

ALFRED

Personal Interactive Assistant for Independent Living and Active Ageing



WP9 – Impact

D9.3.2 Workshop Report II

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This report presents the content and objectives of the second ALFRED workshop. It provides details about the organization as well as the results of the workshop which was part of this year's IEEE eHealthcom'16 conference.



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Project Partners

 <p>Ascora GmbH, Germany</p>	 <p>Atos Spain sau, Spain</p>
 <p>Worldline, Spain</p>	 <p>Charité - Universitätsmedizin Berlin - Department of Geriatrics, Germany</p>
 <p>Asociacion de Investigacion de la Industria Textil, Spain</p>	 <p>Technische Universität Darmstadt, Germany</p>
 <p>National Foundation for the Elderly, The Netherlands</p>	 <p>Talkamatic AB, Sweden</p>
 <p>E-Seniors, France</p>	 <p>TIE Nederland N.V., The Netherlands</p>
 <p>IESE Business School, Spain</p>	

Executive Summary

The second ALFRED workshop took place at the IEEE conference eHealthcom'16 in Munich on the 16.09.2016. The focus of the conference has been on the technical side and the workshop's objective was set on the results and challenges of several ALFRED-project work-packages. These technical issues have been complemented by presentations about testing of intermediate project-results as well as lean-management aspects on how to exploit ALFRED's project-results. Beside the six speakers from ALFRED partners three external speakers have been invited. One of the speakers has been from EU-project ICT4Life. The three presentations have been about interoperability in the field of AAL, data fusion, which also has an aspect of interoperability, and about big data together with machine-learning, presented by Google.

It has been planned to organize a double session at the Ambient Assisted Living Joint Programme 2016 in St. Gallen Switzerland. The proposal for this session has been submitted on 18th March 2016. In May 2016 AAL refused the request as there have been too many requests from other institutions and as ALFRED already could organize a workshop with AAL. Hence a proposal for organizing a workshop at eHealthcom'16 has been sent immediately to IEEE and after having several calls with IEEE, the organizer of eHealthcom'16 accepted the workshop with title "1st International Workshop on Open Platforms in the Field of Independent Living and Active Ageing" (OPAA), containing 9 presentations with a duration of 20 minutes each and 10 minutes subsequent discussion. Summarized topics of the workshop have been:

- Possibilities for interoperability and open frameworks the field of independent living and active ageing, to bring solutions together
- Research results concerning interoperability and standards in that field
- Needs of end users of technology and how these can be tackled within research
- News from Google about big data and machine learning, a hot topic within eHealth

A corresponding specific website for the workshop has been created, containing a) agenda and abstracts of presentations, b) project-partners, c) FAQ, d) registration and e) venue. The workshop was announced on LinkedIn, XING, Twitter, mailings, by different newsletter as well as by EU eHealth in focus – Newsletter.

During the workshop a short digital survey has been conducted to obtain feedback from participants

The workshop received positive feedback from the (31 signed in) participants and every slot ended with a small discussion.

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1 Introduction

ALFRED – Personal Interactive Assistant for Independent Living and Active Ageing – is a project funded by the Seventh Framework Programme of the European Commission under Grant Agreement No. 611218. It will allow older people to live longer at their own homes with the possibility to act independently and to actively participate in society by providing the technological foundation for an ecosystem consisting of four pillars:

- **User-Driven Interaction Assistant** to allow older people to talk to ALFRED and to ask questions or define commands in order to solve day-to-day problems.
- **Personalized Social Inclusion** by suggesting social events to older people, taking into account their interests and their social environment.
- A more **Effective & Personalized Care** by allowing medical staff and caretakers to access the vital signs of older people monitored by (wearable) sensors.
- **Physical & Cognitive Impairments Prevention** by way of serious games that help the users to maintain and possibly even improve their physical and cognitive capabilities.

This report presents the results of the second ALFRED workshop at the IEEE conference eHealthcom'16 in Munich on 14th -16th September, 2016.

1.1 ALFRED Project Overview

One of the main problems of western societies is the increasing isolation of older people, who do not actively participate in society either because of missing social interactions or because of age-related impairments (physical or cognitive). The outcomes of the ALFRED project will help to overcome this problem with an interactive virtual butler (a mobile device application also called ALFRED) for older people, which is fully voice controlled.

The ALFRED project is wrapped around the following main objectives:

- To empower older people to live independently for longer by delivering a virtual butler with seamless support for tasks in and outside the home. This virtual butler (the ALFRED app) aims for a very high end-user acceptance by using a fully voice controlled and non-technical user interface.
- To prevent age-related physical and cognitive impairments with the help of personalized serious games.
- To foster active participation in society for the ageing population by suggesting and managing events and social contacts.
- And finally, to improve caring by offering direct access to vital signs for carers and other medical staff as well as alerting in case of emergencies. The data is collected by unobtrusive wearable sensors monitoring the vital signs of ALFRED's users.

To achieve its goals, the project ALFRED conducts original research from a user centred perspective and applies technologies from the fields of Ubiquitous Computing, Big Data, Serious Gaming, the Semantic Web, Cyber Physical Systems, the Internet of Things, the Internet of Services, and Human-Computer Interaction. For more information, please refer to the project website at <http://www.alfred.eu>.

