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Universal Open Architecture and Platform for Ambient Assisted Living

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V0.2	13/05/2010	PCOS reviewed	2	ToC reviewed
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V0.4	18/04/2011	External proposed	25	Updates on the status of AALOA community, introduction and conclusions
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* The project uses a multi-stage internal review and release process, with defined milestones. Milestone names include abbreviations/terms as follows:

- PCOS = "Planned Content and Structure" (describes planned contents of different sections)
- Intermediate: Document is approximately 50% complete – review checkpoint
- External For release to commission and reviewers;
- proposed: Document authors submit for internal review
- revised: Document authors produce new version in response to internal reviewer comments
- approved: Internal project reviewers accept the document
- released: Project Technical Manager/Coordinator release to Commission Services

universAAL Consortium

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Executive summary

This document is about supporting the start up of AALOA, an AAL Open Association. It explains the rationale behind this effort, sketches an initial comparison with similar organisations, examines the problems that we will find on the road and what are the main issues. It is a practical, short guide to the FLOSS (Free/Libre/Open Source Software) communities and introduces the software commodity and cooperation concepts, which are used to justify the needs of a convergence process towards a common shared platform for AAL. These concepts in addition to the AAL market fragmentation are the essence of the call for action expressed from the Manifesto of AALOA, which is reported in the appendix A.

This document clarifies also the changes to the initial strategy of universAAL for creating a community of interested developers around its own platform as proposed in Description of Work. AALOA does not represent the specific community of universAAL project. AALOA will be the community of communities and universAAL will be one of those communities working in synergy for preparing the AAL market breakthrough.

The document reports about the status of the AALOA community, the current governing board composition, the communication infrastructures and tools activated, and the list of projects already incubated in AALOA. It sketches a very embryonic roadmap for the association and gives an overview on what one should expect from it.

1. About this Document

1.1 Role of the deliverable

This deliverable provides an insight on the world of the Free/Libre/Open Source Software (FLOSS) communities whose support has been considered strategic for the survival of the project results after the project end. A first strategy for building an open source community was documented in the Description of Work (DoW) of universAAL project proposal (section B3.2.1 pg 125). The document presents the rationale for building a FLOSS community and the roadmap for establishing a community during and after the project life.

In order to build such community, the first approach suggested by the DoW was based on the impact generated by organizing an international competition on the evaluation of AAL systems, and by publishing a Manifesto as corner stone in the definition of the vision, objectives, and challenges of universAAL. Those initiatives had to catalyze the attention on universAAL, and thanks to the availability of different web tools help people to communicate, exchange ideas and interests, that's giving rise to a community.

The overall strategy during the first months of the universAAL projects has been refined with the objective to improve the acceptance of the universAAL results and to accommodate the parallel initiatives carried on by other EU projects. To this end the primary objectives of the pillars (Manifesto, Competition and Community) on which was based the aforementioned strategy have been slightly changed. We summarise shortly the differences:

- The Manifesto does not represent anymore the specific vision of universAAL project. It is a widespread call for action inviting individuals, organizations and companies to share their efforts to standardize a common AAL platform.
- The AALOA association does not represent any more the organization of the universAAL community. AALOA will be the community of the communities. It is the forum where several EU Projects share their ideas, experiences and open source software. universAAL findings will be implemented as a set of projects incubated by AALOA.
- The EvAAL competition does not represent any more the attempt to create a community around the universAAL software. It will start to evaluate the building blocks of AAL system, by attracting the research communities on the still open issues of this domain. The main purpose is to obtain new benchmarks for the evaluation of AAL systems and feedback on the platform issues we need to face for the development of an effective and market oriented software platform.

1.2 Relationship to other universAAL deliverables

The deliverable is related to the following universAAL deliverables:

D8.5-A – AAL Competition: *the EvAAL competition will be an initiative organised by universAAL, but promoted in the framework of AALOA, the AAL open association, as an AALOA project.*

D9.2-A – Dissemination plan: *dissemination work done during the project is oriented towards both making universAAL and its results known and making known AALOA, the AAL open association.*

D9.3-A – Exploitation plan: *Business and research goals of the main universAAL results, namely the uStore, developer depot, platform and services. Will clearly identify markets and relevant*

stakeholders and strategies for uptake in the European market, and how the results will provide a competitive advantage. All IPR/Licensing issues relevant to D8.1-A are described in D9.3-A.

1.3 Relationship to other versions of this deliverable

In this version of the document much information about the organization of the community supported by universAAL (AALOA) is still missing. The definition of the statute and the governance rules is an ongoing action coordinated with partners external to the universAAL consortium. Many aspects must be discussed democratically: in volunteer based community this requires time. We cannot anticipate when many important organizational aspects will be decided and finalized in a statute or bylaw. It is a healthy practice to evaluate the procedures before consolidating them in a set of rules and this approach requires time too.

There is a strong relationship with the business ideas and exploitation plan for universAAL in the building of a FLOSS community. This topic will be analysed and described towards the end of the project (D9.3-D) and likely reported in the last version of this deliverable.

1.4 Structure of the document

This document is organized in 6 chapters. The [introduction](#) describes the objectives of the deliverable and the relationship to the other deliverables. The [second chapter](#) is a general introduction to the FLOSS (Free/Libre/Open Source Software) communities, why we need a community to spread the universAAL results and in particular why we need a FLOSS community. The [third chapter](#) describes the role of an association behind a FLOSS community. It begins by reporting on most popular associations or industrial alliances working with FLOSS approach, and then the strategy followed during the first months of life of the project for launching a community is presented. It was based on the dissemination of a Manifesto for an AAL Open Association named AALOA. The status of AALOA, the rationale for the association is the content of the [fourth chapter](#). The principle inspiring the association are reported along with the community roadmap and the services offered to the projects incubated by the community. The [following chapter](#) is dedicated to the FLOSS policy, business models and how the AALOA can influence the universAAL joint exploitation. In this version the chapter briefly describes the different stakeholders and how they should be approached; more details will be provided in the next version according to the plans defined in other work packages. Finally the [conclusions chapter](#) summarises the positive results of the first year of activities pointing out which are the problems to face in the years to come.

2. A FLOSS community

Creating an open source community is not an easy task, not a straightforward one, nor is it guaranteed to succeed. However, in order for universAAL not to let its outcome wasted after the four years of its duration, we need someone to take the baton, and there are ways to handle this task in an educated way [01]. Here we sketch the main issues we are going to face.

2.1 Why a community

The greatest part of software that universAAL aims to release is *infrastructure software*, that is software that serves as the base for end-user products by providing low-level services to higher-level software. In practice, the *middleware* that universAAL is designing is for AAL environments very similar to what a classical *operating system* is for a computer-based office environment. Infrastructure software tends to become a commodity in the long run, and successful infrastructure software tends to accelerate this process, so that the “long run” can become too short to make any profit. A community that takes care of the software can be a solution to the dilemma. Here we briefly explain why. A deeper treatment of these issues is given in [02].

2.1.1 Infrastructure software as commodity

Following Wikipedia's definition, a commodity is some good for which there is a large demand, but which is supplied without qualitative differentiation across a market. It is fungible, i.e. the same no matter who produces it. Examples are petroleum, notebook paper, milk or copper.

Successful infrastructure software tends to become a commodity. In fact:

- infrastructure software should be *widely adopted* to be of any use
- wide adoption implies the use of one or more stable *standards*
- standards should be or become *open* for people to adopt them
- *widely used software based on standards is going to become a commodity*, because many software houses will be interested in implementing the open standard

Nothing of this is automatic, but the above points give the description of a common trend.

2.1.2 Developing commodity software

Developing commodity software is risky business. The main problem is that commodity software licence markets are inefficient:

- development costs are high, because infrastructure software is complex
- marginal cost of reproduction of software is zero, so the market for software licences grants diminishing returns, going to zero in the long run
- "race horse effect" or "winner-takes-all effect" makes this market risky and requires higher initial investments than what would be required to just implement the software

The “race horse effect” is what happens in situations where being second is no advantage: the winner takes it all, so all competitors are pushed to spend more than they would spend in a market where all the competitors get a share more or less proportional to the effort invested. This is dangerous, because effort is going to be greater right from the start, yet returns are aleatory.

2.1.3 Coopetition

To approach this risky business environment it is necessary to think differently than in traditional markets. First, high development costs can be divided between *cooperating competitors*. This business

model is called *coopetition* [03][04], and works well in those types of markets where the costs of the infrastructure can be shared in a cooperative way, while the returns on investment are obtained from the proprietary products that are built upon the infrastructure.

2.2 Why FLOSS

Coopetition in the software field is naturally based on FLOSS licensing models. The main reason is that the commodity software licence market is inefficient. As we stated above, commodity software is necessarily based on standards, very often open standards to facilitate adoption. This means that competitors have a low barrier to entering the market, and the vanishing marginal cost of software copies makes prices go down and returns go down with them.

The inefficiency of the commodity software licence market is avoided by avoiding the proprietary licensing model: adopting free / libre / open source (FLOSS) licences bypasses most of these problems and lays the basis for coopetition. Cooperating on a sound legal basis such as the one granted by established FLOSS licences is easier and gives confidence to the participants, who know from the start how they will have access to the results of the joint effort. It also gives confidence to adopters of the technology, who know that the providers have only limited control on the technology, which is free to be maintained by other providers.

Most important of all is that, after initial development, a properly managed FLOSS development strategy has the potential to spread the high maintenance and evolution costs among a multiplicity of stakeholders: a *community*.

2.2.1 Brief history of FLOSS evolution

Free software was born about thirty years ago. It was a hackers' invention, and thrived in hackers' communities. Then came the Internet, Linux, the Open Software Initiative, and free software went mainstream. In the meantime, there were discussions about the meanings of *free software* versus *open source*. These discussions are relative to the ideals and the purposes of the communities behind them, and are not important for us, at least in the beginning. In fact, from a legal point of view, only the software licence counts, and this is the reason why we use the term FLOSS to indicate software distributed with source and licences that allow free use for any purpose, copying, modification and redistribution in either unmodified or modified form.

When the pioneer times gave place to the initial diffusion of FLOSS, the original loosely coupled communities of enthusiasts expanded to allow for a more varied span of participants, and in this expansion they shifted to a different community model. Associations were born that gave support to strongly integrated communities of individuals, working on their own time or paid by an employer: the Apache foundation is an example of this second generation FLOSS organization [02]. Recently, the shift has begun to a third generation of organisations, gathering diverse stakeholders, from the individual enthusiast, to the employed programmer to representatives from industry, users and other communities. What we have described is a clear-cut division which does not exist in reality, but is a useful scheme to understand the evolution in time and the differentiations between different communities and FLOSS organisations.

