



Senior Newsletter

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Editorial

Welcome to the second issue of the SENIOR Newsletter!

As the SENIOR Consortium has continued to promote an open and diverse dialogue about the ethical and social inclusion impacts of ICT on the elderly, its members have participated in a number of key European workshops and conferences. Through these various fora, they have gathered inputs to the SENIOR roadmap effort, and drawn attention to the various ethical dilemmas facing policy makers, industries, medical personals, caregivers, and the elderly, for the emergence and adoption of a range of new technologies.

At the e-Inclusion Ministerial Conference & Expo, held in Vienna 30 November – 2 December, the SENIOR Consortium, represented by the Coordinator of the SENIOR project Emilio Mordini (CSSC), shared views on the social, ethical and privacy needs of the elderly as part of a panel exploring the Ethics of e-Inclusion. In this panel discussion, moderated by Stefano Rodotà, and joined by Prof. Margit Sutrop, François-René Germain, Dr. Maurizio Salvi, and Kevin Carey, a number of key issues were explored, including privacy, autonomy, inclusion, non-stigmatisation, the technology divide, human enhancement, equal access, dignity and integrity, and informed consent were evaluated, as well as the innate trade-offs between these rights, and how ICT can simultaneously be supportive of some of these individual rights while acting as a roadblock to others. Key conclusions from this session indicated that there is a need for more study of these core e-inclusion issues. The discussion also echoed an assent with the earlier recommendations of the Bled workshop regarding the creation of a pan-European platform on ethics and e-inclusion which would cluster stakeholders (industry, society, academia, ethicists, etc) in the interest of dialogue and sharing of good practices.

The Vienna conference was well-attended by a broad range of stakeholders, with nearly 1500 delegates and more than 130 speakers, and focused on several key themes, including e-Accessibility in Europe, Ageing Well in the Information Society, Information Literacy for life, Investing in e-Inclusion, and Inclusion 20/20. The programme featured, amongst others, keynote addresses from Ministers of the current and forthcoming presidencies, as well as from Viviane Reding, the European Commissioner for Information Society and Media, and the Chairman of Intel, Craig Barrett.

In advance of the Vienna conference, the SENIOR consortium was invited to provide a Briefing Paper, the executive summary for which is included below. The paper reviews some of the outcomes of the Bled Workshop on e-Inclusion held in May 2008, and presents recommended actions to advance the dialogue in terms of developing a specific approach to ethical issues raised by ICT, improving the understanding of the age related digital divide in Europe, defining the legal framework for inclusion of the elderly in the digital society, and identifying technology trends and emerging challenges.

Kush Wadhwa, Global Security Intelligence Limited

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In line with the objectives of the renewed *Lisbon strategy*¹, the *i2020 Strategic Framework* purports to create a "Single European Information Space" which includes "a common set of regulations that govern the supply of content and services and the operation of networks, regardless of the technology that is being used"². In such a context, ethics play a vital role by providing the general frame to EU policies. The specificities of ethics and e-inclusion came into sharper focus at the workshop organised by the Commission in **Bled in May 2008**, which explored the dimensions of ethics and e-inclusion in different contexts. The SENIOR project contributed to the Bled Workshop with a discussion paper devoted to ethics of e-inclusion of older people. The points fixed by the "**Bled Discussion Paper**" constitute the basis of this second discussion paper, which is published for the **European Ministerial e-Inclusion Conference**. Four major areas for further discussion have been identified: (i) developing of a specific approach to ethical issues raised by ICT; (ii) describing in greater detail the age related digital divide in Europe; (iii) defining the legal framework for inclusion of the elderly in the

