐ to his file.

In the afternoon, Fatima makes some time to consult the system on her smartphone. She sees the message from Sofie about the wrong yogurt and that the ironing still must be done.

13. After school, Fatima brings her children to Yousuf and leaves to have dinner with some friends. Yousuf is pleased with their visit and his grandchildren always listen with joy to all the stories he reads or tells them. Later on in the evening Fatima gets back to pick up her children and helps Yousuf in bed.

Wednesday 29th January 2014

14. The next morning, the neighbour Annet agreed a week ago, she would help Yousuf out of bed because Fatima knew in advance she was exceptionally not available. It could be seen in the agenda system the whole care network of Yousuf uses. The neighbour Annet did not check the system again, and remembered falsely that she has to help Yousuf in bed in the evening.

Thanks to pressure sensors in bed, the system knows that Yousuf is still lying in his bed when it is almost 11 o'clock. Also the care task "Help Yousuf out of bed on Wednesday 29th of January in the morning" ☐ confirmed yet by Annet. Based on this information and analysis of data in the back end, the C4B system sends a message towards Yousufs' care network to inform them that Yousuf is still be lying in his bed.

15. Yousuf knows, by looking at his agenda on his tablet that his neighbour Annet will come along. It seems to take a bit longer, but he is fine by that and quietly reads the newspaper on the tablet. He is not feeling hungry lately anyway. Meanwhile, he also looked at the overview of the sensor measurements in the house. He can see that he had sufficient hours of sleep even though he woke up a few times.

As nobody of the informal carers in the network of Yousuf is reacting on the notification that was sent to their devices, Eline is contacted. She is a nurse in the special team of the local nursing home, which works closely together with Care@Home, and can be contacted by the C4B system in case of more urgent needs and when there is no other help available.

16. Eline confirms that she will follow the case and help Yousuf out of bed as soon as she has the chance. She calls ahead to Yousuf to report this to him. To her surprise, she does not need to reassure him. Also the neighbour will be notified that Eline will help Yousuf out of bed so that she does not have to worry once she realizes that she has missed the task.

17. When Fatima calls Yousuf during her lunch break, to ask if he has already eaten, he tells her that he is still in bed. Because she does not quite understand him about who will be helping her dad out of bed, she looks quickly in the C4B system and sees that Eline has accepted to do this task a few moments ago. That reassures her. Fatima tells her father that she will call back later that day.

18. Moments later, Yousuf can see on his tablet that Eline is on her way. When she stands outside his door, Eline takes a look at Yousufs' file to get the most relevant information. She can only see practical information about how to get in, about the fact that he has bedsores and that he has trouble with authority. It is registered by the system when Eline enters the home. This is important for the administration, as well for Yousuf who gets a message on the smartphone/tablet in his bedroom. Therefore he does not get scared when Eline suddenly enters his room.

19. At 13 o'clock Lydia enters the home of Yousuf and cooks dinner for the next two days. She does as much as possible of the ironing and they talk about the events of this morning, and about the accident of his grandson.

Via the C4B app on the tablet, Yousuf gets a message from his neighbour Charles: "Hi, someone likes to eat some cake? We still have some pieces left after a party yesterday" ☐ asks Charles to come and visit him and bringing some cake. Charles confirms that it's fine. Around 15 o'clock, the neighbour Charles is there with cake. Yousuf indicates on the C4B system that he has a visitor. They have a pleasant afternoon outside in the garden, with coffee and cake. Around 17.30 Charles leaves. Yousuf eats the meal Lydia has cooked and the rest of the day proceeds as usually and ends at 10pm when Fatima helps Yousuf to bed.

UC 333-01: ActGo-Gate

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| UC 333 | - | - | ActGo-Gate | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ActGo-Gate: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #human_communication; #life_areas:work; #work:type:part-time; #work:type:part-time:partial_retirement; #work:type:voluntary; #work:system_scope:barter_exchange; #work:system_scope:on-demand_employment; #work:key_enabling_technology:web_platform; #work:operator:service_provider; #key_enabling_technology:communication_functions | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| ActGo-Gate aims on retired or part-time retired workers who like to keep participating to the economic life, whether as voluntary or part-time workers. ActGo-Gate provides a web-platform for barter exchange of work force, on-demand employment services (for small commissional work) and a communication module, for accepting contracts, handling payments etc. |
| Complete Description |
| Mr and Mrs Schmidt are 64 and 59 years old. Mr. Schmidt will retire next year. She, in contrast, has the option for partial retirement with 60, which she will probably do as she is already the oldest person in her company and not feeling that comfortable any more. The kids are gone, but Mr Schmidt's mother has been living with them for a couple of years now. Her need for care is increasing, yet still doable. Both are tired of working at their current position, yet they still feel to young to sit at home with their mother, i.e. they don't want to get old like she was. Both are looking for meaningful activities, yet they also want time for travelling |

and leisure. It needs to be flexible, provide fun, in the best case add some earnings to their pensions, which they already are afraid that will be not enough. They hear of the ActGo-Gate, which perfectly addresses the situation they are in.

ActGo-Gate offers three different kinds of modules. Mrs Schmidt always has been fascinated in helping out others or doing volunteer work. For her, the serve the community module seems very attractive. As she always has been fond of fashion and shopping, she now offers personal style and shopping assistance for fashion. She is quite impressed, as she can then enjoy and live out her hobby, by not spending too much money on own clothes. On the other hand, she earns time credits in the module that she can trade in for care services by other active retirees and golden workers to get support for caring Mr Schmidt's mother.

Mr Schmidt prefers to use the flexible occupation module, as he is more attracted by earning real money. As he is working as an electrician at a large car manufacturer, there are plenty of opportunities for him to work for the home care service provider being present at the platform. Some time ago, when he meet other people and stroke up in a conversation, realizing that they were exactly looking for an electrician, he would think about helping and eventually did it. But it did not occur very often and he always was a bit intimidated of actually charging for it. With ActGo, he now has signed a contract with a home care provider that offers him little jobs in the area. He can opt for them, but it's on him to decide whether he wants to do them or not. As he already has some physical limitations (back problems), Mr Schmidt prefers to do only jobs that don't stress his back too much. What he likes best, that he can manage and decide on the jobs and is not dependent on his employer.

Moreover, Mr Schmidt is totally stunned by the intuitive responsive interaction design that ActGo just introduced. In the beginning, all the documentation around the little jobs was just too complicated. He had to browse for tasks on the platform, wait for the other person to accept it and went there. Then he went back home, had to log in again, doing the documentation and "paperwork" in order to get his money. Therefore, although some job opportunities happened spontaneously and naturally in his real life, he had to incur some costs (time and search-related costs) in replicating a naturally occurring social interaction on the platform. Now, the web-based platform detects where he is, and offers jobs in the near area. When at the customer, the corresponding data and job details are loaded to his smartphone, and he easily process the job confirmation and billing on the go. As both he and the customer use different devices, the affirmation of the job can easily be done in the responsive web interface as both surfaces provide an easy confirmation possibility. Through all this time saved by he client, he now feels more flexible on the one hand, but also gets more money out of the jobs done.

All in all, Mr and Mrs Schmidt enjoy the possibilities ActGo-Gate offers to them. They are looking forward to try out even more activities and functionalities of the platform. For next month, they signed up on a social project happening in their neighbourhood. There will be a street festival that has completely been organized via the third module of Act-Go, Get engaged in projects and organizations. They are looking forward to it, as ActGo-Gate has been a convincing experience for them so far.