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1.2 Deliverable Purpose, Scope and Context

The purpose of this deliverable is to give a short overview of current organisational effort being made to successfully apply for a workshop session at the eHealthcom'16 in 2016.

1.3 Document Status and Target Audience

This document is listed in the Description-of-Work (Dow) as 'public', as it provides general information about the status of the second ALFRED workshop and can therefore be used by external parties in order to receive more information.

1.4 Abbreviations and Glossary

A definition of common terms and roles related to the realization of the ALFRED project as well as a list of abbreviations is available in the supplementary document "Supplement: Abbreviations and Glossary", which is provided in addition to this deliverable. Further information can be found at <http://www.alfred.eu>.

1.5 Document Structure

This deliverable is broken down in the following sections:

- Chapter 1 provides an introduction of this deliverable, including a general overview of the project, the purpose, scope and context, status and target audience of this report.
- Chapter 2 summarizes the objectives of the ALFRED Workshop II and details the preparations and set up of the workshop.
- Chapter 3 gives an overview of the programme, speakers and contents of the Workshop II.
- Chapter 4 gives an overview of the attendants, feedback and general results.

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2 ALFRED Workshop Objectives and Preparation

This chapter gives an overview of the ALFRED Workshop objectives.

2.1 ALFRED Workshop Objectives

Europe is ageing. As a consequence products and services, which support active ageing, are increasingly overflowing the market. Many of these products and services comprise IoT (Internet of Things) and IoS (Internet of Services) that can track, monitor and support health and wellbeing at home and on the road. They are often built up by components or products of different providers with different or no industrial standards. Solutions are difficult to integrate due to these interoperability issues and they are scattered on the market. This makes it difficult for businesses and developers to expand their offers and for consumers it is difficult to choose the solutions that can best support their health and wellbeing according to their specific needs.

The ALFRED project organized a workshop in collaboration with invited speakers to present and discuss:

- possibilities for interoperability and open frameworks to bring together solutions for these issues
- research results concerning interoperability and standards in the field of active ageing
- needs of end users of technology and how these can be tackled within research
- news and insights from Google about the Google Cloud Platform and Google's Big Data Solutions as well as machine-learning.

2.2 ALFRED Workshop Preparations

The definition and first preparations of the second ALFRED workshop started in early February 2016 . From discussions with partners about the objectives of the second workshop it became obvious that it would be advisable to organize a workshop at the end of the ALFRED project. At that stage the infrastructure and eco-system of the project was estimated to be in such a stage, that real scenarios can be demonstrated and based on a well-established system, new ideas can be generated, as the system was planned to be "touched".

The following sections describe this preparation process.

2.2.1 Session Proposal at the AAL Forum 2016

Due to the success of the first workshop being held in the context of the AAL Forum 2014, it has been decided to apply for a double session for AAL Forum 2016 with a different thematic focus than the first ALFRED workshop. The AAL Forum has been promoted by the AAL Programme, which is a European funded activity that aims to create better conditions for life for older adults and strengthen opportunities in Europe through the innovative use of information and communication technology (ICT). Within the programme a wide knowledge base has been created on ICT research and development. The AAL community is very much aligned with and interested in the ALFRED research objectives.

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Once every year the AAL Programme organizes the annual Ambient Assisted Living Forum. This is the main event of the AAL programme and is attended by a wide audience from companies, research organizations, developers and end user organizations. In 2016 the event will take place from 26th to 28th September 2016 in St. Gallen, Switzerland.

The AAL Forum organized an official call for sessions. ALFRED partners sent a proposal to the AAL Forum at 15.03.2016. Several times positive feedback from AAL Forum was received, but at 13.05.2016 AAL Forum rejected the proposal, as ALFRED already could organize a workshop session with AAL Forum and as there was only limited space for workshops.

2.2.2 Session Proposal at IEEE Conference eHealthcom'16

The IEEE Standards Association is playing a major role in the interoperability of healthcare applications and devices. The eHealth environment emerging around the globe is predicated on standards-based interoperability of multi-vendor technology, and helps to enable multi-vendor systems and applications to speak the same language. Healthcare providers are then able to cost-effectively source the disparate array of standards-based technologies that their patients need without limitations on how information is shared across the end-to-end infrastructure.

IEEE has many standards in the eHealth technology area designed to help healthcare products, vendors and integrators create devices and systems for:

- a) Disease management
- b) Fitness tracking
- c) Health monitoring
- d) Independent living

These standards can help to save lives and improve quality of life for people worldwide. By measuring both activity levels and health stats, the goal of e-health is to allow these monitoring and independent living devices to work together to detect conditions sooner. Allowing personal health devices to securely exchange information among the device, patient, and physician is the focus of the IEEE 11073 family of standards.

IEEE's eHealth sector organized the eHealthcom'16 conference between 14.09.2016 and 16.09.2016 in Munich, BMW-World.