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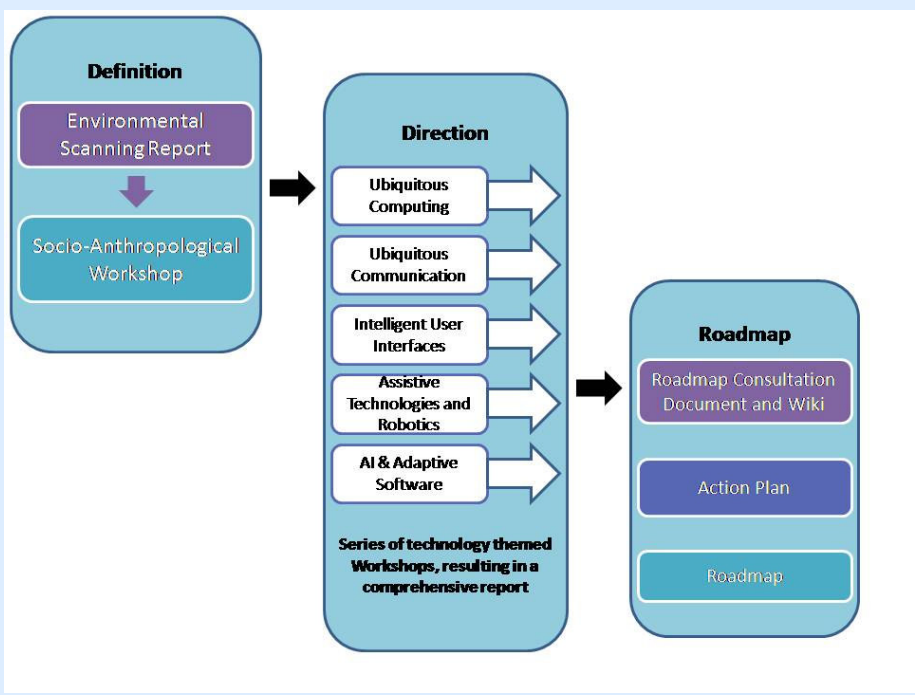
The "e-Inclusion: be part of it!" campaign is organised by the European Commission. More information on this action is available at http://ec.europa.eu/information_society/einclusion. The European Commission bears no responsibility for, nor is it involved in, the events, documents or other manifestations associated or claiming to be associated with the campaign, unless indicated otherwise.

Expert Meetings on ethical and privacy perspectives applied to ICT for Inclusion

The SENIOR project held a series of one-day Expert Meetings in the second half of the 2008 in Brussels. The main objective of the five SENIOR Expert meetings was to hold an active discussion among expert people about what ethical and privacy perspectives are currently applied to ICT for elderly inclusion in Europe. Each expert group analysed technology trends, and the discussion enlightened possible tradeoffs between privacy, ethics and technological innovation. The meetings were attended by internal and external experts selected by SENIOR Consortium.

The attendance of the meetings was up to 30 people including scientist, policy makers and the discussion held in each meeting led to the drawing of a conclusive document on each specific topic.

All documents, presentation showed during the Expert Meetings and agendas are available at the *Past Events* section of the SENIOR website (<http://seniorproject.eu/index.php?module=CMpro&func=viewpage&pageid=9>).



1st Expert Meeting on Ubiquitous Computing, Brussels, 8 September 2008

Ubiquitous computing is based upon a number of enabling technologies, including RFID, geolocation technology, sensors and actuators, surveillance technologies, along with wired and wireless communications, embedded into the environment in ways that make the technologies themselves seemingly invisible, non-intrusive and yet supportive.

These technologies collectively present a number of challenges to technology developers and policy makers in determining how to ensure their safe, effective, and ethical use within the community, the workplace, and the individual home, and in particular, in protecting the needs and rights of vulnerable groups such as the elderly. This Workshop examined ubiquitous computing as a means of supporting independent living in the home and for support of healthcare needs of the elderly, and included an examination of issues related to ethics, policy and standards for these emerging technologies.

Partner responsible: GSI

2nd Expert Meeting on Ubiquitous Communication, Brussels, 22 September 2008

The success of new ICT solutions based on ubiquitous communication technologies depend critically on the use and acceptance on the services by the older people themselves. Usability and acceptability depends on various factors: design, accessibility, financial resources, trust, autonomy, reliability, safety, etc. The workshop aimed at conducting a dialogue with experts, specialists, representatives of users and user organisations in order to elicit and document evidence based descriptions of user needs in terms of ethical and privacy topics.