UC 334-02: Active @ Work Scenario 1

General

| Name of Use Case | | | | |
|--------------------|-------------|-------------------|--------------------------|-----------------|
| ID | Domain Role | Function | Name of Use Case | |
| UC 334 | - | - | Active @ Work Scenario 1 | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or | | Approval Status |

| | | | | |
|--|------------|--------------------|---|--|
| | | Committee | | draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| 02 | 2016-10-05 | Lars Rölker-Denker | | Updated use case |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Active @ Work: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #human_communication; #life_areas:education; #life_areas:work; #work:type:full-time; #work:sector:service_industry:consultancy; #work:key_enabling_technology:web_platform:collaboration_platform; #work:system_scope:employees_health; #work:system_scope:fatigue; #work:sector:service_industry:general_office_work; #work:system_scope:stress_handling; #work:operator:employer; #key_enabling_technology:body_area; #key_enabling_technology:mobile_devices; | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Active @ Work Scenario 1 consists of three components: a collaboration platform, a learning platform and a cognitive module. The collaboration platform connects colleagues and enables them to share knowledge, the learning platform provides trainings (also for the new technologies provided) and the cognitive module monitors the current health state and gives health- and fatigue-related alerts. If necessary the work load is adjusted, e.g. from the learning platform. Mobile devices, ambient sensors and wearables are used. |
| Complete Description |
| Adolfo got his degree in one of the most prestigious business schools in Spain long time ago. He is a great thinker with a passion for ideas. He enjoys every step of his job: problem-diagnosis, problem-framing and problem-solving processes. He also deals with the human face of the consultancy work. Along his whole working life, he has built lasting partnerships with a number of clients through repeated contact and for that reason he is very appreciated by his colleagues. Young colleagues usually ask for his advice and experience through the Collaborative Platform.. Adolfo likes to make use of the Skill development platform to be aware of soft and hard skills he should acquire to improve his expertise and social status at the company (e.g. to be recognized as expert of a particular topic, which makes him a valued team member and increases his self-esteem). |
| On the other hand, his long hours at work, stressful occasional travels and even bureaucratic frustrations |

are affecting him. He used to play tennis and golf with friends but due to his complicated agenda he had to abandon his physical activity. He has obesity and high pressure blood. He feels quite stressed sometimes because of deadlines. He frequently forgets to take a break for a little rest. His sight is being affected by the long hours of work with PC screens. But the Cognitive module is monitoring him through non-intrusive sensors and sends him alerts with preventive well-being recommendations through his mobile phone. The alerts are very discreet and sensors are rather small (and wearable) so he is never forced to give any embarrassing explanations during his daily job about what he is “wearing”. The Cognitive module gives recommendations based on his profile and can also detect if the workplace environment is not comfortable for him and send these data to the Active@work platform which offers a set of recommendations to make his working day and life much comfortable.

UC 335-02: Active @ Work Scenario 2

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| UC 335 | - | - | Active @ Work Scenario 2 | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| 02 | 2016-10-08 | Lars Rölker-Denker | | Revised use case |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Active @ Work: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental; #general_tasks:handling_stress; #life_areas:work; #work:type:full-time; #work:location:workplace; #work:sector:handicraft; #work:sector:handicraft:maintenance; #work:sector:handicraft:facility_management; #work:system_scope:employees_health#work:system_scope:workplace_health_management; #work:system_scope:activity_recommendations; #work:system_scope:stress_handling; #key_enabling_technology:body_area; #key_enabling_technology:vital_parameters; #key_enabling_technology:mobile_devices; #localization:outdoor; #work:operator:employer; | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case | |
|--|--|
| <p>The Active @ Work Scenario 2 consists of two major components: workplace improvement regarding mental and physical workload, and a feedback component on well-being. The workplace improvement provides time keeping on tasks and health information by body parameters for work distributors in order to organize work in the most effective and simultaneously most health-promoting way for workers. The feedback component provides recommendations for employees regarding their well-being at work and recommendations work planners on employees well-being.</p> | |
| Complete Description | |
| <p>People visit a leisure park to have a good time and relax with their friends and family. However, behind the scenes the administrative, cleaning, technical or other staff of the park works in shifts so visitors can enjoy an uninterrupted and relaxing stay at the park. They are the workforce that keep the park's infrastructure clean, safe and operational. The following examples illustrate how Active@work solution will support the park staff and in particular the older members of the team.</p> <p><i>1. Improve workplace well-being by reducing the mental and physical workload:</i> The technical cleaning park staff needs to service the complete park in a very short period. Due to the size of the park, they have to walk or bike quite some distances to get around and not disturb the visitors. Ideally all maintenance (e.g. cleaning cottages and swimming pools, gardening replacing inventory, etc.) takes place during a very short time slots. During this period cleaning staff reports defects that the technical staff needs to address before the next visitor arrives in the cottage. These are the busiest and most stressful times every week when visitors are leaving their cottage and before new families arrive.</p> <p>The Active@work solution will measure the time spent on tasks by employees and provide feedback to the planners to distribute work evenly as not to overload employees. Workload will be measured based on distance travelled, body parameters and time spent in specific locations . As a result the cleaning staff will lose less time between jobs, focus on the task at hand and have a realistic planning of their shift. This will effectively reduce the mental and physical impact of their job.</p> <p><i>2. Provide well-being feedback to management, planners and personnel</i> based on the feedback from the employees the Active at work application will provide advice to the employees about what options are available to improve their well-being. The management and planners will receive overall well-being scores based on the feedback from the employees. These scores and advice will help the organization to improve the well-being of the work environment.</p> | |

UC 336-01: AXO Suit

General

| Name of Use Case | | | | |
|--------------------|-------------|-----------------------------|------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| UC 336 | - | - | AXO Suit | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |

| Basic Information to Use Case | | |
|---|------|--|
| Source(s) / Literature | Link | Conditions (limitations) of Use |
| AXO Suit: Proposal | n/a | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #neuromusculoskeletal:muscle; #neuromusculoskeletal:movement; #mobility:body_position_and_carrying; #work:type:retired; #work:type:voluntary; #work:sector:service_industry:gardening; #work:sector:service_industry:assisting; #work:key_enabling_technology:exoskeleton; #key_enabling_technology:body_area | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| AXO Suit provides three versions of exoskeleton: one version for the upper body part, one version for the lower body part and full-body exoskeleton. AXO Suit assists in daily life and provides assistance in lifting, walking, handling and other daily life tasks. |
| Complete Description |
| <p>Mads and Maria Søndergård are a retired couple aged 73 and 71 respectively, who live in a town house in Aalborg, Denmark where they have many friends with whom they have enjoyed numerous good times. In particular, they love the outdoors especially in the summer. Throughout their married lives, they have been active and had good social interaction within their neighbourhood. Mads loves gardening and Maria loves cooking and they both enjoy being connected to their neighbourhood friends (most of whom are also getting old). In Summer, Mads would do some work such as watering flowers, mowing grass, and other outdoor chores for some of his more elderly neighbours and Maria would do some cooking and general cleaning tasks as well as have a good natter. They also go regularly to the city's Senior Centre, where they work as volunteers to help other elderly friends. Their tasks include: helping preparation of food, carrying groceries, housekeeping and cleaning, working in the garden and helping on nature walks. The work requires general mobility, reaching for objects and ability to lift and hold things firmly and securely to do a variety of everyday tasks.</p> <p>Both Mads and Maria like their volunteer jobs as they feel wanted and connected to their community and that they are playing a valuable role to help their friends maintain a good quality of life through their modest efforts. The jobs also give them incentives to stay active as they have always been but at the level they can decide is best for them over different parts of the year.</p> <p>Recently, both have started to have some physical issues that are causing them concern. Mads has been feeling more tired and from time to time, has stated to have difficulty in holding and manipulating gardening tools. Maria has started to have mobility problems and is getting scared of falling, and she also gets back pain after doing cleaning work.</p> |

Although they both know this is normal ageing, they are reluctant to stop their volunteer work as they feel this will stop them being active and cause them to both deteriorate much faster if they stayed stuck in their home all the time. The situation is making them concerned and sometimes even sad as their sense of being useful is also diminishing. They are desperately in need of a solution that can assist them to move around, reach and handle objects holding them firmly to perform the various tasks they love to do.

