3G Mobile CONtext SENSitive adaptability
- USer friendly mobile work place for seamless enterprise application

Fact Sheet

Project Information

CONSENSUS

Grant agreement ID: IST-2001-32407

Project website

Project closed

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1 April 2002

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31 March 2004

Funded under
Programme for research, technological development and demonstration on a "User-friendly information society, 1998-2002"

Total cost
€ 4 559 555,00

EU contribution
€ 2 279 775,00

Coordinated by
SAP AKTIENGESELLSCHAFT SYSTEME, ANWENDUNGEN, PRODUKTE IN DER DATENVERARBEITUNG
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Objective

Consensus provides software methods for efficient development of user-friendly

mobile applications in 3G networks. A prerequisite for the commercial success of 3G is a rich collection of mobile services that provide value to both user and provider. The project delivers software methods, tools and open standards for cost efficient development of mobile applications and their integration in mobile portals. The software methods are derived from a sound understanding of the specific usability of application interfaces on mobile devices, including voice interaction. Within usability constrains and based on additional semantic annotations, the rendering engine provides a strong automated adaptation for generic applications to a multitude of mobile devices. Lowering the cost barrier for the application provider, the project thus drives the provision of more and even specialised mobile applications.

OBJECTIVES

New software challenges appeared in the 3G world: heterogeneous device browsers, rapid technical development, and fast changing device capabilities force application development to build numerous optimised versions of user interfaces for the majority of the current devices. Consensus will provides software methods that methodologically include the requirements of mobile devices and support application programmers to create highly usable, mobile device-optimised solutions. The overall objectives are:

a) The development of a Renderer Independent Mark-up Language (RIML) and tools to provide strong automated adaptation of a generic application to a multitude of mobile devices within the set usability limitations;

b) Disseminated of RIML as an open standard for connecting arbitrary backend systems and renderers serving mobile applications.

DESCRIPTION OF WORK

Usability requirements research will be the start for achieving the project objectives. Together with the definition of the targeted user group, existing mark-up languages will be compared to find the most suitable one for the project goals. The so derived base mark-up languages including a set of basic User Interface (UI) components will be used for the implementation of test application for the purpose of empirical usability studies. A key part of that activity will be to define device classes, representing groups of physical devices with similar characteristics and to formulate usability guidelines for their best usage for mobile applications. Other results will be the refined definition of the user interface (UI) components. Based on the initial usability research activities RIML will be defined and a RIML rendering architecture will be designed and implemented. RIML uses semantic annotations, describing the relevance of UI components.

The definition of RIML will be based on the set of the base language and address the requirements of the device classes, additional requirements e.g. of voice interfaces and finally the requirements of the RIML rendering process itself. The tools for development of user interfaces will be one of the deliverables. The RIML rendering architecture will be designed to adapt the application's UI to a vast diversity of mobile

devices using those additional semantic information. The architecture consists of three major building blocks: a Backend Connector, a Semantic Adaptation and a Syntactic Adaptation also the Device Connector. The RIML rendering architecture will be implemented for a testbed trial. Within the testbed a development process using RIML will be exercised and used for the modification of existing applications to be tested in field trials including an evaluation of their usability. RIML will be proposed to standardisation bodies to be established as open standard.
Two types of results are distinguished, namely common project results and individual results. The common results have been developed by all project partners together, whereas the individual results are developed by one (or only few) individual partner(s). The consortium as a whole worked on the common results until the end of the project, after which individual partners exploit the results which are most relevant to them.

The CONSENSUS common results are:
- Device Classes and Usability Guidelines for the development of useable device independent Web-Applications
- A single source authoring language for web applications, called RIML (Renderer Independent Markup Language)
- An architecture for the adaptation of device independent web applications and its prototype implementation, called Adaptation Engine
- Authoring tools for the development of device independent web applications
- A set of test applications and a field test showing the feasibility of the approaches taken. In addition to the common project results, partners have indicated expected and already achieved individual results. In certain cases, individual results could be seen as 'spin-offs' or parts of a common result. These individual results are as follows:
- CURE: Research results from empirical studies were and will be published and are used for the development of internal guidelines used for consultancy activities. The preparation of the field trials led to a pool of methods tailored to long term studies which can be reused during further research and industrial projects.
- FUJITSU: Fujitsu will provide cost efficiency and sophisticated multi-channel applications to end-users based on the results of the project.
- IBM: IBM will use the results of the project to investigate the prospects for building an enhanced support for mobile devices by WebSphere products
- Nokia: Nokia has gained a better understanding of the features which are required in future business terminals. This will help when planning for improved device independence for future enterprise application platforms.
- SAP: SAP Corporate Research plans to use parts of the Usability Guidelines, Adaptation Engine and Authoring tools as input for future versions of SAP's Mobile Business solutions.
- Ubicall: UbiCall plans to improve the usability of its products and to reduce the cost of their development, based on the project's results.

Fields of science (EuroSciVoc)

natural sciences > computer and information sciences > **software**

Programme(s)

FP5-IST - Programme for research, technological development and demonstration on a "User-friendly information society, 1998-2002"

Topic(s)

Data not available

Call for proposal

Data not available

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Coordinator

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