2.3 The role of an association behind the community

Ever since the pioneeristic times of the birth of the GNU project [16], when practically all contributors were volunteers, the need for an association arose. In that case, the FSF (Free Software Foundation) [17] took the task of providing servers for various development-related tasks, an organisation for coordinating projects, a legal framework for copyright assignment and legal counselling and protection. Moving towards a community comprised of different stakeholders such as individual programmers, policy makers and company representatives needs a more complex organisation to sustain the community. An independent association or a foundation has the capacity of sustaining the community and to give a clear message of independency from particular interests.

2.4 Creating a community: ways to go

Creating a community is not a straightforward process, nor one whose outcome can be anticipated easily. It is something like building a company: success is not guaranteed. However, experience has shown some things to do and others to avoid. In this regard, the IBM red paper “Supporting Innovators and Early Adopters”, offers an interesting point of view on the effort needed to support and maintain an open community [05]. The practical process followed by universAAL, during the first months of activity, is based on the dissemination of a Manifesto or Call for Action (see [appendix A](#)) and it is described in section 3.3 [“Strategy for Launching the community”](#) and 4.3 [“The community roadmap”](#)

3. An association for building the universAAL community

universAAL helps giving birth to an association that is able to further the development of the universAAL platform after the project has concluded its work, End of January 2014. The reason is that the results of the universAAL project will have a useful meaning only if they survive the universAAL project itself. The infrastructure, the software and the documentation produced by universAAL will make sense if they are inherited by some organisation that is able to back them with legal support, to improve them, have them evolve and to advertise them so that they can become a standard in AAL and related fields. This organisation must be independent of other organisations such as companies and public or private bodies, and will need to gather the attention of stakeholders and involve the highest possible number of them at all levels:

- At the technical level, it must necessarily involve developers and academics with a vision for the future who would guarantee the further development of the universAAL platform at a cutting-edge level.
- At the marketing level, it needs to involve companies, which will provide guidance as to the market needs and which will be the primary consumers of the organisation's products.
- At the policy level, it needs to involve public and private bodies that are in any way related to the needs of older or impaired people and their caregivers.

An organisation with these characteristics is not easy to build, and will necessarily evolve through several stages, which are discussed below. Its legal form should be that of an association or a foundation, in one of European Union's member states. It should be born with the help of universAAL and cared as a baby in its infancy, with the objective of having it able to walk on its own legs when universAAL will be closed, in the beginning of 2014. At the same time, universAAL should have a very light grip on it, as the only way to make it grow and attract entities from outside universAAL is to make it clear right from the start that the association is in fact independent, and not just a way for universAAL to show off. Independence should be looked for at all levels. In the initial phase, the most significant level will be the technical one; from this respect, possible different technical solutions should be put at the same level as the universAAL platform. A possible vision of how the association can pursue independence is described in the following sections.

3.1 Popular communities and their organization

3.1.1 Apache Software Foundation

1. **Community Name:** The Apache Software Foundation (ASF).
2. **Community URL:** <http://www.apache.org>
3. **Statement of purpose:** The Apache Software Foundation provides support for the Apache community of open-source software projects. The Apache projects are characterized by a collaborative, consensus based development process, an open and pragmatic software license, and a desire to create high quality software that leads the way in its field. ASF is more than a group of projects sharing a server, it is a community of developers and users. ASF provides organizational, legal, and financial support for a broad range of open source software projects. The Foundation provides an established framework for intellectual property and financial contributions that simultaneously limits contributors' potential legal exposure.
4. **Profit/Not for profit:** Not for profit.
5. **Governance model:** The apache governance is described in its bylaws under <http://www.apache.org/foundation/bylaws.html> . There are two levels of organization in the

ASF community: The level of the foundation itself and the level of the member projects within the foundation. Here, we will describe both governance models.

ASF

The Foundation has been incorporated as a membership-based, not-for-profit corporation in order to ensure that the Apache projects continue to exist beyond the participation of individual volunteers. Individuals who have demonstrated a commitment to collaborative open-source software development, through sustained participation and contributions within the Foundation's projects, are eligible for membership in the ASF. An individual is awarded membership after nomination and approval by a majority of the existing ASF members. Thus, the ASF is governed by the community it most directly serves – the people collaborating within its projects. The ASF members periodically elect a *Board of Directors* to manage the organizational affairs of the Foundation, as accorded by the *ASF Bylaws*. The Board, in turn, appoints a number of *officers* to oversee the day-to-day operations of the Foundation. A number of public records of the operation of ASF are made available to the community.

ASF member projects

To become a member project, projects must go through an incubation phase (<http://incubator.apache.org/>). Projects have *Project Management Committees* that are established by resolution of the Board, to be responsible for the active management of one or more communities, which are also identified by resolution of the Board. Each PMC consists of at least one officer of the ASF, who shall be designated chairperson, and may include one or more other members of the ASF.

The Apache projects are managed using a collaborative, consensus-based process. They do not have a hierarchical structure. Rather, different groups of contributors have different rights and responsibilities in the organization.

Since the appointed Project Management Committees have the power to create their own self-governing rules, there is no single vision on how PMCs should run a project and the communities they host.

At the same time, while there are some differences, there are a number of similarities shared by all the projects. Important to note is the decision making process, that are taken with a lazy consensus approach a few positive votes with no negative vote is enough to get going.

6. **Targeted members:** Individuals.
7. **Membership models & pricing:** “Membership in The Apache Software Foundation is a privilege and is by invitation only. Candidates for membership are proposed by existing members, and voted upon by the existing membership. Since the Foundation is a meritocracy, meaning that contributions and skills are the factors used to judge worthiness, candidates are expected to have proven themselves by contributing to one or more of the Foundation's projects.” Membership in the projects are decided by the respective projects themselves.
8. **License model:** The Apache Software Foundation uses various licenses to distribute software and documentation, to accept regular contributions from individuals and corporations, and to accept larger grants of existing software products.

Licensing of distributions:

All software produced by The Apache Software Foundation or any of its projects or subjects is licensed according to the terms of the documents listed below;

- Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0>
- Apache License, Version 1.1 (historic) <http://www.apache.org/licenses/LICENSE-1.1>
- Apache License, Version 1.0 (historic) <http://www.apache.org/licenses/LICENSE-1.0>

9. **Project plan/roadmap:** N/A.

3.1.2 Eclipse Foundation

1. **Community Name:** The Eclipse Foundation
2. **Community URL:** <http://www.eclipse.org>
3. **Statement of purpose:** Eclipse is an open source community, whose projects are focused on building an open development platform comprised of extensible frameworks, tools and runtimes for building, deploying and managing software across the lifecycle.

The Eclipse Project was originally created by IBM in November 2001 and supported by a consortium of software vendors. The Eclipse Foundation was created in January 2004 as an independent not-for-profit corporation to act as the steward of the Eclipse community. The independent not-for-profit corporation was created to allow a vendor neutral and open, transparent community to be established around Eclipse. Today, the Eclipse community consists of individuals and organizations from a cross section of the software industry.

4. **Profit/Not for profit:** Not for profit.
5. **Governance model:** The Eclipse Foundation is funded by annual dues from its *members* and governed by a *Board of Directors*. *Strategic Developers* and *Strategic Consumers* hold seats on this Board, as do representatives elected by Add-in Providers and Open Source committers. The Foundation employs a full-time professional staff to provide services to the community but does not employ the open source developers, called committers, which actually work on the Eclipse projects. Eclipse committers are typically employed by organizations or are independent developers that volunteer their time to work on an open source project. The corresponding bylaws describing the Eclipse governance can be found here: http://www.eclipse.org/org/documents/Eclipse%20BYLAWS%202003_11_10%20Final.pdf

Board of Directors: The Board of Directors oversees the policies and strategic direction of the Eclipse Foundation.

As defined by the Eclipse Development Process, the open source projects in Eclipse are guided and co-ordinated by three Councils:

- **Requirements:** The Requirements Council is responsible for capturing and organizing requirements for all of the projects in the Eclipse community. The Requirements Council reviews and categorizes all of these incoming requirements - from all residents of the Ecosystem - and proposes a coherent set of Themes and Priorities that will drive the Roadmap.
 - **Planning:** The Planning Council is responsible for establishing a coordinated Platform Release Plan that supports the Roadmap, and balances the many competing requirements. The Platform Release Plan describes the themes and priorities that focus these Releases, and orchestrates the dependencies among Project Plans.
 - **Architecture:** The Architecture Council is responsible for the long-term technical health of the Eclipse platforms and frameworks. More explanation of the Architecture Council can be found in the Eclipse Development Process and in the guidelines and checklists for the Architecture Council.
6. **Targeted members:** Organisations (public/private/for profit/not for profit), Research institutions, other communities, individuals.
 7. **Membership models & pricing:**

7.1 *Associate Members* are organizations that participate in, and want to show support for, the Eclipse ecosystem.

Associate Membership is non-voting, but as members, Associates can submit requirements, participate in all project reviews and participate fully in the Annual Meeting of the Membership at Large, as well as any scheduled quarterly update meetings of the same. This provides a unique advantage to understand plans, directions, and to network with the full Eclipse ecosystem.

Associate membership is free for non-for-profit organizations, standards bodies, universities, research institutes, media and publishing, government and other organization types as defined by the Eclipse Foundation board of directors. All other organizations, including for-profits, may also become Associate Members with annual dues of \$5,000USD per year.

7.2 *Solutions Members* are organizations that view Eclipse as an important part of their corporate and product strategy and offer products and services based on, or with, Eclipse. These organizations want to participate in the development of the Eclipse ecosystem.

A number of special programs, discounts and services are provided to Solutions Members (and Enterprise, Strategic). For example, discounts towards EclipseCon Sponsorship, providing Foundation quotes for product releases, participation in special sponsorship events.

The annual membership fee for Solutions Members is tiered based on revenue (all values USD):

- Annual Corporate Revenue Less Than \$1 million, and less than 10 employees and contractors - Fee: 1,500
- Annual Corporate Revenue Less Than \$10 million - Fee: 5,000
- Annual Corporate Revenue Less Than \$50 million - Fee: 7,500
- Annual Corporate Revenue Less Than \$100 million - Fee: 10,000
- Annual Corporate Revenue Less Than \$250 million - Fee: 15,000
- Annual Corporate Revenue Greater Than \$250 million - Fee: 20,000

7.3 *Enterprise Members* are generally larger organizations (>1,000 employees) that rely heavily on Eclipse technology as a platform for their internal development projects and/or act strategically with products and services built on, or with, Eclipse. These organizations want to influence and participate in the development of the Eclipse ecosystem.

