



Project no.: 610658
Project full title: eWALL for Active Long Living
Project Acronym: eWALL
Deliverable no.: D7.6.2
Title of the deliverable: 2nd Project Workshop

Contractual Date of Delivery to the CEC:	31.10.2015
Actual Date of Delivery to the CEC:	30.10.2015
Organisation name of lead contractor for this deliverable:	Aalborg University
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Participants(s):	Consortium
Work package contributing to the deliverable:	WP7
Nature:	O
Version:	1.0
Total number of pages:	12
Start date of project:	01.11.2013
Duration:	36 months – 31.10.2016

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 610658

Dissemination Level

PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Abstract:

This deliverable reports about the 2nd project workshop that was held on 12th June, 2015 in London, UK.

Keyword list: eWALL workshop, AAL workshop, eWALL

Document History

Version	Date	Author (Unit)	Description
0.1	Oct, 25, 2015	Albena Mihovska	Final version
1.0	Oct, 30, 2015	Sofoklis Kyriazakos	Technical review & approval

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1 Executive Summary

This deliverable 7.6.2 describes the 2nd project workshop held as a one-day event on 12th June 2015 in London, UK. The workshop was under the theme “**ICT-enabled services and technologies for eHealth and Ambient Assisted Living**” as part of the IEEE ICC 2015 conference (<http://icc2015.ieee-icc.org/>).

Experienced professionals and researchers from several countries (also outside EU) discussed the innovative approaches for both platforms/systems and users. The workshop stimulated open discussions and exchange of participants’ personal experience and insights.

2 Summary of Workshop

2.1 Overview

Ambient Assisted Living (AAL) refers to the housing for people with disabilities for supervision or assistance with activities of daily living; coordination of services by outside health care providers; and monitoring of resident activities to help ensure their health, safety, and well-being.

Normally people with disabilities and especially seniors, cannot enjoy independent living, causing a strong impact on their quality of life, the national health systems, the insurance companies, the relatives and the care-givers. Senior citizens may suffer from a number of diseases, including the decline in cardiopulmonary conditions with weaker muscle functions and a declined neuromuscular control of the movements, which result in a higher risk of fall and a higher vulnerability for cardiovascular and pulmonary diseases. When chronic conditions do occur simultaneously in the same individual, the resulting phenotype –whose complexity is augmented and increased by and with ageing- is so difficult to manage to represent the most serious challenge not only for independent living but, as well, for the sustainability of health systems worldwide.

There is, indeed, a large number of initiatives, products and services for eHealth approaches to address this challenge. Nevertheless there is lack of addressing the problem in a holistic manner, balancing innovation with needs from the user perspective and that under the prism of the regulations and limitations from a Health System perspective.

The 2nd eWALL workshop aimed to provide a discussion framework towards enhanced AAL support for seniors with different types of diseases, focusing on the scientific aspects that can be the game changer in the provision of robust and reliable systems that are user-centric.

The workshop focused on:

- State of the Art AAL initiatives, current landscape of their innovative approaches and drawbacks.
- Interaction and service design concepts that view AAL systems from a user's perspective.
- Edge technology solutions such as wearable and non-wearable sensors monitoring users' vital signs, domotics systems monitoring critical in-home parameters, notification systems sending relevant data to medical experts or family members, etc.
- Regulatory framework and the role of the National Health System

The workshop attracted experienced professionals and researchers in the field who discussed innovative approaches and pinpointed the current gaps in the field with the goal to contribute to the development of a roadmap for AAL. The workshop stimulated open discussions and exchange of participants' personal experience and insights.

2.2 Agenda

Welcome Session

Keynote "Supporting Solutions for Seniors. The Active and Assisted Living Programme"

Rafael de Andres Medina, the President of the AAL Association, will present supporting solutions for senior citizens. The Active Assisted Living (AAL) Joint Programme (JP) is a funding activity of the EC that aims to create better condition of life for the older adults and to strengthen the industrial opportunities in Europe through the use of information and communication technology (ICT). It carries out its mandate through the funding of across-national projects that involves small and medium enterprises (SME), research bodies and user's organizations representing the older adults.

Session 1: AAL Platforms and Systems

Context extraction in the caring home: Infrastructure and algorithms

Stefanos Astaras and Aristodemos Pnevmatikakis (Athens Information Technology, Greece)
pp. 228-233

AAL ontology: from design to validation

Andrej Grguric (Ericsson Nikola Tesla, Croatia); Darko Huljenic (Ericsson Nikola Tesla d. d., Croatia); Miran Mosmondor (Ericsson Nikola Tesla, Croatia)
pp. 234-239

Interoperable eHealth Platform for Personalized Smart Services

Mihail Mihaylov (Center for TeleInfrastruktur, Denmark); Albena Mihovska and Sofoklis Kyriazakos (Aalborg Universitet, Denmark); Ramjee Prasad (Aalborg University, Denmark)
pp. 240-245