Ubiquitous communication technology provide, if designed and deployed correctly, opportunities for improved quality of living longer independently and healthy. Being able to contribute to high-quality employment - active aging at work - is also important for self esteem. And active participation in society through social contacts and activities and democratic decision making are keys to well-being. The workshop thus aimed to carry out the dialogue in three important areas defined in the EC Commission "Ageing Well" framework: ageing at home, ageing at work and ageing in community. In all three areas, a moderated dialogue centred around ethical, social and privacy issues and identified the needs and desires of elderly users as well as opportunities and barriers for deployment in real life. The workshop sought to structure the dialogue in four horizontal themes relevant to services for elderly based on ubiquitous communication technologies: health and healthcare for the elderly, assisted living, social inclusion and democracy. **Partner responsible: In-JeT ApS**

3rd Expert Meeting on Intelligent User Interface, Brussels, 6 October 2008

The technology of Intelligent User Interface (IUI) enables inhabitants of the assisted environment to control and interact with the environment in a natural (voice, gestures) and personalised (preferences, context) way. The workshop examined intelligent user interface from a legal and ethical perspective. As the organisation of this event was entrusted to the Legal department of the Vrije Universiteit Brussels (VUB), the workshop devoted attention to the legal dimensions of e-inclusion. Accordingly, the meeting was divided into four panels addressing respectively:

Panel I: Ethical issues involved with intelligent user interface in smart environments. Ubiquitous environments are equipped with 'intelligent' interfaces acting as the extension of the user's goals and capabilities. The intelligent interface automates some of the tasks given to it by the user. In order to do so, the intelligent interface operates as personal (digital) assistant who learns about interests, goals, capabilities, misconceptions, plans of the user.

Panel II: Positive obligations in the e-inclusion of the elderly Non discrimination law is one of the most dynamic legal domains of today. Its reach extends to many social groups including the elderly and the disabled. Non discrimination law contains far reaching legal principles that the European Union has contributed to enhance through directives on non-discrimination at home, at work and in public places. In order to assess the legal and ethical obligations towards the elderly, an analysis of non discrimination law and principles is needed.

Panel III: The European legal framework of data protection and the principled right to privacy (art. 8). The use of pervasive intelligent technologies, including intelligent interfaces, poses challenges to the extant European privacy and data protection framework. One of the crucial issues is informed consent and the choice of the user to avail itself of technologies that, in order to assist, significantly intrude in the informational private sphere of the individual.

Panel IV: Ethical issues of ICT implants and brain computer interfaces. As the European Group on Ethics in Science and New Technologies (EGE) pointed out (Opinion n. 20, 2005), today it is possible to implant in the human body ICT devices which simulate some biological or physical functions and, for instance, restore bodily functions or, as in the case of prostheses and artificial limbs, substitute some body parts. Moreover, computer scientists have predicted that in the next two decades, neural interfaces will be designed that will allow people to use signals directly from the brain for communication and control movement.

Partner responsible: VUB

4th Expert Meeting on Assistive Technology and Robotics, Brussels, 20 October 2008

Assistive Technology may be defined as “any tool or technical system to facilitate mobility, manipulation, communication, environment control, and simple or complex activities of either daily life, education, professional or societal”; they are all technologies used in daily life to improve quality of life and to live independently for longer. This is part of the “i2010 – A European Information Society for growth and employment” initiative, that presents a new strategic framework and broad policy orientations to promote an open and competitive digital economy, emphasising ICT as a driver of inclusion and quality of life.

Robotics plays a great role in assistive purposes aiming to help persons with special needs including the elderly, to improve daily social and private life, so as to extend as long as possible the independent living and to promote wellbeing.