With the upper-body AXO-SUIT (UB-AXO), Mads can once again manage to work easily and comfortably in the garden. Marie mainly uses the lower-body AXO-SUIT (LB-AXO) to move around safely and securely but sometimes uses the full-body suit (FB-AXO) to help reach for high-up things and manipulate the heavier cooking pots more firmly with the firmer gripping glove. They only use the assistive exoskeletons when needed and this is taking the pressure off them to continue in their active roles. When they put on their AXO-SUITs they feel comfortable and relaxed. The suits are lightweight and easy to use, they feel that they are re-energized and feel almost young as before. They are happier, content and confident again and active in their daily lives.

UC 337-01: EldersUp

General

| Name of Use Case | | | | |
|--|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| UC 337 | - | - | EldersUp | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| EldersUp: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #human_communication; #life_areas:work; #work:type:retired; #work:sector:service_industry:consultancy; #work:system_scope:communication; #work:location:home_office; #work:system_scope:profile_matching; #work:key_enabling_technology:web_platform; #work:key_enabling_technology:web_platform:collaboration_platform; #work:system_scope:stress_handling; #work:key_enabling_technology:voice_recognition; #work:key_enabling_technology:eye_tracking; #work:operator:service_provider; | | | | |

| |
|--|
| #key_enabling_technology:mobile_devices; #key_enabling_technology:questionnaires |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|--|
| Elders-Up! offers a web platform where interested people can edit their profiles and companies offer job opportunities, the web platform matches profiles and offers and finally recommends job offers to the interested persons. Elders-Up! then provides a collaboration platform for virtual teams and is extended by voice recognition and eye-tracking to detect stress and provide guidance through the system. |
| Complete Description |
| <p>Marta is a recently French retired woman. She worked for years in the legal department of a company. Marta is feeling bored and nothing interesting to do despite she has plenty of time; she is falling into apathy and frailty after retirement and nothing is motivating her as in the days she was working.</p> <p>Marta was a hard worker and liked her work very much but unfortunately her company have already found a younger employee to take over her duties. Lately, Marta was suffering from some stress when dealing with technology and computers at work. That affected her productivity and, however she wanted to keep working at the company, she cannot compete with the efficiency of the younger when managing ICT tools, and she sadly accepted its retirement. Marta knows that to have an active life after 55 years old will improve their cognitive status.</p> <p>Marta, after weeks looking for activities to enrol for occupying her time discovered an application that can be run on her tablet, on her laptop and even on her smartTV, the name of the application was Elders-Up!. She started using this application by filling an easy form about her: age, work experience, years of experience, other abilities, hobbies. After that, the Elder-Up! skills matching service provided her with a list of small companies and start-ups that were looking for someone with her experience. Each entry of the list showed a compatibility percentage between Marta knowledge and the needs of the company. She selected one of the options of the list which was from a technological small company of Spain which aimed at commercialising its product by selling it to different European countries. The company didn't have enough knowledge on U.K. regulations to commercialise products so they were asking for legal support on this. By selecting this option, Marta was invited to participate in a work team of three more people, a senior lawyer experienced in legal regulations in U.K., a women expert in business models and market analysis and a man who worked for years in e-commerce. Marta accepts to join the group (she can manage the number of work teams and small companies she would like to provide counselling) and is prompted to the Elders-Up! workspace where she can communicate with the other members of the group, by chatting, videoconferencing or simply talking. The Elders-Up! workspace is hard to manage at first for her and she spend much time in finding the information the others members of the work team has already prepared and she has difficulties in writing to the other members of the team. The tablet sensors she is using are connected to Elders-Up! system detects that Marta is looking from one part to another of the screen (the webcam is tracking her eyes) and is doubting about starting a group conversation on the chat (e.g. she is opening and closing many times a conversation window with one member of the group but does not know how to include new members) and she is getting frustrated and repeating many times "how can I do that?" at loud (the voice recognition module detects it). The adaptation decision-maker analyses the sensors data and self-reporting feedback mechanisms and processes them in order to detect the difficulties that Marta might have and also her level of engagement and motivation. Thus the decision-maker makes a decision about how reconfigure the interface and functionalities of the Elders-Up! system in order to:</p> <ul style="list-style-type: none"> • Ease the way of creating a conversation group and provide her the desired visual changes in the interface |

- Reward Marta for her contributions to the system in order to keep her motivated and actively involved in collaborating with others.

These changes recommended by the decision-maker are implemented in which are implemented thanks to the flexibility and functionality of the collaborative & adaptive workspace and Marta continues collaborating with her team mates easily.

Marta is happy to have found this innovative application and the easiness of the Elders-Up! collaborative & adaptive platform keeps her motivated in using the system. She is also feeling herself very useful for the small company to which she is providing support together with other three people, is like having a work again with team mates and avoiding the stress of managing non adaptive ICT tools!

UC 338-01: ExpAct

General

| Name of Use Case | | | | |
|--|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 338 | - | - | ExpAct | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ExpAct: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:type:full-time; #work:key_enabling_technology:web_platform; #work:key_enabling_technology:web_platform:collaboration_platform; #work:system_scope:profile_matching; #work:key_enabling_technology:classification_of_capabilities; #work:system_scope:expert_endorsements; #work:key_enabling_technology:web_platform:social_network; #work:system_scope:payment_support; #work:operator:service_provider | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case | |
|---|--|
| ExpAct offers a web platform where principals and agents (experts) and can conclude contracts. The systems provides expert profiles with skills and expert endorsements, project history etc. It also provides paying functions and contract assisting. | |
| Complete Description | |
| <p>The network operator has to supply their ExpAct instance with enough experience demand in order to absorb as much willingly supplied experience as possible – the more primary end-users are given the opportunity to participate, the higher the success for this ExpAct use case.</p> <p>The supply users, the experience experts are free to join and leave the AUB-KMU ExpAct system as they see fit. Their supply is met by organisations in general which are in need of expertise and know-how which is not or demand users, the experience seekers. Thus, AUB-KMU has customized their process repository to focus on functionalities similar to out-tasking in order to attract more secondary end-users which can utilize the vast amounts of experience supply. First, the experience experts add their experience to their profile using the taxonomy developed in WP2 (see section 2). The goal is to make this process as easy, understandable and comprehensible as possible. AUB-KMU has decided to offer offline guidance on-demand so that primary end-users who want help in this process can apply for it. Using the same taxonomy to classify their requests for experience, the experience seekers can now enter tasks, which need the expertise and experience of our primary end-users, into the ExpAct system. If an experience expert matches a newly comprised request, they will be notified and can now have a look at see further information, for example during what time period the seeker needs attendance or how much the payment will be. The price for a task will be defined beforehand. In other use cases it will be possible to have other payment models or unpaid incentives only. If the supply user is willing to assume the advertised task and its payment, he can apply as executive experience expert. After an initial deadline for applications, the experience seeker can now have a look at the experience experts suitable for his request. One or more of them can be chosen to fulfill the request. After the request has been fulfilled and their engagement has come to a preliminary end, the experience expert will receive his payment as well as the nonmonetary benefits such as a recommendation from the seeker. Further, his skill level for the applied experience (which can be derived from the request's experience requirements) will rise in his global profile, which can thus be seen by everyone. The goal is that the organization has received excellent aid by experience experts who could put their lifelong honed experience to use and apply them in a real-world challenge. Besides the obvious monetary compensation for their time and efforts, the expert received nonmonetary incentives on top. Aiding in real-world challenges and scenarios will offer the primary end-users opportunities to be involved in a professional environment again and experience social inclusion and acknowledgement.</p> | |