An IoT based Intelligent Building Management System for Ambient Assisted Living

Elias Z. Tragos (Institute of Computer Science, FORTH, Greece); Magda Foti (Converge ICT Solutions & Services S.A., Greece); Manolis Surligas (University of Crete & Foundation for Research and Technology - Hellas, Institute of Computer Science, Greece); Stefanos Papadakis (FORTH-ICS, Greece); George Labropoulos and Stelios Pournaras (Converge ICT Solutions & Services S.A., Greece); Vangelis Angelakis (Linköping University, Sweden)
pp. 246-252

An Ubiquitous Multiple-radio Patient Vital Sign Capture Platform

Quang-Dung Ho, Anh-Tuan Dang and Tho Le-Ngoc (McGill University, Canada)
pp. 253-258

A Game Theoretical Approach for Interference Mitigation in Body-to-Body Networks

Amira Meharouech (Université Paris Descartes, Tunisia); Jocelyne Elias (Paris Descartes University & Sorbonne Paris Cité, France); Stefano Paris (Huawei Technologies Co. Ltd. & Université Paris Descartes - Sorbonne Paris Cité, France); Ahmed Mehaoua (University of Paris Descartes, France)
pp. 259-264

Time Synchronization and Data Fusion for RGB-Depth Cameras and Inertial Sensors in AAL Applications

Enea Cippitelli, Samuele Gasparri, Ennio Gambi and Susanna Spinsante (Università Politecnica delle Marche, Italy); Jonas Wahslen and Ibrahim Orhan (KTH, Sweden); Thomas Lindh (Royal Institute of Technology, Sweden)
pp. 265-270

A Multi-modal Sensor Infrastructure for Healthcare in a Residential Environment

Przemyslaw Woznowski, Xenofon Fafoutis, Terence Song and Sioan Hannuna (University of Bristol, United Kingdom); Massimo Camplani (Univ Bristol, United Kingdom); Lili Tao, Adeline Paiement, Evangelos Mellios, Mo Haghghi, Ni Zhu, Dima Damen, Majid Mirmehdi, Robert J Piechocki, Dritan Kaleshi, Ian Craddock, Tilo Burghardt and Geoffrey Hilton (University of Bristol, United Kingdom)
pp. 271-277

Session 2: User-centric Services and Devices

An ECG T-wave Anomalies Detection Using a Lightweight Classification Model for Wireless Body Sensors

Medina Hadjem (Université Paris Descartes, France); Farid Naït-Abdesselam (Paris Descartes University, France)
pp. 278-283

Human Activity Analysis for in-home Fall Risk Assessment

Daniele Liciotti, Gionata Massi, Emanuele Frontoni, Adriano Mancini and Primo Zingaretti (Università Politecnica delle Marche, Italy)
pp. 284-289

Recognition of Human Daily Activities

Krasimir Tonchev, Yuliyana Velcheva, Strahil Sokolov, Vladimir K. Poulkov and Georgi Balabanov (Technical University of Sofia, Bulgaria)
pp. 290-293

Matching Between Physiological Sensor and Smartphone based on RR Intervals Time Series

Giorgio Quer (University of California San Diego, USA); Matteo Danieletto (University of Padua & University of California San Diego, Italy)
pp. 294-299

Panel "Challenges and Trends for Ambient Assisted Living"

This panel will present and discuss challenges and trends for Ambient Assisted Living. The EC project eWALL will present its activities and will answer questions of the audience with regards to technology achievements, users' feedback, regulatory framework, sustainability and financing of such solutions.

Appendix A - Call for papers

IEEE ICC 2015, June 12th, 2014, London, UK

<http://icc2015.ieee-icc.org/>

ICT-enabled services and technologies for eHealth and Ambient Assisted Living Call for Papers

== Workshop Co-chairs ==

Dr. Sofoklis Kyriazakos, CTIF, Aalborg University, Denmark, sk@es.aau.dk

Dr. Ir. Neeli R. Prasad, Director, CTIF-USA, Aalborg University, Princeton, USA, neeli.prasad@ieee.org

== Scope ==

Ambient Assisted Living (AAL) refers to the housing for people with disabilities for supervision or assistance with activities of daily living; coordination of services by outside health care providers; and monitoring of resident activities to help to ensure their health, safety, and well-being. Normally people with disabilities and especially seniors, cannot enjoy independent living, causing a strong impact on their quality of life, the national health systems, the insurance companies, the relatives and the care-givers. Senior citizens may suffer from a number of diseases, including the decline in cardiopulmonary conditions with weaker muscle functions and a declined neuromuscular control of the movements, which result in a higher risk of fall and a higher vulnerability for cardiovascular and pulmonary diseases. When chronic conditions do occur simultaneously in the same individual, the resulting phenotype – whose complexity is augmented and increased by and with ageing- is so difficult to manage to represent the most serious challenge not only for independent living but, as well, for the sustainability of health systems worldwide. There is, indeed, a large number of initiatives, products and services for eHealth approaches to address this challenge. Nevertheless there is lack of addressing the problem in a holistic manner, balancing innovation with needs from the user perspective and that under the prism of the regulations and limitations from a Health System perspective.

