

Preview Gerontechnology 2002: Creative use of technology for better aging

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Gerontechnology 2002, the 4th international conference of the International Society for Gerontechnology (ISG) will be held on November 9-12 in Miami Beach, Florida, USA.

This communication contains a preview on a summary of the keynote speeches. Overall focus is on 'Creative use of technology for better aging', and will encompass themes that span the challenges of adulthood.

Keywords: better aging, technology, creative use, adulthood

The conference will be held for the first time in North America, at the Wyndham Miami Beach Resort Hotel in Miami Beach, Florida. 'Gerontechnology 2002' is the 4th international research and technology conference of the International Society for Gerontechnology (www.gerontechnology.org). The first 3 were held in Europe. This edition focuses on 'Creative use of technology for better aging', and will be encompassing themes that span the challenges of adulthood, and consist of keynote lectures, symposia, individual papers and posters.

KEYNOTE SPEECHES

Keynote speeches span the challenges of adulthood and form the focus of the conference.

More road to travel by: Implications for mobility and safety in late life

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The 'suburbanization' of the United States is now generating a cohort of older adults who live where driving is most often the sole means of transport to all of the external necessities and conveniences of daily life. As suburbs grow further out from cities so the distances to be driven by future cohorts of older drivers will increase beyond those of today. Much research on driving in late life has focused on assessing the competence of older adults as drivers. Now more work is needed on technological solutions to maintaining this cohort's driving mobility and

safety. The presentation reviews recent changes in transportation technology (such as airbags), considers lessons from them in terms of their effects on older drivers and passengers and considers whether current knowledge of older drivers and their driving patterns offers guidance to future technology.

Smart home technology: Have older people paved the way?

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The terms smart homes, intelligent homes, home networking have been used for more than a decade to introduce the concept of networking devices and equipment in the house. According to the Smart Homes Foundation the best definition of smart home technology is the integration of technology and services through home networking for a better quality of living. If simple plug-and-play tools for controlling lights are included (e.g. X10 tools) or the computer networks in houses are accounted for as smart home technology, hundred thousands of homes all over the world may be called smart homes as well. Only recently, some dozens of projects with smart technology in the houses of older people have been realised or started. The aim of introducing smart technology in these houses is the wish of the tenants to stay independent in their own house as long as possible. Applications are focussed on safety and security, care and comfort. In this presentation an overview will be given of the detailed applications in both new built houses and renovation projects. A summary of the first findings of experiences and reactions of older tenants will be included. Key factors in the further technical development of smart homes are the proper electrotechnical infrastructure, flexible solutions in infrastructure and applications because of shifting needs and wishes, acceptable user interfaces and costs. Even more important for acceptance and breakthrough will be the content and services that can be delivered to the home. A wide range of com-

panies is developing business models to serve the end consumer. Reference will be made to The Smartest House of the Netherlands, a new demonstration house of the Smart Homes Foundation, where both consumers and companies give feedback on the current market developments. The Internet and mobile telephony have been keen drivers to stimulate the interest of technology in the household. But also several economic and socio-cultural factors will cause changes in society in which smart home technology will really break through. The ageing western societies and the clearly expressed needs of older people have raised particular awareness of the several parties in the building process for the opportunities of smart home technology. Finally, based on expected product launches and technical developments at major international companies, as well as based on the feedback of older people currently living in smart homes, some expectations for the near future will be given.

Gerontechnology: An Interdisciplinary Perspective and the Global Networking Dynamics -- The Sample Case of Usability Studies on WWW Usage

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The many branches of gerontechnology call for intimate involvement of diverse scientific disciplines because of (i) the drive to develop for practical use, and (ii) the emergence of new demands for the interface between two mega fields that used to be historically far apart: engineering, architectural and design domains vs. "traditional" gerontological disciplines such as the social and behavioral sciences, medicine and biology. These mega fields have to develop synergy not only by an additive division of tasks (multidisciplinary), but especially by a parallel, genuine collaborative working style (interdisciplinary). Global networks, often in professional

umbrella organizations, have taken the first steps towards interdisciplinarity. These organizations tend, however, to be confined to one of the two mega fields although they usually are not intentionally exclusive. On the other hand, networking dynamics that developed by using modern information and communication technology are just as successful in achieving the interdisciplinarity that gerontechnology needs. These two topics -- interdisciplinarity and networking -- are illustrated by usage of the World Wide Web (WWW). Different disciplines adopt different techniques, different criteria, and different goals. These need to be harmonized. Particularly the multi-faceted concept of 'usability' of the web is not as clear-cut as it may appear -- there are multiple notions of it. Interdisciplinarity aids in finding a common language, and networking schemes can additionally foster efficient and effective use of technology.

The significance of life-long learning in a changing world

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The increasing pace of social, structural, and technological change over the past decades has brought about a multitude of challenges for society in general and the aging population in particular. Among other things, blue-collar as well as white-collar workers can no longer rely on the vocational training and education they finished in their younger days to provide for them over the course of their entire lives. The impact of technology's ever widening use in society, such as the automation of services and the increase in motorized traffic, sometimes make it difficult for elderly people to maintain their autonomy and social life outside the home. Information about many different spheres of life, for instance, is increasingly offered in electronic form in-

stead of printed media. All these changes make life-long learning a significant issue as a person ages.