Figure 1: IEEE and eHealthcom'16 Logo

Every year IEEE organizes a conference about eHealth. Such conferences are important events for universities and organizations to discuss and present technical issues and ongoing standardizations in the field of eHealth. Goal of this conference has been bringing together interested parties from around the world working in the healthcare field to exchange ideas, discuss innovative and emerging solutions, and develop collaborations. Prospective authors have been invited to submit their original contributions covering completed or ongoing work related to the e-Health area. Scope of contributions should be:

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- a) Medical, Biomedical and Health Informatics (e.g. big data)
- b) Devices (e.g. wearable devices)
- c) Communications and Networking (e.g. security)
- d) Signal/Data Processing and Systems (e.g. virtualization, IOT, personalization)
- e) Services and Applications (e.g. physical and medical health, mHealth, monitoring)
- f) System Research (e.g. interoperability)



Home



Figure 2: Screenshot of eHealthcom'16 Website

In order to present the ALFRED results and challenges as a workshop, the ALFRED partners developed and submitted a proposal for evaluation by the IEEE eHealth sector. The proposal which was submitted on 17th May 2016 can be found in annex 1. The title of the ALFRED Workshop was defined as “International Workshop on Open Platforms in the Field of Independent Living and Active Ageing”. The definition and selection of presentations has been based on the scope of the conference:

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Presentation	Health Informatics	Devices	Communications	Systems	Services & Applications	Research
Serious Games					x	x
Sensor Abstraction Framework		x			x	
Open Dialog Platform			x	x		
Containers as a Service			x	x	x	
Information Fusion and Algorithm Training	x				x	x
Interoperability in the Field of AAL. Integration Profiles and Latest Results	x		x		x	x
Market Opportunities						x
End Users in Design and Development of Products						x
Handling Big Data and Machine Learning	x				x	

Figure 3: Matching of presentations to scope of conference

2.2.3 The Website for Session Registration

Due to the good experience with 2014 workshop, a dedicated website for this workshop has been created (<http://alfred.eu/opaa-workshop/>). This website consists out of the blocks:

- a) Overview, objective and actual situation
- b) Schedule
- c) Organizers and Speaker

Organizers and Speaker

Experiences from different projects are commented and best practices are interchanged from different perspectives. The workshop is a joint undertaking of the AAL related RTD projects ALFRED and ICT4Life with guest a speaker from OFFIS and Google. The workshop will go beyond the pure state of the art presentation by providing an outlook to overcome technical challenges of Open Platforms in the AAL domain. It will bring together experts from the user, scientific and technical perspectives and follow a cross-disciplinary approach between the IT and the End User view.



Figure 4: Website with block "Organizers and Speaker"

- d) FAQ
- e) Registration/Venue

2.2.4 Promotion of the Session

The workshop announcement has been spread on Social Media like LinkedIn, XING, Twitter, in the newsletter of the AgeingWell Community as well as the eHealthcom'16

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website and the ICT4AGEING newsletter of DG Communications, Networks, Content and Technology of the European Commission. In addition, each partner has promoted the workshop through its own networks, which allowed reaching a wide and diverse audience.

Furthermore technical partners of other FP7 projects like ICT4Life, Antilope, ReAAL, BRAID and Engaged have been invited.

2.3 Handouts

Handouts about the Agenda have been distributed while conference and can be seen in the figure below.

Project ALFRED
OPAA Workshop
Room: **T2B**



ALFRED



ICT4Life



OFFIS



Google

Time	Speaker	Topic
11:00	Dr. Stefan Göbel	Serious Games for Personalized Health(care)
11:30	Josue Ferri	Sensor Abstraction Framework Architecture for Wearable Devices
12:00	Dr. Fredrik Kronlid	TDM: An Open Dialogue Platform for Active Ageing
12:30	Lunch Break	
13:30	Tobias Hardes	Containers as a Service with Docker to Extend an Open Platform
14:00	Alejandro Sánchez-Rico	Information fusion and algorithm training framework
14:30	Lars Rölker-Denker	Interoperability in the Field of AAL. Integration Profiles and Latest Results
15:00	Federica Righi	Market Opportunities in Active Ageing and eHealth
15:30	Dr. Florian Feldwieser	Involvement of End Users in Design and Development of Products for Active Ageing
16:00	Steren Giannini	Handling Big Data (Genomics project as an example) and Machine Learning with Google Cloud Platform

Figure 5: Handout at eHealthcom'16 with agenda of ALFRED workshop

2.4 Date and Venue

The conference itself took place between 14.09.2016, 13:30 until 16.09.2016, 16:30. The workshop has been set by conference organizers to 16.09.2016, 11:00 until 16:30. It took place at the conference room T2b of BMW-World in Munich.

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Figure 6: Impressions of Conference Venue