The robotic solutions for elderly wellbeing cover a wide range of devices such as mobility indoor and outdoor aids, aids for self-care (hygiene, clothing, feeding), and house-keeping (cooking, cleaning), entertainment and remote control applications.

Many robotic devices are still available on the market of home facilities such as educational and entertainment robots, robotic toys, robotic lawnmowers or vacuum cleaners. The presence of robots in daily environments raises new questions on social and ethical impact to which ethical rules and laws cannot properly answer at the present time.

Ethics and privacy issues in Robotics & Assistive Technology opened the discussions on human dignity, non-maleficence, autonomy and individual responsibility, privacy and informed consent, social responsibility, solidarity, equity and equality: all these issues facing robotic applications for the elderly were discussed in this Meeting.

Partner responsible: IAE GEIE

5th Expert Meeting on Artificial Intelligence and Adaptive Software, Brussels, 8 December 2008

Artificial intelligence and adaptive software ensures that the co-operation within a network of microprocessors can offer intelligent, context-aware services. The software is organised to allow intelligent tools to make their own decisions, without the need for humans to do much of the programming or monitoring. Intelligent tools can determine for themselves how they have to work. The software will also proactively develop data mining processes to discover relationships and trends in the available. These technologies present a number of challenges to technology developers and policy makers in determining how to ensure their safe, effective, and ethical use within the community, the workplace, and the individual home, and in particular, in protecting the needs and rights of vulnerable groups such as the elderly. This Workshop examined AI and adaptive software as a means of supporting independent living in the home and for support of healthcare needs of the elderly, and included an examination of issues related to ethics, policy and standards for these emerging technologies.

Partner responsible: GSI



digital society; (iv) identifying technology trends and emerging challenges. SENIOR proposes the following action points:

Action 1: Propose a set of actions to facilitate the development of communication lines between different EC services, agencies, and relevant expert committees on the issue of ICT ethics.

Action 2: Promote further research on the segmentation of the elderly population in Europe, on the way in which digital divide impacts on different segments, and to what extent the digital divide increases marginalisation in the most vulnerable segments of the older population.

Action 3: Identify and target with specific policies the main threats to older citizens' dignity

Action 4: Develop an understanding of the wider legal and policy implications of anti-discrimination provisions on e-inclusion, in particular on ageing, by promoting research and debate on this subject and by involving relevant EU services and agencies (e.g., the FRA).

Action 5: Promote further reflection on privacy as a distinct concept from data protection and issue a comprehensive policy document on privacy as fundamental liberty right, particularly regarding older citizens.

Action 6: Develop specific guidance on data protection in elderly people, in particular in the context of ambient intelligence and assistive technology.

Action 7: Prevent anti-ageing technology from reinforcing ageism by carefully monitoring messages conveyed by industry and by promoting educational campaigns.

Action 8: Scrutinize the development of brain-machine interfaces (BMIs) and involve all stakeholders in an ongoing ethical review of the technology design.

Action 9: Promote more systematic analysis on specificities of biometric system design for older people with respect to their biological and cultural background.

Action 10: Adopt opportune regulatory measures in order to ensure that the implementation of biometric systems, notably large scale identification schemes, and questions of interoperability, encompass the requirements of the elderly.

Action 11: Support the production of inclusive design guidelines for ambient intelligence to avoid barriers, notably for elderly people, in the design.

Action 12: Promote ethical and legal reflection on surveillance practices on elderly people in order to issue specific guidance and regulation, also involving relevant EC services, agencies, and committees [e.g., the Article 29 Data Protection Working Party, European Data Protection Supervisor (EDPS), the European Group on Ethics and Science in New Technologies (EGE), the European Union Agency for Fundamental Rights (FRA)].

Action 13: Promote the development of corporate statements of social responsibility and codes of ethics in e-inclusion and implement EC Corporate Social Responsibility (CSR) policies in this field.

Action 14: Devote further research to collect and compare best practices at local and regional levels.

Action 15: Launch an initiative to monitor in real time ethical and privacy implications of emergent technology relevant to e-inclusion.