The annual membership dues for Enterprise Members are \$125,000 USD.

7.4 *Strategic Members* are organizations that view Eclipse as a strategic platform and are investing developer and other resources to further develop the Eclipse technology.

There are two types of strategic members: *Strategic Developers* and *Strategic Consumers*. *Strategic Developers* are major contributors of technology to Eclipse. Each strategic developer will have at least eight developers assigned full time to developing Eclipse technology and contribute annual dues of 0.12% of revenue (minimum \$25K, maximum \$250K). *Strategic Consumers* are major users of Eclipse technology. They contribute annual dues of 0.2% of revenues (minimum \$50K, maximum \$500K) but can reduce the dues by contributing one or two developers to Eclipse projects, reducing their dues by \$125K for each developer, to the minimum of \$50K.

Each strategic member has a representative on the Eclipse Foundation Board of Directors allowing them direct influence over the strategic direction of Eclipse. Strategic members also have a seat on the Eclipse Requirements Council providing input and influence over the themes and priorities over the Eclipse technology.

In addition, Strategic Developer companies are expected to lead one or more of the Eclipse open source projects and have representation on the Eclipse Planning and Architecture

Council. This allows Strategic Developers to have direct input into the development and architecture of Eclipse.

7.5 *Committer Members* are individuals that are the core developers of the Eclipse projects and can commit changes to project source code.

As noted in the Eclipse Development Process, committers are those people who through a process of meritocracy are able to contribute and commit code to their Eclipse projects. Committers may be members by virtue of working for a member organization, or may choose to complete the membership process independently if they are not.

7.6 *Corporate sponsor*: A company may become a corporate sponsor by making a financial contribution or an in-kind contribution of goods and services to the Eclipse Foundation. There are three tiers of sponsorship: 1) Platinum (US\$ 100,000 annual contribution), 2) Gold (US\$ 25,000 annual contribution) and 3) Silver (US\$ 5,000 annual contribution); each tier representing the level of annual sponsorship to the Eclipse Foundation.

8. **License model**: all Eclipse projects are licensed under the Eclipse Public License (EPL), a commercial friendly OSI approved license.

9. **Project plan/roadmap**: Yes. http://www.eclipse.org/org/councils/roadmap_v4_0/

3.1.3 OW2

1. **Community Name**: OW2

2. **Community URL**: <http://www.ow2.org>

3. **Statement of purpose**: OW2 is a global open-source software community whose goal is the development of open-source distributed middleware, in the form of flexible and adaptable components. These components range from specific software frameworks and protocols to integrated platforms. OW2 developments follow a component-based approach.

The consortium is an independent non-profit organization open to companies, public organizations, academia and individuals.

OW2 mission is to develop open source code middleware and to foster a vibrant community and business ecosystem.

OW2 is committed to growing a community of open source code developers. The organization is dedicated to the creation of new technology: original code development is one of its fundamental characteristics. As the organization becomes part of the open source marketplace, it also stresses the quality and market usability of its software. It fosters a common technical architecture to be shared by its members and to facilitate the implementation of its technology by systems integrators and end-users.

The OW2 projects aim at facilitating the development, deployment and management of distributed applications with a focus on open source middleware and related development and management tools. In the open source software value chain, OW2 is positioned as an industry platform, facilitating interaction between open source code Producers and open source code Consumers.

4. **Profit/Not for profit**: Not for profit.

5. **Governance model**: At OW2, everything starts with a Project. However, OW2 is conscious of the market requirement for easier component integration; this is why they have introduced Initiatives. In a nutshell, Projects are technology driven whereas Initiatives are market driven.

- **Projects** are technology-driven: they carry the consortium's technology innovation.
- **Initiatives** are market-driven: they help mainstream end-users, systems integrators and ISVS integrate OW2 technologies into their business solutions.

- **Local Chapters** are community-driven: they help disseminate the OW2 message and develop privileged relationships at a regional scale.

OW2 bylaws:

<http://www.ow2.org/xwiki/bin/download/MembershipJoining/LegalResources/OW2C-Bylaws.pdf>

OW2 day-to-day operations are carried out by the *Management Office*, a permanent team of professional executives hired to implement/execute the strategy decided by the *Board of Directors*. The team handles matters regarding general affairs, technology management and ecosystem development.

The board of directors is elected as follows:

- Each Strategic Member shall appoint one (1) representative to the Board of Directors
- Corporate Members, as a class, are entitled to as many seats on the Board of Directors as there are Strategic Members in the Association
- Individual Members, as a class, are entitled to one (1) seat on the Board and such representative shall represent the entire class

The Management Office and the Board of Directors are assisted by three Councils: the Ecosystem Development Council, the Technology Council and the Operations Council.

- The Ecosystem Council is responsible for making sure the consortium activities are aligned with market trends.
- The Technology Council is responsible for building the overall technical architecture, for providing technology validation, and for monitoring production and overall project consistency.
- The Operations Council is responsible for supervising finance and book-keeping, and for providing legal guidance and expertise. Members staff and lead operational councils.

6. Targeted members: OW2 is open to all kinds of organizations and corporations, large and small, for-profit and not-for-profit, and individual members. The research community (whether academia or industry) is granted a special status within OW2.

7. Membership models & pricing:

- *Strategic Members:* Strategic Members are legal entities who stand out to provide significant resources to support the Consortium's objectives and wish to play an active role both in setting the direction of the Consortium code development activities and facilitating the use and acceptance of the Consortium's technology. Strategic Members commit to remain members for a minimum of three (3) consecutive years. Strategic Members are legal entities which comply with the Strategic Membership Conditions set forth in Appendix Four of the Membership Agreement.
- *Corporate Members:* Corporate Members are legal entities that wish to contribute to the code development activities of the Consortium, to participate in the planning and management of the Consortium's technology development process and to facilitate the use and acceptance of the Consortium's technology. Corporate Members are entities which meet the requirements of a Corporate Member as set forth in Appendix Four of the Membership Agreement.
- *Individual Members:* Individual Members include individuals such as, without limitation, freelancers, students and technology enthusiasts who meet the requirements of an Individual Member as set forth in Appendix Four of the Membership Agreement.
- *Associate Organizations:* Associate Organizations are entities, such as standards organizations, research institutions, academic institutions, open source organizations, publishing organizations and other organization types, which wish to support the aims and objectives of OW2. Please note that Associate Organization is not a membership category.

This is the fee structure for the 2010-2012 period.

	Strategic Membership	Corporate Membership	Individual Membership
Fees	€50,000, 3-year commitment	LORGs (2): €10,000 SMORGs (2): €5,000 Micros (2): €1,500 Academia: €4,000 Laboratory (3): €1,000 1-year commitment	No charge
Purchasing Power Parity (1)	Applicable to Founding Strategic Members	Applicable to all Corporate Members -	-

- (1) For developing countries, Purchasing Power Parity Rules as defined by the World Bank will be taken into account. Please contact Cedric Thomas, CEO, OW2 Consortium, cedric.thomas@ow2.org
- (2) As defined by the European Commission
- (3) An Academic Research Laboratory is defined as an organization which: has a small number of members (in the range of 10s) and has an identity within its broad Academic institution (it must have a name).

The rights that go with the memberships are described below:

	Strategic Membership	Corporate Membership	Individual Membership
Board of Directors	One seat by right	As many representatives as Strategic Members	One representative
Initiatives	Entitled to lead an Initiative Entitled to participate in any Initiative Mgt Team	Entitled to participate in any Initiative Mgt Team	Eligible to participate in any Initiative Mgt Team
Projects	Eligible to lead any Project Entitled to participate in any Project Mgt Team	Entitled to participate in any Project Mgt Team Eligible to lead any Project	Entitled to participate in any Project Mgt Team Eligible to lead any Project
Councils	Eligible to chair a Council Entitled to participate in any Council	Entitled to participate in any Council	Entitled to participate in any Council
Local Chapters	Entitled to lead a Local Chapter Entitled to participate in any Local Chapter Mgt team	Entitled to participate in any Local Chapter Mgt team	Entitled to participate in any Local Chapter Mgt team

8. License model:

Described in the OW2 Legal resources:

<http://www.ow2.org/xwiki/bin/download/MembershipJoining/LegalResources/OW2C-IPR.pdf>

Project License: The Project License shall be any open source software license a) approved by the Board of the Association for each Project in accordance with reasonable and appropriate criteria and b) compliant with the non-assertion commitment described in Section 4 and/or imposing at least a royalty-free license of any Necessary Claims which cover the contribution of such patent holder, and which is revocable in the case of lack of reciprocity.

Project License Determination: Upon submission of a Project, the associated project license is reviewed and approved successively by the Management Office, the Operations Council and the Board of Directors. A Project may be associated with more than one license as it may itself contain components associated with different licenses. The Consortium makes the code available to third party under the agreed-upon Project License or Project Licenses.

Responsibility: The contributor remains sole responsible for all and any legal liabilities associated with the software contributed to, and other contribution submitted to the Consortium. If the contribution is not the original work of the contributor or contain elements which are not the original work of the Contributor, it is the responsibility of the Contributor to secure all necessary authorization from the copyright holder of the original work.

Dual Licensing: For avoidance of any doubt, each Member remains free to license outside of the Project its own software contribution under any other license (i.e. dual licensing).

9. Project plan/roadmap: N/A.

3.1.4 *Continua*

1. **Community Name:** Continua Health Alliance

2. **Community URL:** <http://www.continuaalliance.org>

3. **Statement of purpose:**

Continua Health Alliance is a non-profit, open industry coalition of healthcare and technology companies joining together in collaboration aiming to improve the quality of personal healthcare. Continua is dedicated to establishing a system of interoperable personal health solutions with the knowledge that extending those solutions into the home fosters independence, empowers individuals and provides the opportunity for truly personalized health and wellness management.

4. **Profit/Not for profit:** Not-for profit.

5. **Targeted members:**

Open to all kinds of organizations and corporations, large and small, for-profit and not-for-profit.

6. **Membership models & pricing:**

Continua has three types of memberships; Promoter (annual membership fee: US\$25,000), Contributor (annual membership fee: US\$ 6,500), and Liaison / Supporting Participant (annual membership fee: US\$ 6,500).