This workshop aims to provide a discussion framework towards enhanced AAL support for seniors with different types of diseases, focusing on the scientific aspects that can be the game changer in the provision of robust and reliable systems that are user-centric. The workshop will focus on:

- State of the Art, namely the current landscape of AAL initiatives, their innovative approaches and drawbacks.
- Interaction and service design concepts that view AAL systems from a user's perspective.
- Edge technology solutions such as wearable and non-wearable sensors monitoring users' vital signs, domotics systems monitoring critical in-home parameters, notification systems sending relevant data to medical experts or family members, etc.
- Regulatory framework and the role of the National Health System

Experienced professionals and researchers in the field will discuss innovative approaches and pinpoint the current gaps in the field with the goal to contribute to the development of a roadmap for AAL. The workshop will stimulate open discussions and exchange of participants' personal experience and insights.

== Important Dates ==

- Paper submission deadline: 31 January (FINAL DEADLINE - no further extensions)
- Acceptance notification: 1 March
- Final paper ("camera-ready"): 15 March

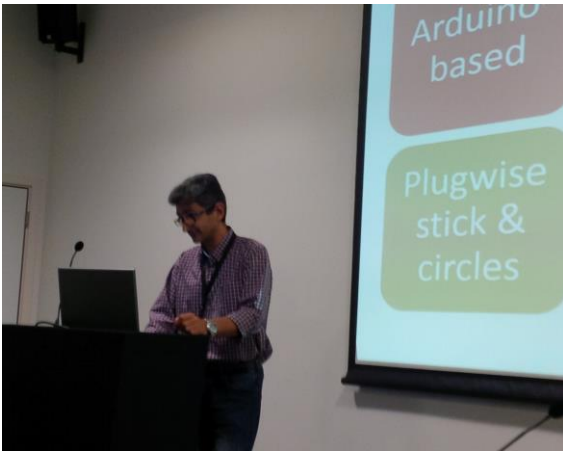
===Paper Submission===

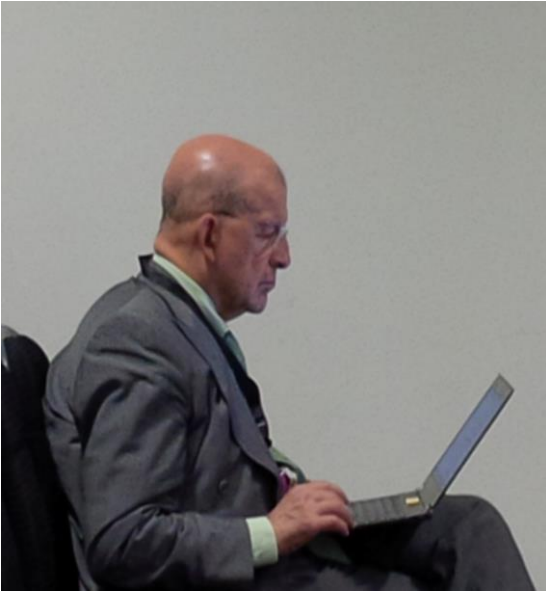
Technical papers describing original, previously unpublished research, not currently under review somewhere else, are solicited. Submissions should include abstract, keywords, e-mail address of the corresponding author. The length of the papers should be limited up to 6 pages in standard IEEE camera-ready format (double-column, 10-pt font). Papers should be submitted electronically in PDF format on <http://www.ieee-icc.org/submguid.html>.

All papers will appear in the proceedings and Xplore and will be peer-reviewed and must be associated with a paid workshop registration.

For information contact Sofoklis Kyriazakos (sk@es.aau.dk) and Neeli Prasad, (np@es.aau.dk). Submission of a paper should be regarded as an undertaking that, should the paper be accepted, at least one of the authors must register and attend the workshop to present the work. All papers will be peer reviewed and the comments will be provided to the authors. All accepted papers will submitted for inclusion in IEEE Xplore/IEEE Digital Library.

Appendix B – Photos





Appendix C – Workshop Website



IEEE **ic** 2015
INTERNATIONAL CONFERENCE ON COMMUNICATIONS
9-12 JUNE 2015 • LONDON, UK
IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS
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IEEE
COMMUNICATIONS SOCIETY

Workshop

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Regulatory framework and the role of the National Health System

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Useful Information

+ Call for papers information

+ Committee

- Program

Friday 12th June

> Click here to see the full program

+ Contact

> Registration

+ For authors

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