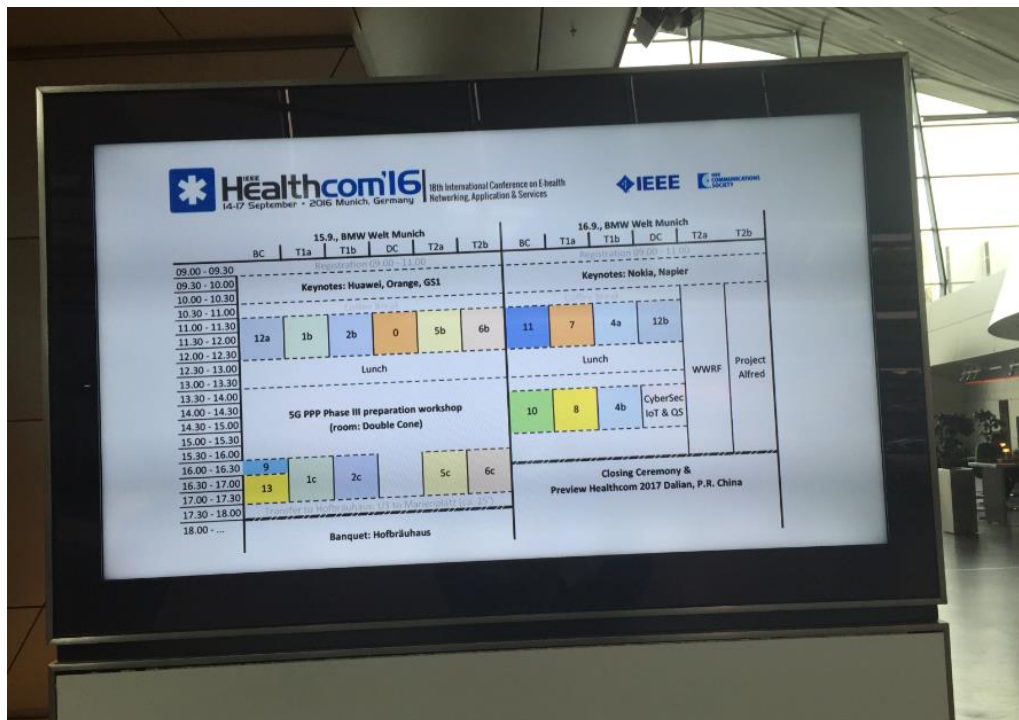


Figure 7: Conference Program at BMW-World

3 The Session Workshop

This chapter provides additional information on the agenda of the ALFRED workshop.

3.1 The Workshop Programme

Title: 1st International Workshop on Open Platforms in the Field of Independent Living and Active Ageing

Workshop Chair: Dr. Peter Merz, TIE Kinetix GmbH, Germany

Workshop co-Chair: Michael Krummen, Ascora GmbH, Germany

Programme:

- 10:50 Welcome
- 11:00-11:30 Serious Games for Personalized Health(care) (Dr. Stefan Göbel, Technical University Darmstadt, Germany)
- 11:30-12:00 Sensor Abstraction Framework Architecture for Wearable Devices (Josue Ferri, AITEX (Textile Industry Research Association, Spain)
- 12:00-12:30 TDM: An Open Dialogue Platform for Active Ageing (Dr. Frederik Kronlid, Talkamatic AB, Sweden)
- 12:30-13:30 Lunch
- 13:00-13:30 Containers as a Service with Docker to Extend an Open Platform (Tobias Harges, Ascora GmbH, Germany)
- 13:30-14:00 Information fusion and algorithm training framework (Alejandro Sánchez-Rico, Artica Telemedicina, Spain)
- 14:00-14:30 Interoperability in the Field of AAL. Integration Profiles and Latest Results (Lars Rölker-Denker, Offis e.V., Germany)
- 14:30-15:00 Coffee break
- 15:00-15:30 Market Opportunities in Active Ageing and eHealth (Federica Righi, IESE Business School, Spain)
- 15:30-16:00 Involvement of End Users in Design and Development of Products for Active Ageing (Dr. Florian Feldwieser, Charité-Universitätsmedizin Berlin, Forschungsgruppe Geriatrie, Germany)
- 16:00-16:30 Handling Big Data (Genomics project as an example) and Machine Learning with Google Cloud Platform (Stereon Giannini, Google)

The content of the presentations have been selected according to the goal of the conference:

- a) Interoperability and extendible platforms
- b) Sensors and monitoring
- c) Security
- d) Remote therapy and fostering fitness of people
- e) Big Data

Beside these technical issues the workshop should demonstrate, how to proceed with development of systems for end user and how to exploit such results. As ALFRED used concepts of agile respectively lean project management, fast feedback due to performing user tests early with development information on this has been included as a presentation.

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For closing the loop, a presentation on how to develop market opportunities has been setup.

Besides speakers from several ALFRED project partners, three external speakers have been invited to present their research and project results. Google has been invited, as the author of this report was obliged to review 20 papers, which have been submitted to IEEE for publication. Among others one hot topic has been around machine learning in the field of ADL (activity of daily living) and analyzing anomalies of human tissues by e.g. ultra sound. Google has high knowledge about machine learning and offers corresponding services.

3.2 Presentations

All presentations have been planned with a time of about 20 minutes with subsequent discussion of 10 minutes each.

A list of the presentations and abstracts can be seen below

3.2.1 Serious Games for Personalized Health(care)

Speaker: Dr. Stefan Göbel, TU Darmstadt, Germany (AFRED partner)

Abstract: Serious Games are games using game technologies and concepts combined with further ICT technologies and domain relevant concepts, applied in a broad spectrum from application domains ranging from educational games and game-based training and simulation environments to social awareness games or games for health. ALFRED presents a status quo of serious games/health games and introduces a metadata based information system to describe and find appropriate health games, matching the needs of individuals.



Figure 8: Presentation of Dr. Stefan Göbel

3.2.2 Sensor Abstraction Framework Architecture for Wearable Devices

Speaker: Josue Ferri, AITEX, Spain (AFRED partner)

Abstract: The adoption of health and wellness devices that track user's fitness activities such as sleeping habits, body temperature and heart rate has been significant during last years. This trend is continuously expanding with set of wearable devices and mHealth

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apps. This forces the industry to innovate and integrate them as part of the care as well as the digital gap among digital immigrants is reducing. ALFRED contributes to reduce this gap by a new architecture that allows managing different sensor sources in an easy way for older users giving at the same time secure mechanisms.