Contributor Member Benefits:

- Right to use Continua technical guidelines and use cases. This includes access to pre-publication drafts of the design guidelines and internal documents through the Working Groups as well as the opportunity to review and comment on new design guidelines prior to their adoption.
- Right to participate (non-voting) in Continua Working Groups to help create and influence the use cases, technical guidelines, marketing materials, lobbying efforts, and all other Continua work products
- Invitation to attend and participate in Continua member-only Summits and Town Hall meetings as well as weekly teleconferences for the various Working Groups.
- Right to use the Continua Test and Certification Program to qualify products and services and display the Continua certification mark.
- Right to participate in Continua Plugfests for cross vendor interoperability testing prior to certification.
- Ability to utilize Continua Enabling Software Library (CESL) and Automated Test Tool.
- Option to allow Continua to place company executives in industry speaking events.
- Right to demo certified products at Continua Summit opening sessions, tradeshow booths, other Continua events and Continua's public newsletter.
- Free Continua marketing kits: signs, brochures, etc.
- Right to use Certified Logo Guidelines for print and digital reproduction upon completion of successful certification.
- Ability to participate in Continua's RFP MatchMaker Program to find/list RFPs and pilot programs to test interoperability.

Promoter members (30 organizations – as of January 2011 – of which 11 were the Originating Promoters):

- All Contributor Member benefits.
- Voting rights in all Continua Working Groups. Including the selection of use cases, standards, industry technologies, and other key Working Group decisions
- Ability to hold leadership positions within the Working Groups.
- Right to be elected to the Board of Directors.
- Right to use Continua marketing material internally and externally.
- Free and open access to use of the Reimbursement Study Cataloging Report.
- Opportunity to participate in Continua sponsored trade show exhibit kiosks and demonstrations.
- Access to industry report on reimbursement business models and barriers.
- Access to industry research reports.
- Access to free educational sessions at Member Summits

Liaison / Supporting Participants:

Supporting Participants may be invited to join only upon nomination by two or more Originating Promoters. Admission as a Supporting Participant is limited to entities and associations who develop and/or maintain and license technical specifications used or useful in the development of the Continua Design Guidelines.

7. Governance model:

Bylaws:

http://www.continuaalliance.org/static/cms_workspace/Continua_Bylaws_October_13_2009.pdf

Continua is governed by a board of directors (at least 5 and at most 15). Members of the board are appointed by Promoting members of continua. Each Originating Promoter has the right of one dedicated permanent seat. The remaining seats are allocated by elections.

All specific work in Continua Alliance is done by its Work Groups. Any Originating Promoter or Promoter may propose to the board of directors the establishment of one or more Work Groups. The proposal must include the proposed charter of the new Work Group, and the Participants that initially desire to participate in the new Work Group. The board of directors may (i) approve or disapprove the formation of each Work Group, (ii) approve or disapprove the charter of such Work Group, and (iii) appoint the initial and any replacement chairperson of such Work Group from among the Originating Promoters and Promoters. Current work groups are *Marketing, Global Development & Outreach, EU Policy, US Policy, Technical, Use Case, Wellness Solutions, Regulatory, and Test & Certification* (as of January 2011).

8. License model:

You need to be a member to access the results of Continua work groups according to your membership category. It is assumed that these results are not shared outside the member organisation.

9. Project plan/roadmap: N/A

3.1.5 Open Health Tools

1. Community Name: Open Health Tools (OHT)

2. Community URL:
<http://www.openhealthtools.org>

3. Statement of purpose:
Open Health Tools is an open source community with a vision of enabling a ubiquitous ecosystem where members of the Health and IT professions can collaborate to build interoperable systems that enable patients and their care providers to have access to vital and reliable medical information at the time and place it is needed. Open Health Tools will generate a vibrant active ecosystem involving software product and service companies, medical equipment companies, health care providers, insurance companies, government health service agencies, and standards organizations.

4. Profit/Not for profit: Not for profit.

5. Governance model:
OHT bylaws: <http://www.openhealthtools.org/legal/OHTBylaws.pdf>

OHT is managed by a board of stewards that manages the business and technical affairs of Open Health Tools. The Board is also empowered to adopt rules and regulations governing the action of the Board and Open Health Tools, generally, and to allocate, distribute and/or pay out the moneys received by Open Health Tools from time-to-time. All contractual arrangements under which Open Health Tools would take on financial obligations must be approved in advance by a majority vote of the Board. In addition, the Board has the responsibility for establishing the policies, programs and practices of Open Health Tools.

The Board shall be comprised of Stewards, Associates, a Chairperson, a Secretary and Representatives of the Committers and Project Leads as follows:

- Stewards. A Steward is a voting member of the Board, and may represent a Member, Committers or Project Leads as described hereunder.

- Member Stewards. Each Member has the right to appoint one Steward to the Board, subject to approval of the Board. In the case that the Board rejects a Member's choice for Steward, the Secretary shall inform the Member of the reasons for the rejection, and the Member may appoint another Steward, subject again to approval of the Board.
- Committer Stewards. Committers, as a class, shall be entitled to at least one (1) seat on the Board (and such representative shall represent the entire class).
- Project Lead Stewards. Project Leads, as a class, shall be entitled to at least one (1) seat on the Board (and such representative shall represent the entire class).
- Alternates. Each Steward, upon written notice to the Secretary or Chairperson, may appoint an Alternate.
- Associates. Associates may be nominated by any Steward or the Chairperson, and must be approved by a majority vote of the Board. Associates shall represent areas of technical, academic, or business disciplines complementary to the Vision.
- Chairperson. A Chairperson for the Board shall be nominated by one or more Stewards and shall be appointed by majority vote of the Board. The Chairperson shall report to the Board, shall serve at the pleasure of the Board and shall be subject to the oversight of the Board.
- Secretary. A Secretary for the Board shall be nominated by one or more of the Stewards, and the appointment must be approved by majority vote of the Board.
- Parliamentarian. A member of the Board shall be nominated by the Chairperson as Parliamentarian for the Board and the appointment must be approved by majority vote of the Board. The Parliamentarian shall advise the Chairperson and the Board on matters of procedure governing Board deliberations and decisions.

The Board has initially established four councils (can establish more), those are; clinical council, requirement council, architecture council, planning council.

The Board appoints officers, Executive Director, Secretary, Chief Medical Officer, and Chief Technical Officer.

The board establishes projects consistent with the OHT vision, approves their scope, appoints a project lead, and establishes a written charter describing the goals, development approach, expected contributions, and potential IP issues. Each project starts with at least one committer (a contributor with write-access to OHT repositories). Contributors may be nominated to become a committer by a project lead or by other committers, and such nomination must be confirmed by a vote of the committers or the board.

6. Targeted members:

Membership is open to those persons or entities that can make substantial contributions in terms of time, technology, knowledge, or industry expertise to the Open Health Tools Vision. Members will be extended additional privileges in Open Health Tools not available to the general community.

7. Membership models & pricing:

To be a Member, a person or entity must complete a written membership application in such form as shall be adopted by the Open Health Tools Board of Stewards (the "Board"), including a description of the contribution that the Member plans on providing to Open Health Tools. Members are approved for admission by a majority vote of the Board, based on the Membership Committee's recommendation. After Board approval, Membership shall only become effective once the applicant has executed the Membership Agreement in such form as shall be adopted by the Board.

8. License model:

OHT is flexible and pragmatic on what licenses to use.

9. Project plan/roadmap:

N/A.

3.1.6 OSGi

1. Community Name: The OSGi Alliance

2. Community URL: <http://www.osgi.org>

3. Statement of purpose:

The OSGi Alliance mission is to create a market for universal middleware. The OSGi Alliance, therefore, promotes widespread adoption of the OSGi Service Platform to assure interoperability of applications and services delivered and managed via networks. To realize this mission, the alliance provides specifications, reference implementations, test suites and certification to foster a valuable cross-industry ecosystem. Member companies collaborate within an egalitarian, equitable and transparent environment and promote adoption of OSGi technology through business benefits, user experiences and forums.

4. Profit/Not for profit: Non profit.

5. Governance model:

Bylaws: <http://www.osgi.org/wiki/uploads/About/bylaws.pdf>

The Corporation shall have a minimum of eight (8) and a maximum of fifteen (15) Directors and collectively they shall be known as the Board of Directors.

Each year, the number of Directors to be elected will be noted and communicated by ballot. Except as otherwise provided herein below, each Director shall be elected for a term of one (1) year. The term of office of all Directors shall begin upon the installation of the new board at a board meeting as soon as practicable but no more than forty-five (45) days after their election. Candidates for the Board of Directors must be employees of a Member.

The officers of the Corporation shall be a President, a Secretary, and a Treasurer. The Corporation may also have a Chief Technology Officer, and one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers, and other such officers with such titles as may be determined from time to time by the Board of Directors. Officers shall be elected by the Board of Directors, each year at a meeting of the Board of Directors and each officer shall hold office until he or she resigns or is removed or is otherwise disqualified to serve, or until his or her successor shall be elected and qualified, whichever occurs first.

An important organizational role in the OSGi Alliance is assigned to its committee working groups. They consist of representatives from member companies of the OSGi Alliance. Examples are the *Marketing Working Committee* and the *Market Requirement Working Committee*.

The OSGi Alliance Board of Directors approves Expert Groups, subject to sufficient participatory interest within the membership and an acceptable charter. Participation is open to OSGi members who submit a Statement of Work to the Expert Group chair(s). Each Expert Group is normally led by two co-chairs who steer activities and represent the Expert Group within the OSGi Alliance and externally. The board confirms the co-chair appointments. Each Expert Group works on items defined in documents known as Requests for Proposals (RFPs), which set the requirements for the technical development. RFPs may be created by anyone but are always reviewed by the Requirements Committee to ensure they meet real-world needs and complement the larger objectives of the OSGi Alliance. Assuming the RFP is accepted, the relevant Expert Group develops Requests for Comments (RFCs), which define the technical solution to the RFP. The Expert Group also develops Reference Implementations and Test Cases to support the RFC where this is appropriate. The current set of expert groups are the *Core Platform EG*, the *Enterprise EG*, and the *Residential EG* (as of January 2011).

The Corporation shall have categories of membership as defined by the Board of Directors; all such categories shall have identical voting rights, but may differ in other rights, selection criteria, privileges, and responsibilities. The Board may also create one or more categories of nonvoting associates which shall have such selection criteria, rights, privileges, and responsibilities as determined by the Board. None of such nonvoting associates shall be members of the Corporation, however the Board may create any title it deems appropriate to refer to such nonvoting associates, including without limitation “Nonvoting Member”, “Associate Member” or “Honorary Member”.

6. Targeted members:

Any For-Profit Corporation, Non-profit Corporation, Government Organization, Educational Institution or other enterprise which supports this Corporation’s goals, policies and procedures is qualified to become a Member of the Corporation.

