

Webcast

PS3: VISIONS OF THE FUTURE – TECHNOLOGICAL INSIGHTS

This session provided a snapshot of advances in some of the key technological fields. Technologies are developing very fast. They are enablers for many useful activities in society; specifically, they can trigger new opportunities to promote eInclusion. The session addressed: 1) where is technology heading?; 2) what are the recent technological developments that could help the e-Inclusion agenda?; and 3) what needs to be done to raise awareness of the potential of new technologies, and to ensure that technology will be affordable and accessible to all? The session was chaired by Jeremy Millard, Senior Consultant, Danish Technological Institute.

Erkki Ormala (Nokia) presented a vision of “mobile inclusion”, where all people will have access to usable and affordable wireless devices by 2015. Mobile access will be at 100 Mbyte per second at a minimum. The prospect of universal, high speed access through mobile brings with it a tremendous business opportunity. Already, the global eInclusion market has potentially 500 million customers. Such a market requires innovative products underpinned by 1) universal design; 2) fully customisable features that are intuitive and accessible; and 3) an open device platform that allows rapid service development (including by third parties) and user customisation of special features. It also requires the wide diffusion of education and skills, particularly for the disadvantaged. An enabling policy environment is vital for achieving an open market and open access, as well as cost reduction. For developing countries in particular, the total cost of ownership associated with mobile communications is still too high, with government tax accounting for 15% of TCO. eGovernment services are particularly important for building critical mass.

The principle of design-for-all was also underlined by Jo De Boeck (IMEC) in discussing ICT and ageing, which is also addressed as part of a forthcoming European Technology Platform EPoSS on smart systems integration. An inclusive ICT society that encourages independent living will increasingly rely on multiple data and information captured from both people and their surroundings. Future wireless sensor-based networks will provide high functionality and complex services that are abundant, autonomous, cheap, unobtrusive and reliable. They will support the next generations of assistive devices for personal health, safety and comfort. User acceptability by the disadvantaged section of the community is very important indeed. It is therefore essential to build convincing field trials with all stakeholders.

Martin Haegele (Frauenhofer IPA) outlined a vision for robotics. At present the market of installed robots is worth €2 billion; by 2008, it is projected to increase to €7.68 billion. Frauenhofer has been running successive R&D projects on “assistive robots” since 1998. In the latest project Care-O-bot III, started in 2003, robots integrate ICT and mobility within an ambient intelligent environment. We are only at the beginning of a new generation of dependable robots, which will cover a widening spectrum of tasks and become increasingly personalised. Dr Haegele presented a technology roadmap for robotic development, with robots that provide elderly care being a longer term goal. Again, user acceptability was underlined as a key factor for a business case.

Luisa Andreone (Centro Ricerche Fiat) described various R&D projects in the car industry to improve mobility by increasing driving assistance, comfort and safety for all users. Cooperative systems are being designed, for example, for the detection of vulnerable users like pedestrian and cyclists, and for enhancing the driver's perception in poor visibility. There needs to be a joint stakeholder effort for designing and developing a shared technology platform for making European vehicles more accessible, with the aim of providing improved cost effectiveness and better mobility for the elderly and disabled.

Kevin Carey (humanITy) put forward the user's viewpoint. He called for a structured stakeholder involvement in technology development. Excluded people should not be perceived as mere consumers of technology - they have the right to contribute to the development of the information society. With successive waves of technology development,

our rules on IPR are increasingly out of date. There is also a pressing need for a generic approach to safeguard the disabled population's right of access to information and technology.

The ensuing discussion indicated that eInclusion issues should be more carefully and sensitively incorporated into the various technology visions of radical innovation. While user needs have been taken into consideration, they need to be more extensively and comprehensively tested. They need to be brought into the design phase of technology projects. Solution development should be not just user-centred, but also user-driven. The market, while being largely successful in promoting technology for the past 20 years, is not perfect. We need to understand eInclusion better. We need to focus on improving the user experience of services, not just the user experience of technologies. Specifically, service fulfilment is important. We need to pay greater attention to personalisation, customisation and user wishes. A broad approach towards ensuring, and mainstreaming, accessibility and usability of products and services is needed. Technology-enabled social networks and the increasing open nature of technology development can lead to more involvement of users in technology innovation, closing the digital divide. This is a both a technical challenge and a business challenge. We need to find the business models for bringing the capability of technology to the wider society, including the excluded and the marginalised.

Objective 1: To launch R&D measures on highly accessible and cost-effective ICT enabled consumer products and services, as well as measures to improve their uptake in society by 2008

Barriers

- Affordability
- Usability
- Accessibility
- User involvement in R&D
- IPR

Possible Actions

- Increase awareness of and attention to these issues in R&D programmes at European and national level as well as by industry
- Develop coordinated large scale technology trials and pilot actions between member states and regions to demonstrate highly accessible and cost-effective products and services in areas of public interest
- A universal design principle which puts users at the centre of R&D, increase their involvement in the design phase of R&D projects, promote iterative user feedback in R&D
- Promote R&D efforts which emphasise user experience of services, not just user experience of technology
- Technology take-up: linking user accessibility and aligning user interests with business models

Objective 2: To significantly increase awareness of available and emerging ICT solutions in support of the eInclusion agenda by 2008.

Barriers

- Lack of product information across the union
- Lack of awareness of technology capability
- Affordability: the need to ensure socially inclusive user access to affordable equipment and networks
- Ad hoc approach to safe-guard users' right of access to information and technology

Possible actions

- Establish an appealing showcase by industry and other actors to promote ICT solutions in support of eInclusion to relevant national stakeholders
- Build a European inventory of available products and services and promote this to national stakeholders, including those who are socially excluded
- Promote a broader and deeper understanding of the nature of eInclusion; initiate comprehensive and structured out-reach effort to the marginalised sections of the community