Figure 9: Presentation of Josue Ferri

3.2.3 TDM: An Open Dialogue Platform for Active Ageing

Speaker: Dr. Fredrik Kronlid, Talkamatic, Sweden (AFRED partner)

Abstract: TDM is a platform for spoken and chat based dialogue systems. During the ALFRED project, the platform have been extended in order to increase its competitiveness:

- Flexibility in language: Resource grammars ensure that TDM can easily be extended to support more languages
- Flexibility in coverage: Dialogue domains can be plugged in and out of TDM just like apps

The presentation covers the basics of the TDM platform and a focused deep-dive into the mentioned features, from the perspective of a dialogue systems developer.

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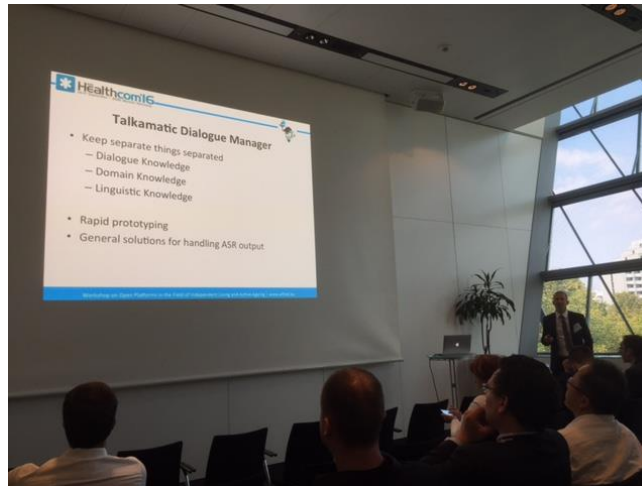


Figure 10: Presentation of Dr. Fredrik Kronlid

3.2.4 Containers as a Service with Docker to Extend an Open Platform

Speaker: Tobias Hardes, Ascora, Germany (AFRED partner)

Abstract: ALFRED was envisioned from the start with an app marketplace to act as an open platform. Following the “Privacy by Design” approach it was clear that the open platform needs to be a closed system to enforce that the end user stays in full control of his data, those drastically limiting the possibilities for third parties to extend the user experience. In the past, the deployment of different web services was linked with major efforts as each web service could use fine differences in the stack, resulting in incompatibilities and conflicts. Containerisation with Docker overcomes this issue; allowing web services to be handled as easily as Apps. Can this approach be the future to extend closed systems?



Figure 11: Presentation of Tobias Hardes

3.2.5 Information Fusion and Algorithm Training Framework

Speaker: Alejandro Sánchez-Rico, Artica Telemdecina, Spain (EU project ICT4Life)

Abstract: IoT data require of information fusion and technological analysis in order to facilitate the knowledge creation for decision support of end-users in both prevention and

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treatment actions. Platforms with generic data inputs require means to adapt the interaction and treatment of this data within fusion modules and analytic technologies to support platform integration in different scenarios. Within ICT4Life fusion and algorithm training API is envisaged to support platform integration.



Figure 12: Presentation of Alejandro Sánchez-Rico

3.2.6 Interoperability in the Field of AAL. Integration Profiles and Latest Results

Speaker: Lars Rölker-Denker, Offis e.V. and University Oldenburg, Germany (external speaker)

Abstract: A key requirement for the success of AAL systems is that they can be extended and maintained over time, growing and adapting to the changing needs of the user. This can only be achieved with modular solutions, where components can be combined in a flexible manner. The “AAL-JP Support Action on Standards and Interoperability in the Field of AAL” has designed a number of integration profiles to demonstrate how this interoperability challenge in AAL can be successfully addressed. Integration profiles start from an end-user perspective, describe systems and components, interfaces and interactions and provide a mapping to communication standards. The talk will also give an overview on latest results in this field, with a special focus on working scenarios.

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Figure 13: Presentation of Lars Rölker-Denker

3.2.7 Market Opportunities in Active Ageing and eHealth

Speaker: Federica Righi, IESE Business School, Spain (AFRED partner)

Abstract: Too few proven business models are key barrier to mHealth access to the market. This is aggravated even more if we are in the field of ageing and ICT. The best approach to such challenge is to use a Lean Startup methodology that helps to validate your ideas with your customers and, eventually, to adjust your product/service' ideas and/or your initial business concept. The session briefly recap the main drivers and barriers for mHealth to enter the market and illustrate the main steps that have been taken within ALFRED project to create a value based product/service.



Figure 14: Presentation of Federica Righi

3.2.8 Involvement of End Users in Design and Development of Products for Active Ageing

Speaker: Dr. Florian Feldwieser, Charité Universitätsmedizin Berlin, Germany (AFRED partner)

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Abstract: Within the EU-funded project ALFRED the development of prototypes was accompanied by iterative evaluations. These evaluations are a continuous process to ensure that project results can be easily used by older people. The tests were conducted over three cycles in France, Germany and the Netherlands. The tests evaluated the voice interaction of older adults with the system, a serious game for physical activation, a sensor t-shirt to monitor vital data, a marketplace solution as well as several other usability issues. User satisfaction was generally on a high level and ongoing field tests will evaluate the real world benefits of the system under realistic conditions.