7. Membership models & pricing:

Full Members lead the alliance and specification development. They have full voting rights and are eligible to serve as director, officer or committee leader and can participate in any OSGi Alliance committees, meetings, events and email lists. Certification testing is included in full membership. This level of membership is open to any organization at any revenue level. The OSGi Alliance expects members to actively contribute to the development of the specifications but no specific rules on the levels of contribution are set. Fees for membership of this class are USD \$25,000 annually for twelve (12) months from date of registration.

Adopter Associates gain early access to specifications created by full member companies. This level of membership is open to any organization at any revenue level. Fees for membership of this class are USD \$3,000 annually for twelve (12) months from date of registration. Member companies collaborate within an egalitarian, equitable and transparent environment and promote adoption of OSGi technology through business benefits, user experiences and forums.

Supporters OSGi Alliance Supporters can display the OSGi Alliance logo on their Web sites to identify support and usage of the technology. Supporters are able to contribute to RFPs, receive meeting discounts and will be kept up to speed with newsletters and interest announcements

8. License model:

OSGi Specification License:

<http://www.osgi.org/Specifications/Licensing>

Implementations of these specifications might bear other license models. For example, the Apache Felix as an open-source implementation of the OSGi Release 4 core framework specification is available under the Apache License Version 2.0, and the Eclipse community has provided a certified open-source implementation for the same specification, called Equinox, which is available under the Eclipse Public License Version 1.0.

9. Project plan/roadmap: N/A.

3.2 Building a non-profit association

It is important to start from the beginning with an attitude of independence from universAAL. This is delicate: while we want the organisation to be born and grow in a way that fits our project objectives, that is, to nurture and foster the growth of the universAAL platform, we also cannot take control of it

and must be prepared to share control with other partners. This is essential to start building trust in it and to gather a core of dedicated partners other than universAAL.

In building the association, we must consider that successful FLOSS organisations have not historically started from scratch. When they were born, they had already something to offer. This should be the case for the AAL open association we want to launch. Since universAAL has nothing to offer yet, it is paramount to start the association together with someone who has something to offer now. There is a natural solution to this problem, which comes because universAAL itself was not really born out of nothing. UniversAAL aims at consolidating software results coming from other European projects, namely PERSONA [06], MPower [07], Soprano [08], OASIS [09], AMIGO [10], GENESIS [11]. In this sense a collaboration with other projects consortia is needed in order to encourage the provisioning of initial stuff to play with. In this process it is important to involve running research projects which may be interested in using the underlying community for their dissemination activities.

3.2.1 The mission

The mission of the association is to gather all AAL stakeholders, starting from Europe and possibly extending further. The interested stakeholders should be at all levels: technical, market, social, policy.

The association wants to provide a platform for AAL services that is standardised at all possible levels, from low-level communications interfaces to regulatory interfaces with service providers around Europe.

The association should work as the central forum where new directions for AAL are discussed and implemented at the academic, technical and policy levels. It should release documents and white papers, work as a consultancy point for the European Commission for topics related to AAL, organise commercial events and scientific conferences.

3.2.2 The association purpose

From the point of view of universAAL, the purposes of founding an association are:

1. giving breadth to universAAL's work for its members, who know that their investment will not die in 2013 when universAAL will close, but has a future
2. giving credibility to universAAL's work from the outside, by clearly stating that universAAL will donate its results to an autonomous, independent organisation
3. provide a forum for interested universAAL's member to keep cooperating after 2013

3.2.3 The association statute

The statute of the association is not yet written. Much work and discussions have been going on this topic, but no results yet. The reasons for this are the same that have delayed the incorporation of the association, which are detailed in the next subsection.

3.2.4 Incorporating the association

The association has not been incorporated yet. There are at least two reasons.

First reason is that there is no natural way of incorporating an association in Europe, as no European-level association form exists. The only way is then to incorporate the association in one of the member states, probably to be chosen among those of the core partners: Norway, Germany, Italy, and Spain. The state where it is easier to found an association is Italy, so probably the association will be incorporated there. Currently, the most probable form appears to be the association of individuals, as detailed later in The Community Roadmap section.

Second reason is that we see no real hurry in incorporating the association. We are having a lot of dissemination activities going on, which target the association called AALOA(see chapter 4), and we are gathering many interested partners. AALOA already has a web site and mailing lists, and work is going on deciding where the association should head first. We are experiencing how lack of a formal legal infrastructure for AALOA does not (yet) hinder its progress. Until things proceed smoothly, we may be better delaying the moment we formally incorporate AALOA.

3.3 Strategy for launching the community

Work is in progress on this topic: much has already been done, much is still needed. The three following sections illustrate the main actions that are being done to attract people around the idea of the association and create a community.

3.3.1 *The Manifesto*

The vision and mission of the association are described in the AAL Open Association (AALOA) Manifesto. It is a position document that illustrates what are the views for the future of ambient assisted living, what are the needs to be satisfied and how AALOA plans to satisfy them. It is intended to be a dynamic document, with subsequent versions to be released. There is no schedule for releasing the next versions, even if during discussions a tentative schedule would be to update the Manifesto yearly, with possibly more releases in the first year.

The writing of the Manifesto was not internal to universAAL. This was important in order to establish a neutral attitude for AALOA since the beginning. After the initial contact established in March 2010 during the AALiance conference held in Malaga (Spain), the people contributing to write the Manifesto included representatives of the MonAMI [12], PERSONA [06], universAAL project.

The first release of the Manifesto is also a call to action and includes an invitation to join the association and instructions to do so. The Manifesto was initially subscribed by some dozen individuals and distributed by various means. Today, the Manifesto is a dissemination effort of eight EU projects BRAID [13], MonAmI [12], OASIS [09], OsAmI-commons [14], PERSONA [06], SOPRANO [08], universAAL and WASP [15]. As part of the dissemination work that has been done to launch the association, a package was sent to a limited number of people asking if they were interested to participate in the launch of the community. The package was comprised of the Manifesto, the EvAAL competition announcement (see § 3.3) and a request for comments on the idea of AALOA. The coordinators of the above projects were the first supporters and subscribers of the Manifesto

The Manifesto has been distributed and presented in the following events:

- EU Policy Workshop on “Public Primary Care Standard for Ambient Assisted Living (AAL) Services in Europe” in Lisbon, Portugal (June 2010)
- Workshop on “AAL Service Platforms” (WASP’10) held in conjunction to with the 12th IEEE International Conference on E-Health Networking, Applications and Services (IEEE Healthcom) in Lyon, France (July 2010)
- AAL forum, Odense, Denmark (September 2010)
- Networking session on AAL platforms at ICT conference in Brussels, Belgium (September 2010)
- Smart Sensor and Context Conference in Passau ,Germany (November 2010)
- Joint Ambient Intelligence Conference in Malaga, Spain (November 2010)
- Med-eTel conference in Luxembourg, Luxembourg (April 2011)

The last version of the Manifesto with the list of the current subscribers is reported in **appendix A**.

3.3.2 *The AAL open association*

AALOA is the name that we gave to the association we are building together with partners external to universAAL. Previously in the section we spoke of the objectives and of the form of AALOA. AALOA is the central point of our strategy for creating a community that will be able to sustain the results of the universAAL project. The universAAL community will be one of the many communities built around incubated projects. AALOA will host different *projects*, which are autonomous activities promoted by a project responsible. Most projects will likely be software projects, but we plan to have other sorts of projects too. The first of such projects is the EvAAL competition, which is promoted by universAAL.

The purpose of EvAAL is to gather interest around AAL themes both from the part of academy and industry. It is intended to be organised as a yearly event, and each year it will be devoted to a different topic. The first event will be devoted to indoor localisation. The data gathered during the competition will be made public, and each competitor will be asked to write a paper describing its installation. We plan to publish the papers in the proceedings of an associated conference.

A detailed description of how the EvAAL competition is organised is the theme of D8.5-A.

3.4 Similar initiatives promoted by other EU Projects

Here we make an analysis of what has been done in other European projects that have purposes and methods at least partially similar to those of universAAL. The list is not intended to be exhaustive, but tries to mention all important initiatives that can be interesting for universAAL for inspiration and, most importantly, for cooperation. The list is going to be updated, enlarged and detailed during the iteration of this deliverable.

The AALOA association should collect stakeholders from four main fields: End users, Industry, Developers and Research. For each of the listed initiatives we specify in which of these fields they are primarily interested.

3.4.1 *OsAmi-commons*¹

The OSAmI-Commons project is developing an open-services ecosystem to enable all types of co-operating devices and software to work together seamlessly in any type of flexible combination. The vision is of a dynamic, service-oriented platform emerging from a community process with all physical entities contributing in the long term, playing service-provider and consumer roles. A combination of service-oriented architectures and broadly-accepted open standards will enable OSAmI to map physical entities to services and build on open-source foundations to construct the ‘web of objects’.

Contact: Jesus Bermejo (Telvent)

Area: Industry and developers

AOB: Emanation of the ITEA2 industrial consortium

3.4.2 *MyURC*²

MyURC is an international consortium of companies promoting the adoption of ISO/IEC 24752 or Universal Remote Console™. The Universal Remote Console Consortium works to promote and implement Universal Remote Console (URC) standards and support services, facilitating user interfaces that are simple and intuitive to use, including future interface technologies such as task-orientation and natural language interaction.

Contact: Gottfried Zimmermann (University of Tübingen)

¹ <http://www.osami-commons.org/>

² <http://myurc.org/>

Area: Standards

AOB: Have contacts with AALOA and Joe Gorman through G Zimmermann.

3.4.3 *Open Health Tools*³

Open Health Tools (OHT) is dedicated to improving the health of people through the transformation of health information technologies (health IT).

Health IT is essential for making significant advances in the three domains of a health system: personal health, healthcare delivery, and population health. The primary users are individuals and their caretakers in the personal health domain, health care providers in the healthcare delivery domain, and public health officials, researchers, quality monitoring organizations, and emergency “first responders” in the population health domain. Many groups and organizations have been working to use health IT to improve the quality, safety, and accessibility of healthcare, while reducing costs, complexity, and market fragmentation. OHT's approach to accelerating the use of health IT combines the lessons that have been learned from these past efforts with expertise from other relevant disciplines, including medicine, economics, computer science and sociology.

