

Project Details

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www.myui.eu

Member of the Cluster on Virtual User Modelling and Simulation (VUMS): www.veritas-project.eu/vums/

Consortium



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Mainstreaming Accessibility through Synergistic User Modelling and Adaptability

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Objectives

The MyUI European research project aims at improving the accessibility of every-day ICT products. To meet this challenge, the needs of both - industrial users (developers, designers) and end users (older people, stroke survivors) - are considered. MyUI user interfaces self-adapt in real-time, leading to a highly individualised user interface well-fitting to the specific user's needs. Moreover, a virtual environment provides tools which support industrial users with the integration, illustration and assessment for adaptive features of ICT products.

Self-adaptive User Interfaces

Real-time adaptations of user interfaces are triggered by changes in the user and context model, based on newly available user and context information. This information is gained from sensors and from the user's interaction behaviour. Depending on the current user and context profile, the best-fitting user interface design patterns are selected and the user interface is re-composed accordingly. This adaptation process is continuously repeated and hence the user profile and individual user interface can be improved stepwise. The multi-modal user interface design patterns approach of MyUI allows addressing manifold individual limitations and preferences.

The Virtual User Lab

The Virtual User Lab (VUL) is a virtual environment supporting industrial users in the development, simulation and evaluation of adaptive user interfaces for user groups with certain needs. Major characteristics of the VUL are:

1. Illustration of user profiles and their changes over time
2. Visualisation of possible user interface adaptations
3. Simulation of a user interface as experienced by a user with specific limitations
4. Pattern browser to provide designers and developers with an overview of design guidelines and an easy access to the MyUI design patterns which serve as re-usable components for adaptive user interfaces.

Reference applications in MyUI

An interactive TV set provides the platform for all reference applications defined in MyUI. Enhanced by extra sensors and control mechanisms, additional information on the user and the current context conditions can be collected. This enables individual user interface adaptations on the interactive TV as well as on the reference applications. Social communication services (email application etc.) and a physical exercise application have been chosen to demonstrate the feasibility and benefit of using MyUI technologies in industrial development contexts.

Involvement of target user groups

Industrial users and end users with disabilities typically associated with aging and stroke are involved during the entire duration of the project.

Surveys with industrial users will identify their requirements and expectations towards the VUL and its integration into industrial development settings. While developing the MyUI reference applications, industrial users provide feedback on the MyUI technologies and the developer's support infrastructure.

Research studies with potential end users will identify effective and acceptable user interface adaptation strategies and individual requirements for privacy and security in user profiling. At the end of the project, field trials are scheduled in order to evaluate usability, accessibility and acceptance aspects of the MyUI system in a realistic setting.