Action 16: Promote more structured exchanges between stakeholders by creating regular consultative mechanisms, platforms and fora.

**From: “Ethics e-Inclusion and Ageing”,
SENIOR discussion paper for the
European Ministerial e-Inclusion Conference**

- (1) Kok, Wim, et al., Facing The Challenge. The Lisbon strategy for growth and employment, Report from the High Level Group chaired by Wim Kok [the Kok report], Office for Official Publications of the European Communities, November 2004.
- (2) i2020: A European Information Society for Growth and Employment is a strategic framework to boost Europe's digital economy, and is a key part of the EU's renewed Lisbon strategy for growth and jobs. <http://ec.europa.eu/i2010/>

HYDRA



The HYDRA project, which is funded by the EU Commission, aims to research, develop, and validate middleware for networked embedded systems that allows developers to develop cost-effective, high-performance ambient intelligence applications for heterogeneous physical devices.

The HYDRA middleware platform can be used in various settings, including healthcare (eHealth) and intelligent buildings (such as smart homes). The HYDRA project has developed plausible usage scenarios on 2015 involving the typical use of Hydra in the Healthcare domain and intelligent buildings.

For further information on HYDRA please visit www.hydra.eu.com.

MARE

MARE is an 18-month supporting action financed by the Seventh Framework Contract, in the frame of Cooperation line, which aims to carry out technology and foresight analysis in the field of Assistive Technologies (AT). MARE will analyse development of these technologies and identify the barriers to their full development, formulating recommendations for AT future development for the Research community and EC decision-makers in Europe. Key issues are:

- Describe ICT Assistive Technology context and define Users Centred Approach
- Create a dynamic repository for ICT AT EC and national projects and programmes
- Set up a User community and an Expert group to involve in the project activities
- Implement a specific Technology Foresight Model to identify AT future trends

For further information on MARE please visit www.mareproject.eu.



SENIOR Website for you

The SENIOR website provides a significant resource for those interested in the project's activities including news and publications from our workshops and other events. Information about SENIOR's goals and mission, as well as our partners are available here as well.

In the Event section all scheduled and past events of the SENIOR project are included, and SENIOR Newsletters, press releases and other news items are found in the News section.

An archive is also available where all visitors can find documents, agendas and presentations of all Workshops held by SENIOR (Launching Workshop and Socio-Anthropological Workshop), and by European Authorities, attended by SENIOR (Ethics and e-Inclusion Workshop, held in Bled, Slovenia). Finally, the link to the Wiki will be available soon; this will be a vehicle for encouraging dialogue and reaching consensus on a Roadmap on Ethics and Privacy of current and emerging ICT for older people.

See you soon on the SENIOR website!

Ira Vater, European Business Associates Srl

External Events

- ⇒ Assistive Technology Get Together - London, 16 January 2009
- ⇒ Dementia and Elderly Care - London, 27 January 2009
- ⇒ 9th International Conference on Alzheimer's and Parkinson's Diseases - Prague, 11-15 March 2009
- ⇒ Include 2009: Inclusive Design into Innovation: Transforming Practice in Design, Research and Business - London, 5-8 April 2009
- ⇒ The 4th National Digital Inclusion Conference 2009 - London, 27-28 April 2009
- ⇒ The 8th China (Shanghai) International Exhibition on Rehabilitation Nursing & Healthcare Products for the Disabled and the Aged - Shanghai, 2-4 June 2009
- ⇒ DSAI 2009 (Software Development for Enhancing Accessibility and Fighting Info-exclusion) - Lisbon, 3-5 June 2009
- ⇒ PETRA'09 - Corfù, 9-13 June 2009
- ⇒ IAGG World Congress of Gerontology and Geriatrics - Paris, 5-9 July 2009
- ⇒ IAHS 8th International Conference - London, 20-22 July 2009
- ⇒ European Seating Symposium incorporating Assistive Technology - Dublin, 14-17 September 2009

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