Contact: Rich Rogers (IBM)

Area: Development, End users, Legacy service providers, Authorities and Deployers

AOB: Releases products with FLOSS licenses

3.5 Strategy for engaging similar initiatives promoted by other EU projects

A strategy for AALOA and universAAL must be to engage the mentioned similar initiatives promoted by other EU projects to avoid parallel work and developments. This would have several benefits:

- create awareness in all these parallel communities (including AALOA and universAAL) regarding work results and ongoing work in order to avoid duplicate work and extend the scope of reuse whenever possible
- whenever complementary work in the sense of the above bullet is not possible, cooperate towards possible interoperability solutions among parallel solutions
- provide a clearer picture of the scene in public relation material about the relationships to other existing organizations that have some overlapping goals

The chance for a combined strategy is of course given when results are published under an open source license. It will be important to sort out in a very early project stage which similar initiatives are present and what they are working on in their initiative and which projects they combine. As AALOA is a very general initiative of combining different AAL projects which could be of interest for different AAL stakeholders, it is obvious that most of the similar initiatives like openURC⁴ are non-competing initiatives and would furthermore complete the AALOA portfolio. This means that for example openURC components, which are basically implementing a specific standard for pluggable user interfaces, could be a benefit and add-on project for an AAL platform approach. Also having in mind that openURC is not interested in the AAL market alone. The same can be seen with other initiatives which also might have some overlapping results which would help in the AAL market (see e.g. Open

³ <http://www.openhealthtools.org/>

⁴ The openURC Alliance was founded in the summer of 2005, immediately following publication of the first Universal Remote Console Standards. In September of 2006, The openURC movement arrived in Europe by way of IST FP6 project i2home. The mission of the openURC is to promote the Universal Remote Console (URC) and associated standards and its application in products, this way facilitating User Interfaces that are simple and intuitive to use. OpenURC is more market oriented than MyURC consortium which is focused mainly on the standard

Health Tools which could help to bring some medical related benefit to AAL). Networking initiatives with similar initiatives should encourage integration activities implemented as autonomous projects under AALOA.

From the viewpoint of universAAL, it will be important to have a clear process monitoring and reviewing initiatives which are working on components and projects that would be beneficial for universAAL or vice versa. From the viewpoint of AALOA, similar monitoring and reviewing processes can help to recognize in good time, which projects could be thinkable to be hosted under AALOA because of working on AAL components.

Each time, when potential for such cooperation has been identified, contacts must be established to bring the communities together. A first step in this direction has been the MonAMI Workshop in Passau on 16.Nov.2010 where both AALOA and openURC initiatives were announced during the Smart Sensor and Context conference and a joint press release along with a joint panel discussion were also organized. Similar events with OSAmI-Commons, Continua Health Alliance or Open Health Tools should follow.

We should keep in mind that at the moment AALOA is the only general initiative of a combined AAL community. Other similar initiatives have mostly only partial interest in AAL and are focused on certain intersections like user interfaces, health data, middleware etc. In a long term way of thinking, it would be desirable if AALOA could get a role like an umbrella initiative for all projects interesting for the AAL stakeholders no matter from which initiative they come. This will also help to establish a centralized community and resource center; a place where AAL stakeholders can find an overview of projects which could help fulfill their needs.

The plan for engaging similar initiatives should include the following:

- Collecting detailed information about similar initiatives, overlaps with AALOA, overlaps with universAAL, hosted projects that are interesting for AAL stakeholders, and projects which can enhance the portfolio of AALOA. This information might also be useful for the yearly updates of the AALOA Manifesto.
- Organizing concrete combined events and workshops with such similar initiatives in order to establish connections and arrange for cooperation.

4. The AAL Open Association

As discussed in the previous section, universAAL is among the cofounders of AALOA, the AAL Open Association.

In a sense, AALOA is already up and alive: it has a website, mailing lists have been setup and people are subscribed to them, AALOA has been advertised at a number of events in Europe starting from June 2010, one hundred of interested people have subscribed its Manifesto and wrote on the mailing lists. Moreover, some organisations OpenURC have expressed interest in cooperating with AALOA. Several projects are on their way to become a reality, starting with the EvAAL competition promoted by universAAL and continuing with the software projects that will be promoted by the PERSONA, OASIS and BRAID projects. Most importantly, AALOA already has a Governing Board of 7 people:

- **Francesco Furfari**, CNR-ISTI, Italy
- **Joe Gorman** SINTEF, Norway
- **Sergio Guillén**, ITACA, Spain
- **Sten Hanke** AIT-HBS, Austria
- **Thomas Karopka**, IT Science Center Rügen gGmbH, Germany
- **Antonio Kung**, Trialog, France
- **Mohammad-Reza Tazari**, Fh-IGD, Germany

and the following deputies have been indicated:

- **Francesco Potorti** (Francesco Furfari)
- **Marius Mikalsen** (Joe Gorman)
- **Laura Belenguer** (Sergio Guillén)
- **Bruno Jean-Bart** (Antonio Kung)
- **Reiner Wichert** (Mohammed-Reza Tazari)

However, as of March 2011, the association is not formally incorporated, so from a rigorous point of view members are in fact *would-be members*. Notwithstanding this status of fact, AALOA has started on the right track. Interest is rising around it and things are rolling. Probably a formal incorporation of AALOA will take some more time, but we are seeing that its lack does not hinder the work, because of good interpersonal and professional relationships that are shared by the members.

4.1 A rationale for the association

The reason for the existence of AALOA is that AAL infrastructures need to be open to be used at all. And they need to be accepted by a wide range of institutions to become useful and create a European market. What is needed is not only a software platform with documentation and support, but the possibility of building services that can be used in any of the European nations. We need to standardise not only software and communications interfaces, but also service models, and business models.

4.1.1 A service platform built on commoditized infrastructures

The basic output of AALOA's work will be an open, standardised infrastructure for deploying AAL services and, more generally, ubiquitous and pervasive services. The infrastructure will be composed of middleware for connecting devices and presenting a uniform interface to applications, documentation, training services and all the support that is needed for a non-trivial piece of software.

The middleware will be released with a FLOSS license, chosen so that it encourages industries and service providers to use and enhance it. It is intended to become a commodity, something that has very little cost to deploy and can be found from many providers. The main aim of universAAL is providing the strongest input to the creation of this infrastructure and to donate it to AALOA, so that it can have a future after universAAL is finished.

4.2 Requirements

We try to define how the association should work to be successful, by listing a set of requirements. These should work as guidelines when decisions will be taken regarding the organisation and the governance of the association.

4.2.1 *Technology neutrality*

While in the end we aim at a universal platform for AAL, which should be a standard commodity and hence probably unique, we don't know yet what it will be and what shape it will have. Much research and implementation efforts are still required. In order to encourage visionary contributions and open the views of AALOA, no commitment, even no preference needs to be given to any specific technology for the platform. The association will be open to different, concurrent solutions, even if these will naturally be in competition between them.

Technology neutrality will probably be set aside in a second phase of the association's life, when a single winner will emerge from the host of solutions that we hope AALOA will nurture. When that point will be reached, the association will take a more commercial-oriented attitude and will, at least partially, give up on its initially research-oriented attitude open to any possible solution.

4.2.2 *Transparency*

In order to gain credit among all the stakeholders, AALOA will be committed to transparency at all levels.

Governance will be managed by a set of organs that are elected or nominated through well-defined and publicly known procedures. Currently, the only organ that is active is Governing Board, which was created by admitting a single representative of each of the interested (volunteer) institutions among those that subscribed to the association's mailing list. This happened at least two months after the creation of AALOA was announced in the public events above mentioned and its web site was up, with invitation to interested people to subscribe to the mailing list. The AALOA Governing Board is not closed to accepting new interested participants, and is however intended only as a temporary, informal governance body in the time preceding the incorporation. The leader of each project incubated in AALOA becomes a member of the Governing Board as soon as the release of some artefact is accomplished.

Transparency will be compulsory in the management of the AALOA's *projects*. Most projects will care about development of software artifacts, but some may have different objectives, like the EvAAL competition, which will be organised into an AALOA project. Projects will be self-governing, but some rules will be given, among which transparency on governance rules.

4.2.3 *Openness*

AALOA will be open in the sense that it will accept contributions without prejudice of provenance and, especially in its first, research-oriented phase, without prejudice of technological solution. Membership will be based on functional criteria.

Moreover, AALOA will be open with respects to the results it produces; specifications, documentation or software. AALOA is strongly committed to using FLOSS licenses for software and similar open access criteria for specifications and documentation.

4.2.4 *Non profit*

AALOA will always be a non-profit organisation.

To be continued in version D8.1-B.

4.2.5 *Emerging of diversity*

To be continued in version D8.1-B.

4.2.6 *Simple Management*

To be continued in version D8.1-B.

4.2.7 *Simple Commitment*

To be continued in version D8.1-B.

4.3 The community roadmap

AALOA has already started its activities, as mentioned above. While it is not easy to foresee what will be its evolution path, such an exercise is of great importance, both because AALOA needs a direction to follow and because new partners can only be attracted if we show them a credible vision.

4.3.1 *During the project lifetime*

The first initiatives around AALOA have been mentioned at the beginning of this section. We now need to advertise it more widely, in order to attract mainly developers and academic contributors. Industries are important in the first phase mostly as counsellors and providers of development forces. What is needed now is people wanting to start *projects* inside AALOA. UniversAAL is starting the EvAAL competition, the FP6 PERSONA project is starting the Zigbee4Osgi project hosted at <http://zb4osgi.aaloo.org> and the Austrian project NovaHome is starting HOMER project (HOME Event Recognition System) hosted at <http://homer.aaloo.org>. Other projects like OASIS and BRAID have expressed interest in contributing to AALOA by incubating projects. Once at least four or five projects have been established, it will probably be time to incorporate the association. This will give it a more solid stance and a better aspect from the outside, at the expense of some bureaucratic overhead. CNR has already donated a server to AALOA, which is currently hosting all of AALOA's services. When we will have two or three projects, it will be wise to have a redundant server donated by some other institution: ITACA and Fraunhofer-IGD have already declared that they are willing to do that.

Once AALOA is incorporated and working (that could happen towards the end of 2011), priorities should be chosen. Possible priorities at that time could be enlarging the number of members, targeting some particularly interesting entities to convince them to become members, increasing the number of active projects, starting some specific projects with the aim of dissemination (e.g. a yearly exhibition or conference, or establishing liaisons with an established conference).

Probably towards the end of 2012 AALOA will have to start changing shape. This will be the second phase of its life. The shape change may happen near or after the end of universAAL lifetime, so we discuss it in the next section.

4.3.2 *After the project lifetime*

When AALOA has matured enough to host several projects of which at least one is mature enough to be considered for final engineering and production, AALOA will probably take a decision on a single technology to focus on. This may be an abrupt process or a smooth one, where a single platform will be endorsed by AALOA or simply a single platform will get the most attention from AALOA's governance. After this decision, all or most of AALOA's efforts should be directed to promote the chosen platform and to push it towards a suitable development stage.

