MyWear Newsletter Nº3 - May 2013

Developing new process technologies in order to realize a new generation of customized, eco-friendly, safe, healthy and smart work wear and sportswear products for elderly, obese, diabetics and disabled people is the MyWear goal.

Data Integration Platform development

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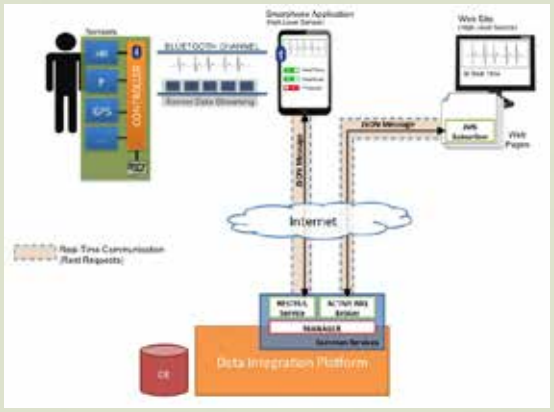
The different nature of the software components involved in the MyWear system requires a shared communication layer. The development of this layer is carried out within WP2 activities. Indeed, one of the main goal of this WP is to develop the Data Integration Platform (DIP) that enables centralized communication and data management in the MyWear distributed system. This software componenent is able to share data among High Level Services (i.e. websites, dedicated applications, ...) in real-time. The DIP sends all the information that receives from the Smartphone to the High Level Service in real time. Thanks to that, for example the doctor that is watching the browser in the office can see the information of the patient in real time. Nevertheless the real time customers' data transfer has always a small delay due the fact that the communication is performed over the internet, so the data cannot be sent to the DIP and at the same moment resent to the High Level Services. To overcome this issue, messages over commmunication channels have to contain a timestamp, that allows every software involved into the architecture to rebuild the data timeline.

A Java Message Service (JMS) API has been used, that allows the communication between different components of a distributed application to be loosely coupled, reliable, and asynchronous, thus able to send the information in real time with just one request done by High Level Services.

ROPARDO performed many tests in order to assess the suitability of using a JMS solution for MYWEAR project: data acquisition from sensors, using mobile devices (Android based) and sending of acquired information to



DIP using a JMS server as a broker. The basic test scenario involves sending messages from mobile device, receiving them on the server application and computing various statistics, varying:

- the message size: in order to decide the strategy for sending the sensor's samples,
- the number of messages: to check if there is a "setup" time while initiating the transmission and if the queue performance remains constant while sending an increasing number of messages,
- the connection type: to select the best connection channel and defined the required constraints.

JMS can be used to support the MYWEAR Data Integration Platform and mobile applications with certain performance restrictions.

The performed tests results bring to the following considerations:

- Mobile device and networking are the bottlenecks in the system and they set the boundaries regarding the speed and method of transmission;
- The only viable solution to send high-rate samples is to aggregate several of them in bigger messages and send them all at once. Sending many small messages (each one a sample) was not possible using the test hardware (due to network latencies and mobile device capabilities). Even sending bigger messages at a smaller rate depleted the battery rather fast. For a mobile device in the field this could be a big problem.

CeBIT 2013

Contributed by: Gabriela Candea, Ropardo

CeBIT is the world's largest trade fair showcasing digital IT and telecommunications solutions for home and work environments. The key target groups are users from industry, the wholesale/retail sector, skilled trades, banks, the services sector, government agencies, science and all users passionate about technology. CeBIT offers an international platform for comparing notes on current industry trends, networking, and product presentations. More than 4,000 companies from 70 countries took part in CeBIT 2013, including numerous start-ups.

ROPARDO S.R.L. attended like exhibitor at CeBIT 2013 within Romanian Stand and presented the commercial services but also the research capabilities and services. Like an active partner in research projects, ROPARDO took full advantage about EEN-future match (international cooperative market by CeBIT lab and Enterprise Europe Network-EEN) in order to spread and disseminate the information about results from running projects.

Upcoming events

Title	When?	Type	For whom?	Moer info?
Prèventica	France, May & Sept 2013	Exhibition	Reasearch & industry	www.preventica.com
World Manufacturing Forum 2013	USA, October 2013	Conference	Reasearch & industry	www.worldmanufacturingforum.org
A+A 2013	Germany, November 2013	Exhibition	Reasearch & industry	www.aplusa-online.com

MORE INFO:
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SEVENTH FRAMEWORK PROGRAMME

MYWEAR

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