UC 339-01: Give & Take

General

| Name of Use Case | | | | |
|--------------------|-------------|-----------------------------|------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 339 | - | - | Give & Take | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |

| | | | | |
|---|------------|--------------------|--|---------|
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Give & Take: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:work; #work:type:retired; #work:type:voluntary; #work:type:voluntary:neighbourly_help; #work:system_scope:on-demand_employment; #work:key_enabling_technology:web_platform; #work:key_enabling_technology:web_platform:social_network; #work:system_scope:barter_exchange; #key_enabling_technology:mobile_devices; #work:operator:municipality | | | | |
| Scope and Objectives of Use Case | | | | |
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Narrative of Use Case

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| Narrative of Use Case |
| Give&Take is a municipality hosted system and provides a web-platform for barter exchange of work force, on-demand employment services (for small commission work) and a communication module, for accepting contracts, handling payments etc. |
| Complete Description |
| <p>Beth is 73 and lives in a local community called Æblehaven in the Frederiksberg area. She used to be a conservator at an art museum. Her husband passed away three years ago, while they were still planning to enjoy life with travelling, local theatre, and looking after their tiny garden and five grandchildren. Paul, 69 years old, lives in the same apartment complex. He was divorced 15 years ago, and never remarried. Life changed drastically, when he retired four years ago after 40 years as a schoolteacher. Paul has an urban garden plot not far away where he spends time in his carpenter workshop. Since the divorce, his garden has grown a little wild. Anne, a retired expert in permaculture, recently moved in next to Beth. They all subscribe to the Give&Take neighbourhood portal, which was established two years ago. For Beth the Give&Take portal has been a way to feel needed again after she became a widow. She has created an experience profile with her interests and experience, and it is life affirming to be able to share skills and experience with people who need her. She has listed cooking, simple garden work, embroidery, and painting restoration in her profile. Paul has also become a member after Beth encouraged him to join. He has listed driving, shopping, carpenter work, handyman-work in general. Beth is re-decorating her hall and has been to IKEA to buy a new lamp to mount on the wall. She grabs her new tablet computer and taps on the Give&Take icon. She notices that she has plenty of credit on her sharing balance - after looking after children in the neighbourhood several times - and puts up a task request on the Give&Take portal about mounting her lamp. She remembers to click the 'bring own tools' box, and hope that somebody replies soon. After two hours she hears an alert from her phone indicating a response. She finds the tiny phone display difficult to work with, so she only uses the Give&Take mobile app when she is not at home. Instead, she turns on her tablet computer. Paul has put in a reply and suggested three alternative timeslots for performing the task.</p> |

She picks the first one, tomorrow at 11am. The next day Paul arrives, and the drilling and mounting done in less than an hour. Beth is very happy with the look of the new lamp. While Paul is cleaning up and collecting his tools, Beth suggests that he stays for an open sandwich with her homemade marinated herring while they negotiate which level the drilling task accounts for in the system. They agree that drilling is a small service, based on the examples that Paul look up via his Give&Take app on the phone. Paul is happy now: Beth's homemade herring is one of his favorites, and now he has enough credit have some help for his overgrown garden plot. He remembers that Anne is offering a course on urban gardening through the Give&Take portal. Previously he had exchanged services with a young family to help with the plot but he decides that it is probably even better to learn himself how to handle the garden. And you always meet a lot of nice people at the Give&Take courses.

At the public care office, Elisabeth notices that the care unit responsible for Æblehaven have been requested 21% less for home care service, since the introduction of the Give&Take system. She enters the system to see how many Give&Take users Æblehaven currently have. She notes that almost half of the residents have signed up, and that it is a pity that the recently widowed Peter is among those that have not. She decides to offer him the free loan of a tablet computer and a personal introduction from one of their voluntary technology pioneers to see if he decides to join. Elisabeth's experience indicates that engagement in civil service through the Give&Take system keeps many seniors more mentally and physical fit, and thereby often happier.

UC 340-01: Healthy@Work

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 340 | - | - | Healty@Work | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Healty@Work: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #neuromusculoskeletal:movement; #life_areas:work; #work:type:full-time; #work:location:workplace; #work:system_scope:workplace_health_management; #work:key_enabling_technology:web_platform; | | | | |

| |
|---|
| #work:sector:service_industry:general_office_work; #work:system_scope:employees_health; #work:system_scope:instruction_checklists; #work:sector:service_industry:care; #work:system_scope:gamification; #work:system_scope:activity_recommendations; #work:operator:employer; #key_enabling_technology:mobile_devices; #key_enabling_technology:body_area |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

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| Narrative of Use Case |
| Healthy@Work is a workplace health management application offering activity reminders and health-related behaviour recommendations based on activity detection and profiling. It includes gamification elements like earning points, highscores and competitions. |
| Complete Description |
| <p>Linda, HR-Manager at a care-giving company providing care-giving services to patients at home with about 800 employees and 6000 clients, is noticing in her absentee statistics that the amount of sick days per employee is slowly increasing, especially among the older administrative workers. She also has several older care-giving employees per year that have to quit and retire or seek entirely new professions because of back problems like spinal disc herniation. She has secured an annual budget for occupational health promotion and used to spend it for traditional measures like free water dispensers, instruction talks about ergonomic lifting or increasing the ergonomics of the desk workplaces. While some of these offerings are well received by the employees others are not and Linda is not satisfied with the overall success and of these initiatives. She is looking for a more efficient way to invest into health promotion of her employees.</p> <p>Chris (62), accountant, is a long-term employee who has little reason in his job to move beyond his desk. He is slightly overweight and is not exactly a sports enthusiast. Lately he missed some workdays because of his back aching. He has heard many well intentioned hints how he could improve his health, but on a daily basis he does not really follow them. He feels awkward getting up during work for a few push-ups or feels like his employer would not agree if he went outside for his 10 minutes morning break. At lunch often he omits the healthy meal with a last minute choice when he sees the delicious French fries.</p> <p>Alice (56), home-care nurse, is having ever-growing problems with her lower back when lifting and handling patients at home, especially because often at the patient's homes the infrastructure like beds, doors, chairs and handle bars is far from ideal, much less than in a purpose-built and -fitted hospital or aged care home. She has heard many speeches about ergonomic handling and lifting, but in her daily work, she often forgets it or cannot apply the best practices in the specific situation.</p> <p>Linda decides to start a healthy@work-Programme and signs up on the healthy@work-Website. She invites all employees of her company to join the programme and announces motivating rewards for the organizational units and individuals with the most active participation – earning the most Health Points. Chris gets an invitation email on his smartphone, installs the corresponding healthy@work app and is automatically signed up for the healthy@work programme. After he has been working for more than an hour on his desk, he is very surprised, that his smartphone is noticing that he has not moved for such a long time and healthy@work offers him 5 Health Points if he now gets up and does a 2 minutes walk. When he has a meeting later on a different floor and is approaching the elevator, he is reminded to use stairs and is again rewarded when he does so.</p> <p>Alice also joins the programme. After the first day of work she is very surprised to get feedback on her smartphone about her healthy behaviour at work. She was not aware that while she is using the app, she</p> |

has room for improvement for healthy activities. She gets specific tips on how she can improve. After a few days Chris is using stairs as his normal behaviour and Alice is starting to improve her technique on transfers, so the healthy@work app magically stops to give hints and alerts. Only when after a few weeks Chris falls back into using elevators all the time the app is suddenly alerting him with a hint, that in the last few days he did not use any stairs anymore and motivates him to do it again. On the healthy@work App, Chris and Alice can compare their participation and score with the average participating employee, and also see how they improved over time.