This presentation addresses the most important aspects of learning in a technological society, such as the recent historical developments of education and the contextual and personal preconditions for learning. It will differentiate between job-related from non-job-related learning, consider formal and informal learning opportunities, and show ongoing efforts in developing adequate training systems for older adults. Moreover, the presentation examines trends in the availability and use of new technologies suited for life-long learning, generation-related changes, and in conclusion, future perspectives.

Physical and mental activity essential to retain a viable position in the workplace

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'Chronological age, functional age, working age, mental age, physical age, emotional age, age of wisdom - are they all the same and how do they affect the way we function at home and at work?' There is growing evidence to suggest that universally there has been a significant increase in the number of older workers in a diversity of jobs. Winn (2000) talks of the working population over 50 years of age as 'exploding' during the next 25 years; he predicts that the work force will comprise approximately 35% of older workers (50 - 64 yr) and only 17% of younger workers (15 - 24 yr). With an example set by Nelson Mandela who 're-started' work at 75 years of age this aging trend is not something to be overly concerned about, rather it is important to be realistically aware of the effects that aging may have on the productivity and general well-being of an older group, and to adjust one's lifestyle and work environment accordingly. This paper will present the importance of participation in regular physical exercise, and involvement in stimulating mental activities in order to maintain one's abilities to cope

with the demands of life in general and work specifically. There will also be a discussion on how chronological age influences the functionality of an individual and how tasks may be modified to accommodate older workers' capabilities in order to avoid over taxing the worker. The basic Ergonomic premise is to adjust the task to suit the specific work force.

Intervention Research with Family Caregivers: Current Status and Future Directions, with Special Emphasis on the use of Technology to Support Caregivers

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This presentation provides a broad overview of care giving research with a special emphasis on the recent emergence of intervention approaches to care giving and the use of technology to support caregivers. We include psychosocial and technology-based interventions for caregivers and environmental and pharmacological interventions for care recipients. Four specific questions will be addressed: What is the range of intervention strategies currently being used? What role does technology play in these intervention approaches? How effective are existing interventions? And what is the future of intervention research with caregivers?

Aging and technology: new trends in Brazil

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This article discusses the increase in the Brazilian population's aging rate, the economics and public policies of medical care and retirement, and points to ways in which the technology might be adapted to better fit users' present needs. A National, Public Health Care System is available, however approximately 25% of the population uses some sort of private health care. The larger someone's income, the greater is the utiliza-

tion of the private health care system. The lack of efficiency in Public Health Care allowed the emergence of a strong private health care system that is presently dominating the market. In the past years, the policy adopted by these systems led to an increase in home care services. This article presents the problems the users of this type of system face, from family, patients and professional points of view as well as ways of technology utilization to adapt the activities to peoples' characteristics, skills and limitations leading to an efficient, comfortable and safe performance.

Japanese elderly and computers in the workplace

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While computers have been rapidly introduced into workplaces, elderly people might have difficulties adapting to new work environments. In addition to natural changes with age, factors such as cultural and linguistic differences may also make it challenging for elderly adults. This paper aims to illustrate those factors and also possible interventions, citing some experiences Japanese elders might have. The first challenge is handling Japanese characters on computers. Because of the huge number of characters used in the language, direct input on keyboards is almost infeasible. Input with alphabetic keys requires conversion from intended Japanese to alphabetic expression, which is fairly demanding for elderly. The second problem is learning new concepts and manners that were developed in different languages. Although most of the concepts used in modern computers are expressed in plain English, today's Japanese elderly populations may not be familiar with them. That means they have to learn both names and concepts as whole new things. A similar situation is also true for design of tasks or applications. An application developed based on a task model may look unfamiliar to peo-

ple with different ways of working. Thus when elderly workers learn new applications with different cultural backgrounds, they may also have to learn new ways of work. The discussions may seem to be specific to Japanese. However, they may also apply for other societies with different languages and cultural backgrounds, and also for design of computer systems for a wide variety of users.

Assistive Technology for Older Users: Development, Evaluation, and Dissemination Issues

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This presentation will describe the challenges associated with attempting to develop, evaluate, and disseminate assistive technology effectively. Using research, educational, and business development cases, primarily from Canada, detailed information and analyses will be offered to help illuminate "why the

provision and adoption of assistive technology for and by older adults is often a significant challenge".

Dr. Watzke works at the Technology Centre of the British Columbia Institute of Technology (BCIT). BCIT is a unique applied institute that has a comprehensive mandate involving technology, training, research and development, improvement of quality of life, and economic development for British Columbians and Canadians across the life-span.



EARLY REGISTRATION

To register as a participant
Early registration at a reduced rate ends on July 1, 2002.

Young researchers and PhD students may apply for a travel grant at the Herman Bouma Foundation for Gerontechnology (www.gerontechnology.nl/grants.htm). Closing date is June 1, 2002.

SPONSORS

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