Figure 15: Presentation of Dr. Florian Feldwieser

3.2.9 Handling Big Data (Genomics Project as an Example) and Machine Learning with Google Cloud Platform

Speaker: Steren Giannini, Google, Germany (external speaker)

Abstract: Google's innovation in data is based on internal development of infrastructure and services, which are based on needs of Google-developer. After having reached stable start of production, they will be released to publicity. Interesting services to eHealth are among others Big Query and Tensor Flow for Machine Learning. For this Google offers General-purpose cloud infrastructure and on top of this Data services & tools. Life science-specific projects as the Genomics API could be built on top of these layer. With the help of tools and big volume of data, insights can be gathered, which are very helpful to e.g. health.

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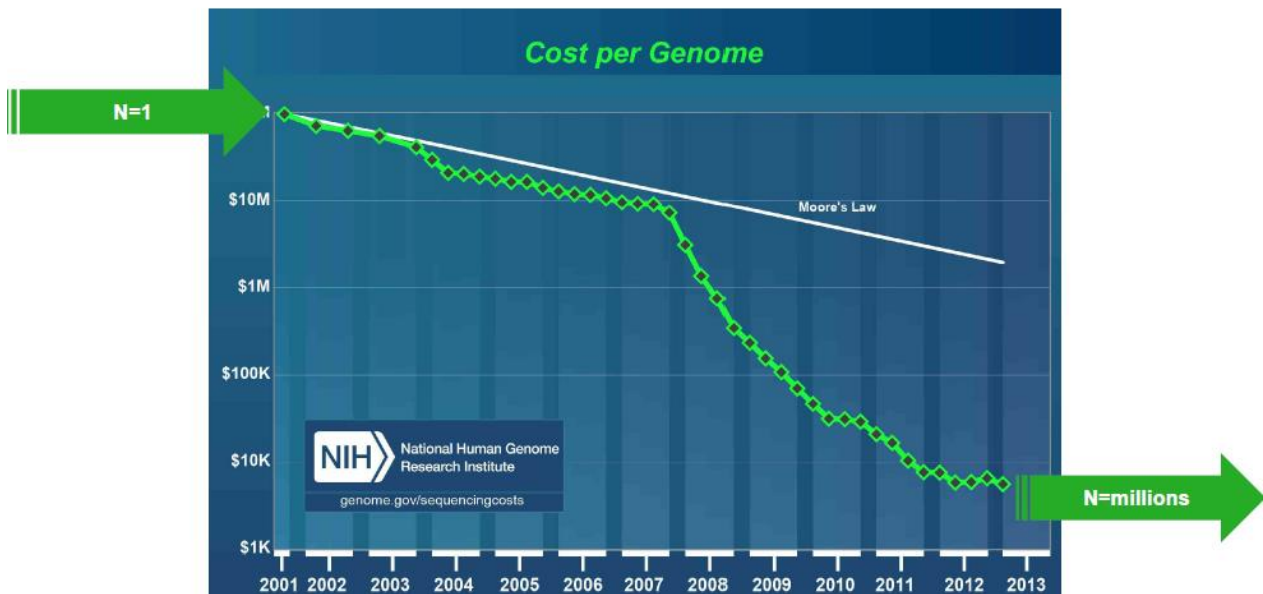


Figure 16: Google example: Costs per Genome

With Big Query Petabyte of data can be analyzed in a very fast way. A query demonstration needs for this between 3 and 6 minutes, depending on the complexity of the query.

With machine learning applications can be developed, than can see, here and understand (e.g. Google Translate, Google Natural Language (Speech) API, Google Vision API). Machine learning means:

- Making sense of (lots of) existing data to make predictions about new data
- And getting smarter from that new data to make even better predictions



Figure 17: Presentation of Steren Giannini

4 The OPAA Workshop Results

In advance to the workshop, the organizers of the conference already were very excited about the content of the presentations of the workshop, as the topics fitted very well in the overall conference scope. Unfortunately there have been only nearly 200 participants at the conference, according to the organizers of the conference due to the actual situation (terrorist attacks, rampage) in Europe and especially in Munich. Furthermore the workshop has been placed on a Friday, the last day of the conference; additionally the workshop has been moved back by two hours 2 days before opening of the conference. Last not but least, the agenda was not published as slots but as one big block. Nevertheless all participants of the OPAA workshop gave very good feedback to content of the workshop.

4.1 Signed Participants

The participants were asked to sign an attendance sheet to confirm their participation. 31 participants signed the attendance sheet (annex 2), but there have been participants, who didn't sign, as they didn't participate at the whole workshop.

4.2 Feedback from Participants

A short survey has been handed over at the workshop to the participants to gather feedback of the OPAA workshop. The survey included the following questions:

1. How satisfied were you with the theme/scope of the workshop?
2. How satisfied were you with the quality of the speakers and presentations?
3. How satisfied were you with the organization of the workshop?
4. Any comments, input or feedback?

Six attendees filled out the questionnaire. The results don't contain any statistical value, but they give an insight how the workshop was received. The following figures show the results of the survey.