Such change should be led primarily by industrial partners, and accompanied by a substantial change in leadership and governance. AALOA should switch, more or less abruptly, from a research-oriented attitude

where academics and developers lead the way, with industries as counsellors and contributors, to a market-oriented attitude, with industries leading the way with academics as counsellors.

In the second phase of AALOA's life, it will strive to include members from a wider range of stakeholders: policy makers, industrial associations, service providers, caregivers and society groups will need to be involved, from as much European countries as possible.

National regulators will need to be contacted or involved, in order to harmonise legislative requirements across Europe and allow a single market to be born. AALOA could serve as a lobbying center, and could seek the status of European Technology Platforms (ETP).

The above planning sees AALOA as the center of AAL initiatives in Europe. This might not probably be the case, but it is not possible now to foresee which other entities are going to gain importance in the field. Most likely, AALOA will try to get in touch and associate, incorporate or merge with other initiative of a similar scope.

4.4 Supporting the association and community

AALOA existence was initially given only by its website and mailing lists. A community is now starting to gather around them, and it should be supported with services. The services provided by AALOA at this stage are mostly services for developers and for collaborative working. They are hosted on a server donated by CNR.

4.4.1 Website

AALOA's web site (at <http://aaloa.org/>) is the portal to all of AALOA's services and contains the documents regarding the association, the most important of which is the AALOA Manifesto. Other than that, it contains text explaining in more detail what we plan to do within AALOA, how we plan it will be organised and a call for participation.

4.4.2 Mailing Lists

Mailing lists are currently the main medium used to create the community. They are currently non moderate and subscription is free. The activated mailing list are:

- info@aaloa.org, to contact AALOA (reflector)
- supporters@aaloa.org, the subscribers of the Manifesto (public)
- promoters@aaloa.org, people interested to the organizational aspects of AALOA (public)
- board@aaloa.org, the AALOA Governing Board (private)
- infrastructure@aaloa.org, the people setting up the infrastructure of AALOA (private)

There are other mailing lists activated for each project, typically a private mailing list for the steering board and a number of mailing list depending of the project requirements. In this moment we have mailing list activated for the following projects:

- Zigb4Osgi (dev@zb4osgi.aaloa.org, board@zb4osgi.aaloa.org)
- EvAAL (steering@evaal.aaloa.org, localization-pc@evaal.aaloa.org, contest@evaal.aaloa.org)
- Homer (dev@homer.aaloa.org, board@homer.aaloa.org)

4.4.3 Services offered to developers communities of incubated projects

Many of service facilities and general tools offered to each incubated project can be activated on request from the project leader, few of them are mandatory:

- Domain Registration,

Each incubated project has a mandatory domain name as follow: <http://<project name>.aaloa.org>

- Content Management System (CMS)

The CMS selected in AALOA is Joomla (<http://www.joomla.org/>).

- Project Management System (PMS)

The selected PMS is Redmine (<http://www.redmine.org/>)

- Software Code Management (SCM)

The selected SCM is SubVersion (<http://www.redmine.org/>). Each incubated project must use the AALOA SVN repository

- Software Artifacts Repository (SAR)

The selected SAR is Nexus (<http://nexus.sonatype.org/>), a Maven based repository (<http://maven.apache.org/>)

- Mailing lists

The select mailing system is based on Mailman (<http://www.gnu.org/software/mailman/index.html>). Communities are invited to open mailing list using the format: <list-name>@<project name>.aaloa.org

- Web Server

The web servers used by AALOA are Apache and Tomcat (<http://tomcat.apache.org/>)

4.4.4 Consortium members participation to the community life

Many members of universAAL are part of the (currently small) community of AALOA. People from AIT, CNR, Fraunhofer, FZI, ITACA, Philips, Prosys, SINTEF, TSB, UPM and UPV are subscribed to the mailing lists. We must reach a delicate balance here. It is important that universAAL's members are involved in AALOA's life, but it is also important their presence not to be overwhelming: AALOA is not universAAL's, and while universAAL is currently the main thrust behind it, it is paramount that AALOA be independent of universAAL and that it *looks* independent as far as possible. universAAL community will be created around the projects incubated by the consortium within AALOA as soon as projects results will be available.

5. FLOSS policy, business models and universAAL exploitation

We need to attract all the AAL stakeholders, firstly in Europe and as much as possible in the rest of the world. There are several types of stakeholders that we should like to be involved, and each of them has different needs and characteristics; each can contribute in a different way; each should be approached appropriately.

5.1 Attracting members to the association

We need to attract all the AAL stakeholders, firstly in Europe and as much as possible in the rest of the world. There are several types of stakeholders that we should like to be involved, and each of them has different needs and characteristics; each can contribute in a different way; each should be approached appropriately.

5.1.1 Industrial stakeholders

Industrial stakeholders are of paramount importance for the real adoption of AAL in the market. The involvement of industry must be seriously addressed from the beginning of the community. Without the inclusion of the small as well as big industrial stakeholders, the adopted platform and development conducted under the umbrella of AALOA will not be as likely to gain a wide support and adoption. In other words, without such players AALOA will not have a sustainable future.

As AALOA takes a start in the needs and desires of the industry stakeholders, we must assume that these stakeholders should have a clear interest in being a part of the association, that is, if AALOA indeed manages to identify the right needs of the stakeholders.

AALOA will attract the key industry stakeholder through identifying what their needs are in relation to creating a sustainable market with prosperous growth opportunities. AALOA should serve a clear purpose for these industrial stakeholders' value chains, e.g. as a marketing and sales channel, procurement channel or place where the industrial players can develop their technologies through competitive benchmarking.

AALOA must attract the industrial stakeholders in order to gain a sustainable value in the market. The association must therefore be more than a simple membership organization, in which members talk about AAL. The association must attract the industry through providing it with a unique set of value-creating activities that cannot easily be copied by other associations in the market.

Being an association, AALOA will build virtual as well as real networks in places such as conferences, Facebook, through the website and through other viral marketing efforts such as wiki pages, YouTube videos and so on. Here, all the stakeholders of AALOA will meet and share opinions and experiences on AAL. The goal of such initiatives is to create synergetic relationships across the stakeholders and to create new products, services and indeed also ideas to how the market of AAL should become sustainable and profitable for the industry.

5.1.2 Academic stakeholders

Academics are of key importance to AALOA as many European academies have been exploring the technical possibilities of AAL. There are a consistent number of publications and results that are ready to be exploited in a potential market. Academies are a key partner of the association because they must drive the transference of knowledge from the research to the industry, within the association. AALOA should thus be an important facilitator of material as well as information across the stakeholder boundaries, thereby shortening the distance from research to industry and society.

AALOA will attract these stakeholders by exploiting the relationships between the partners of the group and other universities. It will also advertise the community in scientific conferences, meetings or academic events. Furthermore, the association should identify key areas of importance to the academics and actively support these areas through activities and services offered through the community.

5.1.3 *Society stakeholders*

Society stakeholders are those entities created within the society, not necessarily related to the public system. Examples are associations of elderly people, residences for elderly, and associations for chronic illness. Also technical associations are welcome, for instance free software associations, industry related groups, medical groups.

Given the high variety of the associations that could be involved in AALOA, different strategies must be put in place for each sector. As an example hereby we provide a strategy for three groups:

- 1) Associations of elderly and ill people. These associations are usually much localized. Language issues must be taken into consideration. These associations must be involved in the discussion about how to address the needs of the users and to validate the proposals raised in the community.
- 2) Associations of care givers (doctors, nurses, geriatrics). These groups must be also contacted to analyze the needs of the elderly population, but from a medical point of view. The medical needs will give advice to what kind of services can be created on top of the universAAL platform and the members could be contacted to validate the proposals.
- 3) Associations of developers. These groups must be involved in the AALOA in order to motivate the cooperation among industries, researchers, and individual developers. The aim is to stimulate the creation of open source code that could be reused in the community and create business opportunities.

These groups should be contacted exploiting the contacts of the project's partners and by advertising AALOA at specific events and conferences.

5.1.4 *Institutional stakeholders*

Institutional stakeholders are those who are part of the public system, like the ministries, public health associations, hospitals, medical care centers. The aim of their involvement is to push the solutions produced within the AALOA community into the public system and to raise awareness. Moreover the institutions could help the community to harmonize the work in terms of legal requirements for the applications being developed. The inclusion of such stakeholders is thus important to AALOA to ensure sustainable solutions and to lobby the association's stakeholders' interests.

These groups must be contacted through active networking, e.g. through the European contacts within the project. AALOA should furthermore be advertized at specific conferences and events relating to such stakeholders.

5.1.5 *Individual stakeholders*

Individuals are also welcome to AALOA; in particular the community should involve persons of high scientific relevance, or persons who can give good visibility to the project. Examples are journalists, scientists, famous researchers, politicians.

These individuals should be approached personally, rising their interest in public events or by sending direct information to the personal contact.

5.2 How the association organization can influence the universAAL joint exploitation

This section will be completed in conjunction to the WP9.3 working on the exploitation plan.

6. Conclusion

During the first year of activity the dissemination of the AALOA Manifesto has successfully attracted interested people to the discussion. The building of the AALOA community has been recognized as essential for the survival of the universAAL results beyond the project end. By the way, the diverse point of views on the characterization of the AAL domain and the different role of the stakeholders involved - researchers, end user representatives, SMEs - make the interests of this group of people very heterogeneous. Although we reached a good level of dissemination, this is not sufficient to maintain a cohesive community. More attention and work must be done to aggregate the people around common objectives, by proposing concrete actions. At first glance, the mission of the Manifesto can be endorsed by many of them, but still it must be defined how the objectives of a common platform will be achieved and the procedures we will put in place to accomplish that may create problems. We need to be prepared to face different kind of problems, to name a few:

- The governance rules/body must be discussed and consensus be reached.
- The number/quality of incubated projects may not be sufficient or enough stable
- The participation only on volunteer basis may be not satisfactory,
- Relevant organizations in the domain may not endorse AALOA activities adequately
- The “not invented here” syndrome can limit the growth of the community

It is clear that universAAL community, currently formed by the partners belonging to the project consortium, has the ambition to promote its own investigation in the AAL domain. But not all the aspects can be faced by the universAAL consortium, for example we don't have experience in the robotic field. Thus it is also clear that the impact of our findings, as well of any other EU project working in this area, will be limited without a larger community interested in working on the platform concept and the relevant implications at social, economical and technological level.

The next versions of the deliverable will report on the current discussion on the governance rules and the way to create consensus, the procedure to activate working groups, and define common interface and components for a shared platform, the general status of AALOA, the number of the active projects and details on their relevant activities , and finally the process for incorporating AALOA.