When Linda meets Chris in the morning on the stairs up to his office, it seems to her that his mood is better than it used to be. He greets her friendly, looks fitter and seems to be less stressed. Alice's back problems are getting rarer. Linda's statistics seem to prove that not only for Chris and Alice, but also for others who have participated in the programme the number of sick days during the last calendar year have decreased by 10%.

UC 341-01: LetItFLOW

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 341 | - | - | LetItFLOW | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| LetItFLOW: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #sensory:seeing; #neuromusculoskeletal:movement; #learning; #life_areas:work; #work:type:full-time; #work:location:workplace; #work:sector:service_industry:care; #work:system_scope:instruction_checklists; #work:system_scope:automated_work_queues; #work:system_scope:knowledge_management; #work:system_scope:training; #work:key_enabling_technology:voice_recognition; #work:key_enabling_technology:augmented_reality; #work:operator:employer; #key_enabling_technology:mobile_devices; #localization:indoor | | | | |
| Scope and Objectives of Use Case | | | | |

Narrative of Use Case

| Narrative of Use Case |
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| <p>LetItFLOW offers instruction checklists, knowledge management and training tools, automated work queues with expert identification and instructor assistance. It also offers seeing impairment support by voice recognition and language support.</p> |
| Complete Description |
| <p>Let's imagine Elena, a 57 years old and over 35 years of experience in neurology department. She is very active and very experienced, but she is suffering of myopia forte. Due to this limitation, she prefer to hear the indications instead of reading. As a consequence she has to cut back on writing and reading duties and instructions. Additionally, she has had trouble with her back frequently in her long career as a nurse. As a consequence she has to cut back on physical work.</p> <p>Elena is now equipped with a mobile handphone with all the indications in memory of this device. The device has our task support application and Elena is performing her work correctly, called LetItFLOW. The system is should ensure the privacy of Elena, who is aware of the shared information, and can easily control it. She receives from the instructor the task planned for today, chronologically organized.</p> <p>In the indications, the first patient is Dan, and he needs an intramuscular injections. Elena needs to verify before the injection the blood pressure, ventricular rate and the body temperature. All of these, she can do in a properly manner due to the LetItFLOW, which tells her the next task. She can call for help if some of these parameters are not in normal range. Dan also needs wheel chairs, because it was prescribed by doctor yesterday. Wheelchairs are in the upper floor and are folded (hard work for Elena). As if by magic, her young colleague Arthur appears on the door with the wheelchair. LetItFLOW is aware of the problems Elena has with her back and lifting objects, warned the instructor when was creating the workflow. LetItFLOW sent this order to Arthur, who was not performing any urgent task in this moment.</p> <p>After this initial patient, the next one is Maria, a demented patient, who needs help for oral medication. Elena can give her the correct medication and in a correct dosage due to the hearing instructions. Maria seems quiet warm, and trigger an alarm that assign he another young assistant to bring a thermometer and read the temperature, because she cannot read the small numbers of the thermometer. Elena is sitting next to Maria all the time because she become agitated and nervous. It is not for the first time when the patients are confused and disoriented, and Elena knows that she has to stay near and not to leave them because they could hurt themselves. The new device helps her to seek help in a rapid way and she sends alarm to nurses to come and help her. Elena asks for help through LetItFLOW, and the platform assign two auxiliary attendants to help her with this task. LetItFLOW remember Elena to fill in the report to indicate that the task is completed, and she does so, using voice interfaces.</p> <p>Anne, another young nurse is having problems with one patient. She detects that a patient has a Post-Partum Hemorrhage. Anne is the first time that lives this situation and pushes the alarm button. The staff is warned. According to her position and expertise, Elena is warned to support Anne. Elena helps Anne in the first aids. After this episode, Elena feels happy because she saves a life, and teaches a colleague how to proceed is such critical situation.</p> <p>In the room of the second patient, new monitoring equipment has been installed. LetItFLOW ask to Elena to launch an application that will guide her in the understanding of such equipment. Augmented Reality based tutorial, provided by the manufacturer and plugged in the handheld by the instructor. This application helps Elena to consolidate the theoretic learning that she received when this equipment was installed. With this application, she feels more confident when handling the new equipment, and this practical learning improve</p> |

the learning curve. After one week with this assistive tool, Elena decided to use it without any help. Before LetItFLOW, Elena frequently needs in-situ assistance from other personnel when new equipment is installed.

For the next day, according to average parameters, such as time to attend a patient or needs of other colleague to complete the work, LetItFLOW recommends the instructor to remove the assignment of Maria as a patient of Elena. The instructor accepts the recommendation.

UC 342-01: ProMe

General

| Name of Use Case | | | | |
|--|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 342 | - | - | ProMe | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| ProMe: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #learning; #human_communication; #life_areas:work; #work:type:part-time; #work:type:part-time:partial_retirement; #work:type:voluntary; #work:location:home_office; #work:sector:service_industry:general_office_work; #work:sector:service_industry:consultancy; #work:system_scope:communication; #work:system_scope:training; #work:system_scope:knowledge_management; #work:system_scope:expert_endorsements; #work:system_scope:profile_matching; #work:system_scope:mentoring; #work:system_scope:webinars; #work:key_enabling_technology:web_platform; #work:key_enabling_technology:web_platform:collaboration_platform; #work:key_enabling_technology:web_platform:social_network; #work:operator:service_provider; | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| <p>ProMe is web platform aiming on experts being partial or completely retired but having the willingness to work on a voluntary or part-time basis as mentors for more unexpired workers. ProMe offers profiling, matching and communication functions to establish contacts between mentors and mentees. It also offers webinars for knowledge exchange between one mentor and multiple mentees as well as collaboration functions for bidirectional work between mentees and mentors.</p> |
| Complete Description |
| <p>Susan is 58 years old and in the transition to her retirement. She has more than thirty years of experience working in a marketing department of a large company and has gained a significant amount of knowledge and expertise throughout the years. Although Susan is looking forward to having more time to spend with her two grandchildren and to pursue her hobbies, she is also thinking about potential opportunities for future occupation to maintain purpose in her life. Susan does not see herself as being an “old person”, but as vital and active, and she wants to continue working to some extent, probably on a voluntary basis. Her greatest fear is to no longer be needed and that all the knowledge she gained throughout the years is lying fallow.</p> <p>Recently, Susan was invited by her company to give a presentation on marketing strategies based on her knowledge and experiences. She enjoyed being involved and would like to continue this kind of activity. At this event, Susan heard about the ProMe platform and its use in sharing professional knowledge with younger generations. She became curious and had a look at the platform. She did not initially want to take over the role of a mentor; she simply started answering questions in the Q&A area on the ProMe platform. Susan obtained positive feedback from a couple of young students, who valued her support and advice. Following this initial success, she decided to become active as a mentor after a few weeks.</p> <p>As Susan could easily access the platform with her LinkedIn-Account, she logged-in and explored the different opportunities and functionalities it provides. She set up her profile, indicating information about her professional knowledge and experience, her time availability, and the languages she speaks. The intelligent expert system (agent) provided suggestions for potential mentees, searching for expertise in the area of marketing. Susan began looking at the several interesting profiles, receiving a contact request from a young woman, Maria, who was seeking for advice in developing her own business concept. Susan accepted the request and they both had a conversation via videocommunication. Within that conversation, they looked up the Mutual Agreement Tool and started discussing their expectations. They found that some of the issues were not easy to define and decide to each take time to reflect upon some of the issues, agreeing on having another video conversation. This appointment was entered in the Calendar. Some days before their planned second video conversation, they were notified that the Mutual Agreement was not finalized yet and were invited to use the trigger questions to prepare for their meeting. Individually, they reflected on these questions and start filling in some of the answers they proposed (visible for the other partner) and, thus, prepared for that second video conversation. During their second meeting, they discussed each issue again (explain to each other what is meant by their unilateral information in the Mutual Agreement) and they agree on their mutual expectations.</p> <p>With the easy-to-use functionalities of the ProMe platform, Susan and Maria were working together towards the development of business concepts using the communication tools, such as Video-chat and Email, the platform provides. Additionally, the My Progress Tool allowed Maira to document most important achievements within the mentoring process, on which Susan could comment. Susan really enjoyed the collaboration and noticed that, in addition to sharing her thoughts and experiences, she was also learning new ideas from the young mentee (a two-way process).</p> <p>Susan wanted to find out more about how she could improve her skills as a mentor. Therefore, she explored the Tool Pool, providing a collection of material that helps her to develop her skills. She steadily improved in</p> |