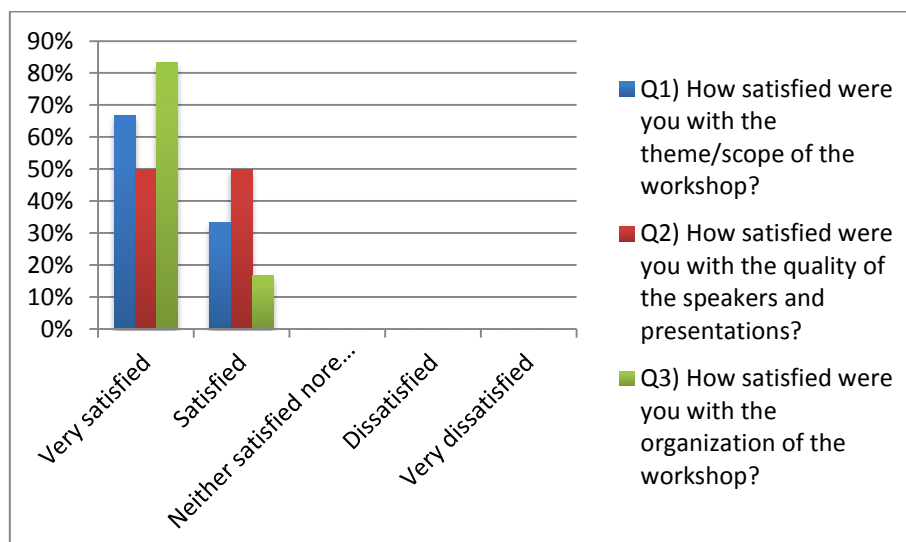


Figure 18: Survey Results

Annex 1: Proposal for Workshop at eHealthcom'16



IEEE Healthcom'16 conference 2016

Workshop Information	
Title of session and workshop:	International Workshop on Open Platforms in the Field of Independent Living and Active Ageing
Name of session coordinator:	Dr. Peter Merz
Contact details of session coordinator:	+49-89-990164-118 E-Mail: peter.merz@tiekinetix.com
Name of session chair/ workshop leader:	Merz, Peter (TIE Kinetix GmbH) Krummen, Michael (Ascora GmbH)
Names of speakers/experts	Tobias Harges, Ascora GmbH, Germany Dr. Stefan Göbel; TU Darmstadt, Germany Josue Ferrer, AITEX (Textile Industry Research Association), Spain Dr. Frederik Kronlid, Talkamatic AB, Sweden Federica Righi, IESE Business School, Spain (t.b.d.) Lars Rölker-Denker, OFFIS e.V., Germany Alejandro Sánchez-Rico, Artica Telemedicina, Spain (t.b.c.)

Session Content
<p>Rationale & objectives:</p> <p>Active ageing is about enabling people to enjoy a good health and quality of live and to act independently as part of society as they age. This notion “Active Ageing” becomes more and more important within political, economic and ethical discourse as well as within the e-Health community. As a consequence products and services, which support active ageing are increasingly overflowing the market. These products and services comprise IOT (Internet of Things) and IOS (Internet of Services) that can track, monitor and support health and wellbeing at home and on the road. Many services and solutions are built up by components or products of different providers with different or no industrial standards. Examples are smart watches, scales, bracelets to measure physical parameters, sensors at the home. The problems with these services and devices is that they are very scattered and difficult to integrate into different solutions due to interoperability-issues. This makes it for businesses and developers difficult to expand their offer. And for consumers it is difficult to choose the solutions that can best support their health and wellbeing according to their specific needs.</p> <p>This workshop will present and discuss</p> <ul style="list-style-type: none"> - possibilities for interoperability and open frameworks to bring solutions together - research results concerning interoperability and standards in the field of active

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ageing

- needs of end users of technology and how these can be tackled within research.
- business modelling and implementation of active ageing solutions in the market.
- solutions, offered by a global player

The program will consist of the following topics (still to be confirmed) with a total duration of 270 minutes. Each presentation of 20 minutes will be followed by 10 minutes of discussion.

Presentations:

Examples of open platforms

Serious Games for personalized health(care)

- Speaker: Dr. Stefan Göbel, Technical University Darmstadt, Germany
- Abstract: Serious Games are games using game technologies and concepts combined with further ICT technologies and domain relevant concepts, applied in a broad spectrum from application domains ranging from educational games and game-based training and simulation environments to social awareness games or games for health. ALFRED presents a status quo of serious games/health games and introduces a metadata based information system to describe and find appropriate health games, matching the needs of individuals.

Sensor abstraction framework architecture for wearable devices

- Speaker: Josue Ferri, AITEX (Textile Industry Research Association), Spain
- Abstract: The adoption of health and wellness devices that track user's fitness activities such as sleeping habits, body temperature and heart rate has been significant during last years. This trend is continuously expanding with set of wearable devices and mHealth apps. This forces the industry to innovate and integrate them as part of the care as well as the digital gap among digital immigrants is reducing. ALFRED contributes to reduce this gap by a new architecture that allows managing different sensor sources in an easy way for older users giving at the same time secure mechanisms

TDM: an Open Dialogue Platform for Active Ageing

- Speaker: Dr. Fredrik Kronlid, Talkamatic AB, Sweden
- Abstract: TDM is a platform for spoken and chat based dialogue systems. During the ALFRED project, the platform have been extended in order to increase its competitiveness:
 - Flexibility in language: Resource grammars ensure that TDM can easily be extended to support more languages
 - Flexibility in coverage: Dialogue domains can be plugged in and out of TDM just like apps

The presentation covers the basics of the TDM platform and a focused deep-dive into the mentioned features, from the perspective of a dialogue systems developer.