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Appendix A. The AALOA Manifesto

Version 0.14

AAL (Ambient Assisted Living) has great potential for positively influencing the lives of many people. But impact so far has been less than hoped, partly due to fragmentation of research efforts and the lack of a standardised approach for developers. To address this, we are forming the AALOA (AAL Open Association), and invite you to join in our efforts.

AAL - promising but problematic

The abbreviation “AAL” stands for Ambient Assisted Living⁵ and is about making smart use of technology to support well-being in the preferred living environment for people who might otherwise find this difficult (e.g. infirm or very elderly people who want to continue living in their own homes). Research in the area is motivated by socio-political issues of the ageing population, and offers a promising approach with potentially wide-reaching benefits. It involves many ICT-related R&D disciplines in an application field that has attracted much attention. Several initiatives have emerged to tackle the challenges involved⁶, and significant incremental progress has been achieved on many fronts. But a major AAL breakthrough, leading to a standardized approach and thereby to widespread adoption, is still not in sight. A way of doing things that has general acceptance and can almost be assumed, like the Apache Server is in the web world, is missing in the world of AAL.

Why have there been no AAL breakthroughs?

From an R&D perspective, part of the answer is to be found in fragmentation of research efforts in the area of Aml (*Ambient Intelligence*⁷ - also referred to as Ubiquitous and Pervasive Computing^{8,9}). Aml is the key research discipline that underpins the domain of AAL, and many innovative ideas and approaches have emerged from research projects, conferences etc. in recent years. The field has matured over time – but so far with no converging conclusions.

From a market perspective, there are two obstacles. The first arises from the lack of technical convergence: this leads to development of very different technical solutions that are difficult to compare, so there is no baseline against which to assess user experiences in the types of scenarios envisaged by Aml. It's hard to market something whose benefits you can't clearly quantify. The second obstacle is market fragmentation. The whole concept of “ambience” is all about making use of everything around you as part of a single overall solution. But today's commercial reality is that the growing number and types of devices around us (mobile phones, home theatres, games consoles, media servers, home gateways etc.) are treated as separate market segments – even though the devices themselves have the potential to interact. A paradigm shift is needed, but who will risk the investments and changes in business models needed in the absence of a precise model adopted by a large ecosystem of artifacts?

The concept of *co-opetition*¹⁰ - collaboration among competitors - has been put forward as a way to achieve commoditized infrastructures and been successfully deployed in some cases. But for there to be any chance of a real paradigm shift, a transversal cooperation over diverse market segments with the involvement of many stakeholders is needed. That is one of the key things that the AALOA aims to achieve.

AALOA – an Open Association promoting AAL research, development uptake and impact

The subscribers of this manifesto consider that the time has come to do something about the problems hindering progress in the area of AAL. We believe that this is something that transcends individual

⁵ Ambient Assisted Living as introduced to the European research: <http://www.aal169.org/Published/aal2103.pdf>, 2006

⁶ E.g., <http://www.aal-europe.eu/aal-association>, <http://www.aaliance.eu/>, and <http://www.continuaalliance.org/>

⁷ Emile Aarts & José Encarnação: “True Visions: The Emergence of Ambient Intelligence”, Springer, 2006

⁸ Mark Weiser: “The Computer for the 21st”, 1991

⁹ M. Satyanarayanan: “Pervasive Computing: Vision and Challenges”, 2001

¹⁰ Adam M. Brandenburger, Ada Brandenberger, Barry J. Nalebuff: “Co-opetition”, 1997

projects or organizations, and needs a long-term approach, with broad involvement from all types of stakeholders. This manifesto is intended as an invitation to join us in our **mission**, which is to:

- Bring together the resources, tools and people involved in AAL in a single forum that makes it much easier to reach conclusions on provisions needed to achieve AAL progress;
- Make sure that all technology providers, service providers and research institutions involved in AAL are either directly involved in AALOA or (as a minimum) aware of decisions it promotes;
- Involve end-user representatives in all work of AALOA;
- Identify key research topics in AAL, and reach agreement on prioritization of these;
- Design, develop, evaluate, standardize and maintain a common service platform for AAL.

Our mission is founded on a **long-term technical vision**. This will evolve over time, but gives an indication at the initiation stage of the direction in which we want to go. In our vision, ordinary hardware resources such as displays, keyboards and storage devices that nowadays need drivers integrated into Operating Systems (OS) will evolve into pluggable networked resources. We foresee the emergence of new programming languages, based on resource and service discovery paradigms, facilitating the development of Aml applications.

There will be a shift away from the idea of developing applications that run on different PCs and OSs towards the concept of developing applications for “AAL spaces”. Middleware¹¹ will be widely used, and help developers to identify the features available in the environment (sensors, other devices, services) and write programs which can exploit large classes of them effectively, without needing to know their actual whereabouts or be concerned with low-level configuration details.

This will involve more than just developing pluggable components: it will mean that developers will effectively be able to contribute to several distributed applications - without even knowing all of them beforehand. “AAL Spaces” will become the equivalent of today’s PCs (in terms of widespread availability, standardization and acceptance) and new markets will emerge for software and hardware products, involving houses, cars, airports, hospitals and public spaces.

¹¹ P. Bellavista, A. Corradi “The Handbook of Mobile Middleware” 2006

Getting started: defining a reference architecture

The hardware specification of the original IBM PC of the eighties, when several independent manufacturers started to produce peripherals and compatible hardware thanks to the standardization of connector interfaces and the availability of specifications, was one of the key enablers that led to the ubiquity of PCs we know today.

One of the first tasks of the AALOA will be to do something similar for the AAL domain: define a *reference architecture* to standardize the resources available in AAL environments, and how to integrate them. This will encourage the creation of new brands and the coalition of firms around new business opportunities.

Your AALOA needs YOU

To achieve our mission, and contribute to bringing about this long-term vision, the subscribers of this manifesto started to incubate the AALOA – the Ambient Assisted Living Open Association. As its name suggests, anyone can join the AALOA, and this manifesto should be considered as a direct invitation to do so.

The AALOA can only achieve its mission if its membership represents a significant proportion of the people and organisations involved in AAL/Aml, in one



way or another. We invite you to join the association, and to participate in its activities: to bring fresh ideas, to propose workshops and projects and to contribute actively to

the growth of the association. For details of how to join, please visit:

<http://www.aaloo.org>

The detailed organisational structure of the AALOA is in the process of being formalised in a set of statutes. These are still under development, and people responding to the invitation to join will have the opportunity to influence their development.

We envision a not-for-profit organization, with two boards that nominate common elective offices: a

Governing Board following common best practices of open source communities and an Advisory Board composed of industry and user communities. The latter will be organized into working groups whose role is to advise AALOA's open source community about emerging technical and market challenges.

The Open Source policy

The importance of open source software in the industry has risen to prominence in recent years, especially in the development of software infrastructures. Closed, proprietary approaches become less attractive as standardised infrastructure software becomes a commodity: high development costs due to the complexity of such software, uncertainty due to the "winner-takes-all" effect and diminishing marginal returns make the market for infrastructure software a risky business. The open source approach, on the other hand, promises easier software maintenance, allows cooperation between competitors and helps spread production costs over a multiplicity of stakeholders^{12,13}.

Call for project proposals

The association will be organised as a *federation of projects*, one representative of each project being a member of the Governing Board.

Proposals for new projects can be submitted to the Governing Board, whose main role will be their evaluation with respect to the association's mission, while still encouraging the emergence of diversity, and avoiding monoculture. Projects will autonomously organize their governance rules. Over time common rules suggested by practice may be formally adopted.

As one of the association's objectives involves building an open source community working on service platforms for AAL, projects related to software development are to be expected. But we emphasise that other types of projects are also welcome. The next section describes an example of one such.

We are setting up resources for building and managing projects. You can access these resources by submitting a project proposal with a list of individuals or organizations that support your project idea. Visit the

web page at <http://www.aaloa.org/projects> for details.

The EvAAL International Competition

EvAAL has been the first project proposed to AALOA promoters and it is a paramount for the AALOA purposes. In fact, an important action for the assessment of the research results in this area is based on the analysis and comparison of the existing solutions provided by the research community¹⁴. To this end, we intend to promote an international competition called EvAAL ("Evaluating AAL Systems through Competitive Benchmarking"). The competition is intended to raise awareness of and interest in AAL, and to spread knowledge about the state-of-the art to a large audience. To do this, we will issue an annual "Call for Competition Ideas", in which we will invite practitioners and experts to propose the topics and rules for that year's competition. The idea received will be assessed and possibly merged, before the competition itself is announced. The competition itself will invite people to compete by developing hardware/software artefacts supporting the selected topic.

Generally, the competition will be organized around one or several of the functions enabling AAL spaces, such as:

- sensing
- reasoning
- acting
- interacting
- communicating

In order to stimulate the participation of PhD students, a cash prize will be awarded to the competition winner(s) each year. We would like this to be something significant, such as an amount equivalent to a research grant for one year at an international university. All participants in the contest will have the opportunity of publishing a peer-reviewed paper describing their system. For details about the contest please visit the EvAAL web site at <http://evaal.aaloa.org>.

¹² François Letellier "Open Source Software: the Role of Nonprofits in Federating Business and Innovation Ecosystems" 2008

¹³ Brian Behlendorf "Open Source as a Business Strategy" 1999

¹⁴ K. Connelly, K.A. Siek, I. Mulder, S. Neely, G. Stevenson, C. Kray "Evaluating Pervasive and Ubiquitous Systems" 2008

Acknowledgments

The idea of forming the association arose from discussions between some of the institutions involved in the projects PERSONA and universAAL, funded respectively in FP6 and FP7 (the Sixth and Seventh Framework Programme of the EU), but similar ideas were also discussed by partners of other projects who had recognised the need for a common effort in the field of AAL/Aml, as well. Today, the Manifesto is a dissemination effort of the EU projects BRAID, MonAml, OASIS, OsAml-commons, PERSONA, SOPRANO, universAAL and WASP. The subscribers listed below are people who support the ideas promoted by the Manifesto and are willing to participate in the life of the association.

In addition to the subscribers, there are few promoting organisations (details to be found on the Web site) that have allocated resources for carrying out the tasks in the incubation phase of AALOA, until its bylaws are finalised and the association itself is established as a legal entity. Nevertheless, more effort and voluntary contribution is still needed. Hence, we encourage you, as the reader of this manifesto, to get involved in this open process! This Manifesto will be revisited regularly to refine the vision and mission of the association with the contribution of its members.

Subscribers

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