

Open minds

AALOA's Thomas Karopka, Francesco Potortì and Sten Hanke provide insight into the association's ongoing work to find a common platform for independent living applications...

Healthy and active ageing is one of the main challenges for most industrialised nations and a key issue on Europe's agenda for the period 2014-2020. The number of people aged 60 and over in the EU is now rising by more than two million every year.¹ This raises the question of how to transform this challenge to our societies into a driver of economy and create a win-win situation?

One of the envisioned solutions is the application of assistive technology combined with newly created services to allow people to live an independent life for as long as possible.

Research in this area involves many ICT related R&D disciplines and has attracted much attention in the last couple of years. Several initiatives have emerged to tackle the challenges involved, and significant incremental progress has been made on many fronts. But a major breakthrough, leading to a standardised approach and thereby to widespread adoption, is still not in sight.

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One of the main problems from the technological point of view is fragmentation. The mission of AALOA, the Ambient Assisted Living Open Association, is to address this situation by bringing together the resources, tools and people involved in Ambient Assisted Living (AAL) in a single forum that makes it much easier to reach conclusions on provisions needed to achieve progress.² A concrete technical objective is to promote a common platform or middleware that is distributed as open source software.

What is open source software?

Open source software is provided under a copyright license that allows the user access to the source code of a product together with the rights to modify, enhance and redistribute



it. The software is ideally suited for cooperative, co-creative development.

The importance of open source software in the industry has grown 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, has the potential of easier software maintenance, facilitates cooperation between competitors and helps spread production costs over a multiplicity of stakeholders.

One successful example of an open source-based infrastructure is the GNU/Linux operating system, which a multitude of companies have since opted to base their business on. In the mobile phone market, the Android operating system – based on GNU/Linux – has created a large ecosystem and allowed a very diverse landscape of products ranging from simple mobile phones to smartphones and tablets. The vision of AALOA is to create a similar ecosystem for the domain of assistive technology for independent living. In contrast with the consumer electronics industry, where the technology is the ‘product’ that has to be marketed and return its investment, in AAL the ‘products’ are services that make use of this technology.

Assisted living and the EU's ageing challenge

Europe's expanding elderly population and the need to access health and care services have led to the growth of the assisted living technologies market. Spending on healthcare in Europe stands at 8.5% of GDP and is rising faster than economic growth. By 2020, it is estimated that 25% of the EU will be aged over 65. Between 2010 and 2030, the number of people aged from 65 to 80 will rise by nearly 40%.

The European Commission sees ICT as central to enhancing quality of life for elderly people. Since 2008, the European e-Inclusion policy has focused on raising awareness of how technology can be empowering and removing the barriers to older people using ICT, including lack of affordability, access, motivation and skills, and an unwillingness to embrace new technologies.

The Commission's Ambient Assisted Living Joint Programme (AAL JP) aims to provide innovative, ICT-based products, services or systems that make life easier for older people while strengthening Europe's industrial base.

Launched in 2008, with a planned budget of €700m, AAL JP is set to run to 2013. A Fifth Call for Proposals: 'ICT-based Solutions for Self-Management of Daily Activities of Older Adults at Home', was launched in February 2012 and will close on 31st May 2012. Call five aims to develop ICT-based solutions that help older adults to continue to manage their day-to-day activities in their home, as well as innovations that support informal carers at home.

Lack of standardisation is not the only problem hindering widespread adoption, as there are legal and regulatory issues (eg liability) and financial issues (eg reimbursement, the question of who pays). Focusing on technological aspects, an open platform that allows SMEs to use this common framework as a basis for their innovative products and services has the potential to be the most effective and efficient way to foster the emerging market of assistive technology for the elderly.

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Community building and the Lecce Declaration

One of the main tasks of AALOA is promoting community building among all stakeholder groups. Two main initiatives have been brought forth so far. The AMB11 workshop, organised together with the e-Inclusion unit of the EC and supported by the Ambient Assisted Living Association (AALA), was targeted at SMEs willing to integrate their product into a common platform.³ The workshop follow-up was the Lecce Declaration,⁴ which gained support from 44 projects, mostly at the EU level. The declaration proposes a set of key measures for market breakthrough of AAL and was sent as AAL community input to the high-level steering group working for a pilot European Innovation Partnership on Active and Healthy Ageing.⁵ Examples of key measures include:

- Support to ecosystem building;
- Definition of an interoperability framework;
- Long term support of a recognised body in charge of platform maintenance based on a consensus building process.

Current status and objectives

Currently, AALOA hosts three software projects and two research-oriented community building and dissemination projects. The short-term objective is to accept AAL related projects under the AALOA umbrella and converge to a common open source AAL middleware layer complete with specifications, with the ambition of becoming a standard commodity for the implementation of services in the field of AAL. The way to achieving this objective involves attracting a community of stakeholders including developers, academy, industry, standards organisations, social institutions and policymakers.

¹ Eurostat, Demography Report 2010, ISBN 978-92-79-17603-6

² AALOA Manifesto, <http://aaloa.org/manifesto>

³ AMB11, <http://aaloa.org/workshops/amb11>

⁴ Lecce Declaration, www.aalforum.eu/group/leccedeclaration

⁵ EIP-AHA, <http://ec.europa.eu/active-healthy-ageing>

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