# m·power

## What is MPOWER?

Middleware platform for eMPOWERing cognitive disabled and elderly – is a IST project running from October 2006 to March 2009. The project objective is to develop a middleware platform supporting rapid development and deployment of services for cognitive disabled and older people. This is accomplished through an iterative user driven process. The project follows an agile approach where all activities are planned and performed in short iterations.

## Partners:

SINTEF (NO)
Ericsson Nikola Tesla (CR)
ARCS (AT)
PIV/NCDR (NO)
TB-Solution (ES)
CMUJ (PL)
UCY (CY)
Dimension Informatica (ES)

## Deliverables from MPOWER:

Scientific and popular science articles
Project reports
Work-shops
Middleware components
Reference Architecture

## Project web-page:

www.mpower-project.eu

## Status of the work in MPOWER

At the end of month 18 of MPOWER the project is mainly on track with regard to the project plan.

This newsletter informs on the following:

- Standardisation
- Knowledge exchange with other projects – find common services
- Evaluation of MPOWER technology – metrics to measure success.
- Business plan

## MPOWER and Standardisation

Ole Martin Winnem (SINTEF)

First, with regard to contribution to standards, we are doing the following: SINTEF will work through our partner in the Linkcare project and the Nexes project, which is a promoting member in Continua, to communicate with the Continua alliance with input on the MPOWER platform and knowledge. Second, ARC will work towards Continua through the MPOWER appliance of ISO/IEEE 11073-1047 standard for domotic sensors. ARC is a member of the national standardisation body ON-AG 238.04 and the European group ISO/TC 215 that is defining the IEEE 11073-1047 standard. Many of the same people that are active in ISO are active in the Continua alliance. We believe that the most relevant contribution we can give to the Continua alliance is to provide them feedback on the use of the standards they are producing and the products they deliver. One can see MPOWER as a reference implementation to Continua, applying products and standards they are providing. This is important feedback and knowledge that we can provide to the alliance. Third, through ETK and the National contact point for Croatia to HL7 we are working along two lines towards HL7. First, we can provide HL7 input on the challenges and benefits of applying HL7 in the independent living domain. Second, and equally interesting, is that we have developed services and information models in MPOWER, that is relevant to the domain, that HL7 has not standardised. It is two services in particular, reminder service and message board, two services heavily used in MPOWER. This will be provided as input to HL7, and it is up to them if they consider it relevant to start standardisation initiatives based on this

## Cooperation with other projects

MPOWER has initiated cooperation with the PERSONA project. The technical manager in MPOWER first became aware of the PERSONA project during the Tromsø Telemedicine and eHealth conference (Tromsø, Norway) in 2007. After the presentation of the MPOWER project, there was a discussion on methodology and tools with partners from the PERSONA project. The technical manager of MPOWER has weekly meetings with a technical manager of PERSONA at the University of Tromsø, Norway. In a telephone conference in April 2008 (two from PERSONA, one from MPOWER), it was decided to share results and experience. The project manager and technical manager in MPOWER participated in the PERSONA meeting in Copenhagen ultimo May 2008. We have identified several areas of cooperation, including dissemination, user needs and services. We have also submitted a proposal to a joint workshop in an upcoming conference.

## Evaluation of MPOWER Results

In MPOWER, there are three main technologies to evaluate. These are; the toolchain, the middleware services, and the proof of concept applications. The toolchain has already been evaluated once by the developers in the project. Results are published as a scientific paper *"Factors affecting developers' use of MDSD in the Healthcare Domain: Evaluation from the MPOWER Project"* in the European Conference of Model Driven Architecture, Workshop "From Code Centric to Model Centric Software Engineering: Practices, Implications and ROI" (http://www.esi.es/modelplex/c2m/ ) In addition, we are in the planning phase of an experiment in Tromsø, Norway, where developers from the health informatics domain are invited to a 3-4 day workshop on Model Driven Software Development using the MPOWER middleware and toolchain. The workshop will be a given as a course in model driven development along with 1-day exercises where the participants will create an application by creating new services and reusing MPOWER services. The evaluation will use a cross-over design where the toolchain will be evaluated against a traditional development process with e.g. Eclipse IDE as the primary development tool. The proof of concept application in Norway has been installed in the homes of 4 users. We are continuously gathering feedback and knowledge from the elderly, their cares, and the loved ones, that we use to improve the Norwegian POCA. The Polish POCA is in user acceptance testing, and installation at site is started in June, and we will start gathering evaluation data on the poca then. Also, we are aiming to use SUMI as a tool to evaluate the Proof-of-concept applications (pocas) both in Norway and Poland, which will give us the possibility to compare the strengths and weaknesses of the two applications.