asking good questions to encourage her mentee to work on the next steps. Susan has been working together with her mentee for several months and was perfectly supported by the functionalities provided on the ProMe platform according to the specific needs of this mentoring relationship. Also, after her mentee had successfully started her project, they stayed in contact via the platform for further support in everyday businesses.

UC 343-01: Revolution

General

| Name of Use Case | | | | |
|--|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 343 | - | - | Revolution | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| Revolution: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #life_areas:economic_life; #community; #domestic_life:shopping; #work:type:voluntary; #work:type:voluntary:neighbourly_help; #work:system_scope:automated_work_queues; #work:system_scope:gamification; #work:operator:service_provider; #key_enabling_technology:mobile_devices | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|--|
| Revolution is a neighbourhood communication platform based on voluntary help. Volunteers are informed if a person needs help in daily activities and volunteers are automatically informed if there are open requests (e.g. shopping requests). Requests can accepted or denied, a rating systems and scoring adds a competition function to the system. |
| Complete Description |

Karin (71), an enthusiastic “realtime volunteer”, goes almost daily to the nearby supermarket to buy the basic needs for her and her husband Kurt.

Also today, she puts on her shoes, takes her Smartphone and leaves the apartment. Knowing her daily habits, Karin’s Smartphone has already recognized that she probably goes shopping (behaviour prediction). Since Karin has activated her willingness to do shopping services for her neighbours, the system checks in the background whether a suitable request is open.

A SMS signals Karin, that Mrs. Müller in the next block has asked for 1 litre of fresh milk and some rolls. “Wow, that’s nice, I haven’t seen her for quite a long time”, Karin says to herself and presses the ‘OK’-button on her smartphone to confirm the order.

Entering the supermarket, Karin monitors her shopping list which was complemented with the need of Mrs. Müller. She quickly gets her items in the food corner and goes to the cashier. Shortly before checkout, Karin gets a SMS-Signal from her mobile phone. Mr. Fisher from the 7th floor has just entered his need for toilet paper. Karin laughs. Because there’s still enough room in her bag and today’s shopping is not very heavy, Karin accepts this shopping request as well. On the way back home she first goes up to Mr. Fisher to hand over the toilet paper. Then she visits Mrs. Müller. Here she stays down longer because the two women haven’t seen each other for quite a long time and there is a lot to tell. Furthermore, Mrs. Müller always appreciates such neighbourly help and evaluates Karin’s voluntary activities with top ratings. With every positive feedback, Karin receives ‘health points’ and she probably will rank again among the top ten in the local volunteer ranking.

UC 344-01: SOPHIA

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 344 | - | - | SOPHIA | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| SOPHIA: proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |

| |
|--|
| #human_communication; #life_areas:work; #work:type:retired; #work:sector:service_industry:medicine; #work:location:home_office; #work:system_scope:knowledge_management; #work:system_scope:expert_endorsements; #work:key_enabling_technology:web_platform:collaboration_platform; #work:operator:service_provider; |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| SOPHIA is collaboration platform for retired employers providing discussion forums where other persons can post their questions. The retired experts can answer the questions at own will and login whenever they like to. |
| Complete Description |
| <p>George is a 65 years old doctor whose days in the hospital have come to pass. On his retirement documents he reads in an entry with a checkbox if he wants to participate to SOPHIA. He had heard about SOPHIA, being a Greek word for wisdom, and he knew that it was an initiative that had to do with continuing to offer his services in a freer schedule; one of his colleagues even participated and had one or two good stories to say. After making sure that he could make back whenever he felt to, agreed to join. Days later, his phone rang and someone from SOPHIA asked if he had the time to arrange a meeting and see in what extend George could participate. The meeting took place, George and SOPHIA representative had a nice discussion over his place. George would be willing to give some speech if asked to, and maybe follow forum conversations concerning heart diseases, his specialty, where he could offer his opinion. After having a demonstration of how the platform works, it was very simple and friendly really, George found it interesting to log in and answer to a couple of questions every now and then.</p> <p>Nick is an employee in a pharmaceutical company who had some questions concerning some pains he had and if they could be connected with smoking. He had heard of SOPHIA and made an account to make a quick question where he knew that experts would give an answer. Neither did he trust random forums for a health matter nor did he have the time (and money) to visit a doctor for a seemingly trivial matter. He posted his query and, luckily, George replied that it was nothing to worry about. Nick then had some other questions answered as well, since the platform proposed him to take a look at other similar frequently asked questions. At some point, Nick heard that his boss wanted to organize a seminar on heart diseases in order to promote their products and thought that George from SOPHIA could make a speech on that seminar. So they came into contact, the price was agreed and the speech went smoothly. George was happy to feel “still in action” and Nick’s boss was thanking SOPHIA to have found him such an experienced doctor to make a speech and in a fair price.</p> |

