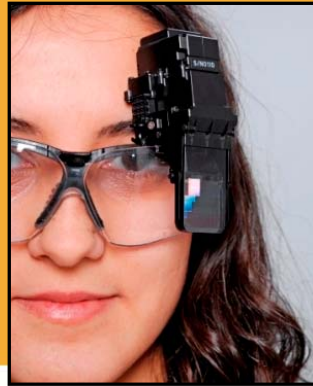


WEARIT@WORK: Empowering the mobile worker by wearable computing



Project Description

wearIT@work sets the stage for the applicability of wearable computer in various industrial environments.

wearIT@work novel computer systems support their users or groups of users in an unobtrusive way. This allows them to perform their primary task without distracting their attention enabling computer applications in novel fields.

Interaction with wearables by the user is minimal to realize optimal system behaviour. For this reason the current work progress of a user might be detected by integrated sensors. Based on the work context detected the system pushes useful information to its user, e.g., how to proceed with the work. Apart from speech output, media could be optical systems presenting the information, e.g., via semi-transparent glasses within the workers visual field.

Project Goals

One of the major goals is to investigate the **user acceptance** of wearables. Furthermore, methods for user interaction and processes suited to wearables in industry are identified. It is essential to have methods to detect the work context and have a general architecture of wearables as well as a hardware and software platform for the implementation of wearables. This is the basis for the four industrial pilot applications: variant production, the clinical pathway, maintenance, and emergency and also for the three take-up projects on cultural heritage, fire prevention in rural areas and inclusion.

In **variant production** the challenge is information integration and intelligent information presentation. For **the clinical pathway** the focus is on intelligent information logistics and context aware collaboration. The **maintenance** scenario has its focal point on context detection and intelligent manuals. The focus of the **emergency** activity field is the collaborative planning and interaction using wearable devices.

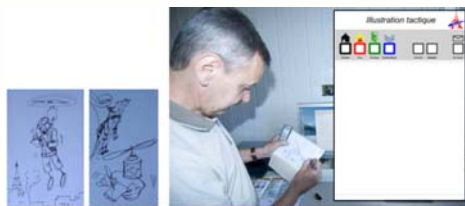
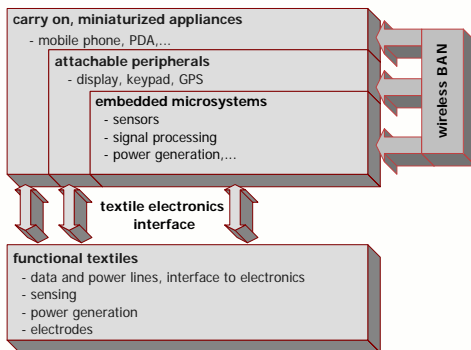
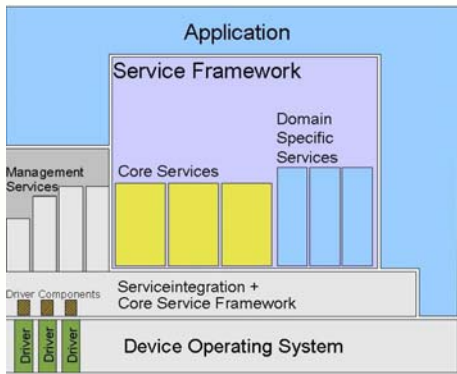
wearIT@work was set up by the European Commission as an Integrated Project to investigate "Wearable Computing" as a technology dealing with computer systems integrated in clothing.

The project has 42 partners, a project volume of 23.7 million € and an EU funding of 14.6 million €

It is the largest project world-wide in wearable computing.

<http://www.wearitatwork.com>





Advantages

The following advantages are achieved: First of all an improved productivity and flexibility of workers; Second increased safety at work and decreased pressure towards automation. wearIT@work solutions allow the simplified access to enterprise information and lead to faster group decisions. Furthermore new information technology products are introduced into the marketplace based on the pilot applications developed within wearIT@work.

The worldwide market for wearable computers generated over \$600 million in supplier revenues in 2006. The market will increase at a compound annual growth rate (CAGR) of over 16% through 2011, and grow to over \$1.7 billion.

Despite its massive growth, the market for wearable computing solutions in industrial applications is largely been project driven and looks for turn-key solutions lately characterized by open platforms, lower adoption costs, greater competitive involvement and broader user adoption by user and organization size. Drivers of the growth are a standardised hardware platform and a software framework enabling the new work paradigms. wearIT@work delivers both and is with its partners a key driver for this market.

Project Aspects and Organisation

This Integrated Project is organised in activity lines (AL) and activity fields (AF) to manage its complex structure and follows a **human centred design approach**. The pilot applications are developed in 18 months cycles. Actually the project reached its final innovation cycle. Solutions and components of the hardware platform and software framework are classified with respect to their maturity.

Milestones

The project results in four pilot applications and three take-up applications developed in a cyclic way. In the first 18 months "Show Cases" were realised and evaluated. Based on the experiences gained there "System Prototypes" were developed, which became the basis of the final "Industrial Pilots" in the four dedicated scenarios and the three take-up applications.

Results of the project are a technology repository of hardware and software solutions with a continuously updated maturity level classification also for commercial off the shelf components as used in the project.



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