



I2Web



The Future Internet Community that will be more mainstream in people's lives, may further isolate excluded groups. I2Web will provide tools to develop inclusive Future Internet services that will overcome this widening divide. To enable the Future Internet to be very extensively used by people with disabilities and the elderly, the inclusiveness of its Services Front Ends will be of paramount importance. I2Web particularly responds to immediate challenges of the Future Internet: ubiquitous and mobile Web, media convergence and user-generated content, in combination with cloud computing, Web 2.0 developments, Social Networking, User-Centred Design and Inclusive Design principles.

At a glance

Project title:

Inclusive Future-Internet Web Services (STREP)

Project coordinator:

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Partners:

The National Microelectronics Applications Centre Ltd (IE),
University of York (UK),
Hewlett-Packard (IT),
Public-i Group Ltd (UK),
TXT e-Solutions (IT),
University of Ljubljana (SI),
National Council for the Blind of Ireland (IE),
Foundation for Assistive Technology (UK)

Duration:

November 2010 – April 2013

Total cost:

€ 2.7 M

Website:

<http://i2web.eu/>

An accessible Future-Internet

Demographic change means that a significant number of Internet users will be above 60 in 2025. This requires us to address fully Internet access and usage needs, especially of the elderly. If we add the current number of disabled people, which is 10% of the total population, then the number of people that may be affected by the I2Web approach will be almost 40% of the EU population by 2025.

The I2Web project responds to important challenges that the information society must address in the immediate future: the ubiquitous and mobile Web, media convergence and user-generated content, all in combination with developments such as cloud computing. These challenges are the result of the evolution of the Web from primarily static pages to inter-related interactive applications. The evolution has occurred partially due to the widespread use of mobile devices, and further due to the integration of the web connectivity in everyday objects creating a true Internet of Things. The ubiquitous, interactive nature of these everyday objects raises the importance of the context of use, making it possible for people to interact with the web at any time, in any place. Furthermore, the Web is evolving into a participatory environment where users become content and application providers, leading to a myriad of Web applications such as mashups.

Neither the average end-user nor Web developers, managers nor commissioners are familiar with the complexity of user requirements resulting from personal characteristics and preferences, together with the variety of devices they might use.

The availability of authoring, delivery and compliance tools for creating and evaluating web applications, reflecting and integrating the needs of users will be crucial for ensuring that content and application providers will be able to reach their target audiences and that users with special needs and older users will be able to participate in the Future Internet.

I2Web aims to enable these user groups to create accessible ubiquitous and mobile Web 2.0 applications. This will be achieved by integrating accessibility compliance components that take into account user and device models together with semantic application descriptions into a number of different authoring environments.

I2Web will deliver an open, scalable, dependable service platform architecture and online space, enabling automatic service description, discovery, composition, and negotiation with a multiplicity of reusable inclusive services, which may be mobile or nomadic, multi-device, multimodal and multi-context.

Objectives

The I2Web Project will prototype these developments in three application domains: Web 2.0, Ubiquitous and Mobile Web and IPTV/iTV. Our work will be based on the latest accessibility and mobile Web standards. This will provide both industry and the public sector with tools and frameworks that support seamless accessibility integration in distributed development environments.

These aims will be achieved by:

- Developing user models based upon existing accessibility standards combined with an analysis of user requirements for people with special needs and older people in relation to ubiquitous Web 2.0 applications, in which multimodality and delivery context are key components.
- Extending existing device models from the Mobile Web arena, to cope with the needs of other devices, ranging from standard desktops to consumer electronics devices. The models will also include assistive technologies and mechanisms to modify themselves according to different user characteristics.
- Developing open information models and generic application abstractions, that can deal with information aggregation, cloud computing applications, Semantic Web and mobile/ubiquitous Web 2.0 systems.
- Implementing feedback mechanisms of compliance results to be integrated into existing development environments, which will provide to users, developers, managers and commissioners information on accessibility and usability issues of their applications. This information will be integrated into their standard development workflow and will be implemented via Service Oriented Architecture components.
- Testing, validating and demonstrating the developed frameworks and tools in different industrial development environments.
- Ensuring the impact of the developed frameworks, by feeding the project results into relevant standardisation bodies, of which several of the consortium partners are members. This membership will ensure a smooth incorporation of state-of-the-art developments in this area.