UC 345-02: SpONSOR

General

| Name of Use Case | | | | |
|--------------------|-------------|-----------------------------|------------------|-------------------------------|
| ID | Domain Role | Function | Name of Use Case | |
| 345 | - | - | SpONSOR | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for |

| | | | | |
|---|------------|--------------------|--|-----------------------------|
| | | | | comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| 02 | 2016-09-02 | Eichelberg | | Fixed typos |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| SpONSOR: proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #learning; #human_communication; #life_areas:work; #work:type:retired; #work:type:voluntary; #work:system_scope:profile_matching; #work:system_scope:expert_endorsements; #work:system_scope:communication; #work:system_scope:training; #work:system_scope:mentoring; #work:system_scope:barter_exchange; #work:key_enabling_technology:web_platform; #work:operator:municipality; | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| Short Description |
| Complete Description |
| <p>SpONSOR will be able to function in diverse contexts and fulfill several kinds of support functions through its flexible integration into existing service offerings. For example regional (social) services can setup job searching tools optimised to take into account the experience and requirements of elder people while volunteer organisations will be able to find retired businessmen in coaching the younger generation. Both use cases rely heavily on profiling and matchmaking but differ in their context of use, approach and service orientation. This is also particularly true from the senior perspective. For example, seniors looking for leisure pastimes to share with others will of course articulate different preferences from those looking for voluntary work. As a result, matching job offers to elderly people requires not only competence based profiling but also consideration of time preferences and health aspects. Under the deficit model of age, these are often considered to be limitations. With SpONSOR, they will be recognised for what they actually are: the dynamic and changing preferences of individuals who are keen to manage their valuable time.</p> <p>Ernst interacts with the matchmaking service of a job agency specialised in career mobility. In updating his profile he adds his competences in teaching and his voluntary work experience (he's a good chef). As a result of his update he will not only get suggestions on matching job opportunities but gets also matches from nearby volunteer organisations and a job opportunity of the national elderly organisation. (provided that Ernst has given permission to use his profile to these types of organisations).</p> |

In this example Ernst has built up connections with Marianne for whom he cooks occasionally and a job offering from the national elderly organisation. Furthermore he was invited by a school to teach history for twelve hours a week.

Although the matchmaking between profiles, activities and requests is calculated on central level, the communication is embedded as part of the service provided by mediating organisations. The organisations themselves are enabled to upgrade their service level and design matchmaking functionalities that fit their organisations.

Marianne for whom Ernst cooks is a 80-year-old retiree. She was before a nurse and managed thanks to SpONSOR to find a second occupation while adapting her schedules when she felt like doing so. Afterwards, when she could not more drive, SpONSOR and its collaborative activity management service enabled her to maintain both her activities thanks to David who comes from a foreign country and is a driver. He got from SpONSOR practical advice and useful information about the regulations, policies and standards regarding post-retirement work in Marianne's country (he was actually retiree when he decided to move) and other constraints to satisfy in order to have a valid contract. Marianne needs help from Ernst the cooker, David the driver, but she also helps Sonia, a student in English literature thanks to SpONSOR intergenerational collaborative service. Marianne shares her house and her dinner with Sonia during the week, who in turn does her shopping and teaches her French, the language that Marianne always wanted to learn, but had no time for that before.

UC 346-01: StayActive Scenario A

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 346 | - | - | StayActive Scenario A | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| StayActive: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #vital:cardiovascular; #life_areas:work; #work:type:full-time; #work:location:workplace; | | | | |

| |
|--|
| #work:sector:service_industry:general_office_work; #work:system_scope:stress_handling; #work:system_scope:employees_health; #work:system_scope:gamification; #work:operator:employer; #key_enabling_technology:mobile_devices; #key_enabling_technology:body_area; #key_enabling_technology:vital_parameters; |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| |
|---|
| Narrative of Use Case |
| Short Description |
| Complete Description |
| In an office working environment an older adult is spending a lot of hours at a desk while wearing the “StayActive chest band” and has a mobile phone with the StayActive system installed. The mobile services and the chest band send health data to the mobile service and based on this data the service determines the user is under stress and notifies him about his condition. The message contains information suggesting that although his stress levels are at medium, continuous work under the current conditions can lead to various heart issues. The person sees the notification and accepts to see some recommended activities. The mobile service searches on the cloud personalization service for appropriate actions and determines that based on his medium stress health index the user likely needs to play serious games designed for this specific situation. This action is presented to the user via the mobile interface by showing a list of possible games for the medium stress index category. The service will continuously monitor his vital signs during his activities. Based on the gathered data the personalization service will adapt his next recommendations to fit the user profile. |

UC 347-01: StayActive Scenario B

General

| Name of Use Case | | | | |
|---|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 347 | - | - | StayActive Scenario B | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| StayActive: Proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |

| Generic, Regional or National Relation |
|--|
| Generic |
| Further Keywords for Classification |
| #vital:cardiovascular; #life_areas:work; #work:type:full-time; #work:location:workplace; #work:sector:handicraft:factory; #work:system_scope:stress_handling; #work:system_scope:employees_health; #work:key_enabling_technology:health-profiles; #work:operator:employer; #key_enabling_technology:mobile_devices; #key_enabling_technology:body_area; #key_enabling_technology:vital_parameters; |
| Scope and Objectives of Use Case |
| |

Narrative of Use Case

| Narrative of Use Case |
|---|
| Short Description |
| Complete Description |
| In a factory, an older worker is performing his day to day activities while using the StayActive system. The worker deactivates the common detection of stress levels because he is used to medium stress level while doing his activities. After a long hour shift the mobile service determines that based on the recorded vital signs, the user is at a high level of stress. The service alerts the user via sound/vibrations/on screen messages that he is at a stress level that can prevent him to engage in any work activity and he is at risk of collapsing if no action is taken. The worker ignores the first few alerts but then decides to see some recommended activities. Based on his health index and profile the personalization service recommends that the user should measure his blood pressure and input the values into the mobile service or should take at least a 15-20 minutes break before going back to work. The worker chooses to measure his blood pressure and inputs the values it into the mobile service. The mobile service analyzes all the data collected data and recommended the user to immediately take a break and if possible consult a medical person. While the user is taking a break the service continues the monitoring and is now seeing a decrease in stress levels. |

UC 348-01: wellbeing

General

| Name of Use Case | | | | |
|-------------------------------|-------------|-----------------------------|---------------------------------|---|
| ID | Domain Role | Function | Name of Use Case | |
| 348 | - | - | wellbeing | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-06 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |

| | | |
|--|-----|--|
| wellbeing: proposal | n/a | Public (permission to publish the use case received from the original authors) |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | |
| visionary | | |
| Generic, Regional or National Relation | | |
| Generic | | |
| Further Keywords for Classification | | |
| #life_areas:work; #work:type:full-time; #work:location:workplace; #work:sector:service_industry:finance; #work:system_scope:workplace_health_management; #work:system_scope:gamification; #work:system_scope:stress_handling; #work:system_scope:nutrition_recommendations; #work:system_scope:activity_recommendations; #work:key_enabling_technology:health-profiles; #work:operator:employer; | | |
| Scope and Objectives of Use Case | | |
| | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| Short Description |
| Complete Description |
| <p>Alejandro Fernandez (55) lives in Ugena, a small town about 40 minutes by car from Madrid. He works in a big bank in Madrid, Banco Santander, and commutes between Ugena and Madrid. He travels approximately 2 hours by train every day and uses this time to prepare presentations and costumer quotations. He really loves working with people and has been working at Santander for almost 23 years by now. Since he already works in the lower management, his weekly hours of work are 43 hours in average – not including the time for commuting. On the weekend, he occasionally goes cycling in the surrounding area of Ugena, but he spends most of his leisure time with his wife Ignacia and his 16-year-old son Felipe. On Sundays, they often visit his mother Inez (77) and enjoy her Paella for lunch.</p> <p>Unfortunately, Alejandro does not have time to do sports regularly or spend a lot of time together with his family due to his demanding job. Additionally, the possibilities for a quick lunch around Santander are very limited and thus he often eats pizza and other kinds of fast food. Since his job is very demanding and requires him to sit all day long, he often feels extremely tired and exhausted.</p> <p>Last month the management announced to establish a new system called “wellbeing” to enhance the wellbeing and quality of life of their employees. He was very interested in this system and started using it from the very beginning. The system allows him to communicate his actual health status and provides him exercises and tips to enhance his wellbeing. He started to play mini games against colleagues from other departments and already achieved to be the “healthiest employee of the month”. Nevertheless, wellbeing does not only motivate him to do physically exercises and remind him of sitting in a more healthy and comfortable position. It furthermore provides information and techniques to cope with stress and to reduce his personal stress level. About two weeks ago, he also started participating in the nutritional balance module. As a result, he not only learned why balanced nutrition is so important, but due to the tips provided by the system he also started to change his diet.</p> <p>After a few weeks of using the wellbeing system, he experienced that he has a much better work life balance, since now he works more effectively and he started to read books during his train rides.</p> |

Furthermore, all his occasionally appearing pains in the back were gone and he is not feeling that exhausted any more resulting in a much higher quality of life.