Containers as a service with Docker to extend an open platform

- Speaker: Tobias Harges, Ascora GmbH, Germany
- Abstract: ALFRED was envisioned from the start with an app marketplace to act as

an open platform. Following the “Privacy by Design” approach it was clear that the open platform needs to be a closed system to enforce that the end user stays in full control of his data, those drastically limiting the possibilities for third parties to extend the user experience. In the past, the deployment of different web services was linked with major efforts as each web service could use fine differences in the stack, resulting in incompatibilities and conflicts. Containerisation with Docker overcomes this issue; allowing web services to be handled as easily as Apps. Can this approach be the future to extend closed systems?

Research results

Interoperability in the field of AAL, results from 6. AAL JP-calls (to be clarified)

- Speaker: Lars Rölker-Denker, Offis e.V., Germany
- Abstract: t.b.d.

Market opportunities in Active Ageing and eHealth

- Speaker: Federica Righi, IESE Business School, Spain
- Abstract: t.d.b.

Involvement of end users in design and development of products for active ageing.

- Speaker: Dr. Florian Feldwieser, Charité – Universitätsmedizin Berlin, Forschungsgruppe Geriatrie
- Abstract: t.d.b.

Google Vision API in eHealth; machine-learning

- Speaker: NN, Google
- Abstract: t.b.d.

Target Audience:

- Companies and researcher working in the field of eHealth, ambient and assisted living
- Developer
- Health care institutions
- Hospitals

Expected number of participants (minimum/maximum)

50 / 70

Specific requirements

Annex 2: OPAA Workshop Signed Attendees

Registration IEEE HealthCom 2016 Munich

Workshop ALFRED - 16 September 2016

N	Name	Surname	Company	E-mail	Photo	Signature	Country
1	Nina	van der Veele	CH Ouderenfonds	n.vanderveele@ouderenfonds.nl			Dutch
2	EMILIA	GARCIA NLETO	WORLDTIME	emilia.garcia@worldtime.com			SPAIN
3	Marion	van Oijh	NFE	m.vandijf@ouderenfonds.nl			NL
4	Göbel	Jefan	TUDA				D
5	Florian	Feldner	CHI				D
6	JORGE	DOMENECH	AITEX	jdomenech@aitex.es			SPAIN
7	JOSUE	FERRI	AITEX	jferri@aitex.es			SPAIN
8	Krammen	Arnd	ASL	krammen@asl.com			D
9	Fredrik	KRONLID	TALK	Fredrik@talkomatic.se			SE
10	Maria	Peter	TIE	peter.yonck@lichimotor.com			USA
11	Leus	Dölber-Dank	OFFIS	leus.d@offis.de			DE

N	Name	Surname	Company	E-mail	Photo	Signature	Country
12	Isar	Nejadgholi	university of ottawa	inejadgh@uottawa.ca			
13	FERNANDEZ	Anais	E-SENIORS	anais.jeanrodez95@gmail.com			FRANCE
14	GIRAULT	Ariane	E-Seniors	ariane.giraault@guaiel.com			FR
15	Alexandro	SANCHEZ-RICO	ARTICA TELEMEDICINA	alexandrash@artica.com			ES
16	Peng	Gustafson	Talkomatic AB	peng@talkomatic.se			SE
17	Wei	LIU	G.G.C	WLIU@ggc.edu			U.S.
18	Jolanda	Alvares	Opole University				PL
19	VANOE	DE FALCO	CNR	VANOEDEFALCO@ICAR.CNR.IT			ITALY
20	APARUP	KBRTWR	university of Calicut	aparupkb@univcalicut.ac.in			India.
21	Amal	NASEEM	University of Orleans	amnaseem33@gmail.com			France
22	VANDERME	SELVA	UNI-FEDERAL-AMAZONIA BRAZIL	VANDERME@UFAM.EDU.BR			BRAZIL

N	Name	Surname	Company	E-mail	Signature	Country
23	Robert	Konrad	httc/ TU Darmstadt	robert.konrad@httc.de	R Konrad	Germany
24	Federica	Reghi	KESE Business School	freghi@gmail.com	freghi	SPAIN
25	Christina	Schweikert	St. John's University	Schweike@stjohns.edu	Christina	USA
26	Robert	Lill	TIE Kinetics GmbH	robert.lill@tiekinetik.com	R. Lill	Germany
27	Isaac	True	Vicibox GmbH	isaac.true@vicibox.de	Isaac True	Germany
28	STEFEN	CIANMINI	GOOGLE	stefen@google.com	Stefen	DE
29	IDRI	ALI	University of Namur	ali.idri@unam.ac.ma		
30	BAGOT	Mathieu	IRISA	mathieu.bagot@irisa.fr	Mathieu Bagot	France
31	NUNO	PEREIRA	ISEP	NTP@ISEP.IPP.PT		