UC 349-01: PEARL

General

| Name of Use Case | | | | |
|--|-------------|-----------------------------|--|---|
| ID | Domain Role | Function | Name of Use Case | |
| 349 | - | - | PEARL | |
| Version Management | | | | |
| Changes / Version | Date | Name Author(s) or Committee | | Approval Status draft, for comments, for voting, final |
| 01 | 2016-06-27 | Lars Rölker-Denker | | Initial |
| Basic Information to Use Case | | | | |
| Source(s) / Literature | Link | | Conditions (limitations) of Use | |
| PEARL: proposal | n/a | | Public (permission to publish the use case received from the original authors) | |
| Maturity of Use Case (in business operation, realized in demonstration project, realised in R&D, in preparation, visionary ...) | | | | |
| visionary | | | | |
| Generic, Regional or National Relation | | | | |
| Generic | | | | |
| Further Keywords for Classification | | | | |
| #mental; #sensory; #learning; #life_areas:work; #work:type:full-time; #work:location:workplace; #work:sector:service_industry:general_office_work; #work:system_scope:ergonomics; #work:employees_health; #work:system_scope:instruction_checklists; #work:system_scope:webinars; #work:system_scope:stress_handling; #work:system_scope:lighting; #work:system_scope:activity_recommendations; #work:operator:employer; #work:key_enabling_technology:web_platform:collaboration_platform; #key_enabling_technology:ambient; #key_enabling_technology:games; #key_enabling_technology:mobile_devices; #key_enabling_technology:home_automation; #key_enabling_technology:vital_parameters | | | | |
| Scope and Objectives of Use Case | | | | |
| | | | | |

Narrative of Use Case

| Narrative of Use Case |
|---|
| Short Description |
| Complete Description |
| MotorDesign SA is a very successful SME company, which designs, develops and produces motor parts for |

major manufacturers all around Europe, notably manufacturers in the automotive and defense industries. One of the main competitive advantages of the company is its human capital and more specifically its experienced engineers who produce novel high-quality designs. Several of these engineers have been working for the company for more than 25 years, therefore being a main source of the above-mentioned competitive advantage. Three of the designers have reached the retirement age (i.e. 65 years old), while another five are aged over 55 will be shortly approaching this age. The potential retirement of these engineers is a significant issue for the company, given that the company cannot readily plan for their replacement without any essential impact in the company's production capability. Hence, MotorDesign SA is now developing a strategy for prolonging the working age of their employees, while also boosting the productivity of all older designers and engineers. At the same time, the company is also planning for their smooth replacement once their retirement is inevitable. As part of this strategy the company is willing investing in the development of an age-friendly workplace for elderly designers/engineers. As part of the planning of the investment, MotorDesign SA has come across the age-aware workplace solutions offered by PEARL SA. PEARL SA is specialized in the development, programming and deployment of ICT-based workspaces that address the needs of elderly workers. The PEARL SA workforce includes medical experts (i.e. geriatrists, gerontologists), usability experts, and ICT experts.

MotorDesign SA assigns to PEARL SA the task of completely redesigning and renovating two smart rooms of the company, including the task of equipping them with the proper ICT technologies. PEARL SA performs the design task on the basis of a holistic approach that takes into account the age profiles of the elderly engineers/designers, the nature of their occupation tasks, as well as the features of the ICT technologies that comprise its PEARL programmable platform/product. The latter product enables the programmability and configuration of several functionalities according to the requirements of MotorDesign and its employees. The result is an ergonomic and motivating working environment for MotorDesign, which includes the deployment of: (A) Surface computers, including surface tables and Tablet PCs enabling the elderly to interact with the PEARL platform, including the whole range of ICT tools of the platform. In addition to surface large screens are also used to enable users to view and interact with engineering designs. (B) Ambient environmental control functionalities including the configuration of the lighting and the provision of work-related information all over the space. (C) An RFID/NFC infrastructure enabling users to use their RFID card in order to personalize their working environment (e.g. conditions, desktop configurations), while also enabling them to conveniently access information (e.g. displays details of design projects, customer requirements, task scheduling information) by attaching their card in specific read-points in the workspace or even by using their mobile NFC-enabled phone. (D) Project and time management tools that organize and manage task structures and times associated with the design work, while also providing ambient context-aware reminders to workers about deadlines and task dependencies. These tools are configured according to the projects and tasks of the MotorDesign SA. (E) A set of tests for the cognitive, functional and affective assessment of the elderly, which are administered to the elderly in specified intervals. The elderly are prompted to undertake those tests, according to their age and cognitive status. (F) A learning platform facilitating the elderly to access and training materials, while also sharing materials and course with the younger engineers. All the above infrastructures and services are configured and controlled by the PEARL platform, in a way that information and functionality from one service is used to reinforce the others.

Following the deployment the older employees have all those services at their disposal. Manfred a 65-year old engineer is experiencing a decline in his vision, while he is also starting forgetting things. Before the deployment of the new workspace, he was thinking of retiring although he really loved his job. Now he is much more confident that he can continue to be productive in his design tasks, and he really feels comfortable in the new working environment. Thanks to surface computers, large screens and human-centered interfaces he perceives the new environment as ergonomic and elderly friendly. Furthermore, the ability to access his cognitive and functional status, while also strengthening his cognitive skills based on enjoyable gaming activities that are administered to him during or after working hours. The time and project management applications provide Manfred with appropriate (timely and non-intrusive notifications), which ensure that he does not lose control. In addition to Manfred, Maria a 58 year old experienced engineer is

also enthusiastic with the new development. Maria is recently experiencing some attention and orientation issues, and thinks that the new environment provides her with opportunities to strengthen these cognitive skills, but also to organize herself better during the occupation tasks. She is also delighted about the configuration of the working environment in terms of lighting and the provision of information points and memory aids.

Apart from Manfred and Maria, the management of MotorDesign is very excited, since it aspires to maintain its experienced designers and engineers, beyond their retirement age. Furthermore, the company has observed that the combination of the above functionalities has increased the overall productivity of elderly workers. Also, it perceives that the interactions between elderly workers and their younger counterparts have improved, as part of intergenerational knowledge transfer processes and related seminars. Note the older workers interact with younger ones electronically (e.g. based on a learning platform), but also face-to-face in shared spaces.

MotorDesign shares its positive experience within its local chamber/association of SME companies. Other companies (notably of the creative sector) show interest in deploying similar workplaces. A company from the marketing and branding sectors (facing the problem of the ageing workforce) calls PEARL and provides its own requirements for age-friendly workspaces. PEARL will work towards programming its platform and addressing these requirements in order to grow its track record and reinforce its good reputation.