

performance and pitfalls. New York: Springer; 2000; pp 2-3

9. www.atmeda.org; retrieved October 6, 2008
10. Cherry JC, Moffatt TP, Rodriguez C, Dryden K. Diabetes disease management program for an indigent population empowered by telemedicine technology. *Diabetes Technology & Therapeutics* 2002;4(6):783-791
11. Trappenburg JC, Niesink A, Weert-van Oene GH de, Zeijden H van der, Snippenburg R van, Peters A, Lammers J-WJ, Schrijvers AJ. Effects of telemonitoring in patients with chronic obstructive pulmonary disease. *Telemedicine and e-Health* 2008;14(2):138-146
12. Forjuoh SN, Reis MD, Couchman GR, Ory MG. Improving diabetes self-care with a PDA in ambulatory care. *Telemedicine and e-Health* 2008;14(3):273-279
13. Berlo A van. Smart home technology: Have older people paved the way? *Gerontechnology* 2002;2(1):77-87; doi:10.4017/gt.2002.02.01.010.00
14. Mynatt ED, Melenhorst A-S, Fisk AD, Rogers WA. Aware technologies for aging in place: Understanding user needs and attitudes. *IEEE Pervasive Computing* 2004;3(2):36-41
15. Caine KE, Fisk AD, Rogers WA. Benefits and privacy concerns of a home equipped with a visual sensing system: A perspective from older adults. *Proceedings of the Human Factors and Ergonomics Society, 50th Annual Meeting*; 2006; pp 180-184

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GERONTECHNOLOGY IS MORE THAN A MEDICAL MODEL

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The European Silver Paper¹ is essentially based on a medical model of ageing with maintaining health in old age as its major focus, and could be considered as concerned with increasing life span rather than dealing with the effects of old age. It suggests that we concentrate on 'improved prevention and management of age associated dysfunction', and 'promote healthy ageing, prevent age-associated disease', and 'rehabilitation'.

Life, however, is a terminal condition - the only way to avoid the effects of old age is by an early or sudden death. We should not consider gerontechnology simply as a way of 'curing the effects of old age', we also need to give substantial efforts in alleviating the undesired effects of old age. There are many ways in which information and other technologies can be used to this, none of which are mentioned in the Silver Paper.

For example, research at Dundee University includes: IT systems specially designed for older people^{3,4}, accessible/inclusive IT systems^{5,6}, support for cognitive impair-

ments⁷ and dementia^{8,9}, smart houses¹⁰, and a range of other areas. In addition, other researchers have published a substantial amount of research in these fields in journals such as *Gerontechnology*.

References

1. Cruz-Jentoft AJ, Franco A, Sommer P, Baeyens JP, Jankowska E, Maggi E, Ponikowski P, Ryś A, Szczerbińska K, Milewicz A. European silver paper on the future of health promotion and preventive actions, basic research, and clinical aspects of age-related disease. *Gerontechnology* 2008; 7(4):331-339; doi:10.4017/gt.2008.07.04.001.00
2. www.computing.dundee.ac.uk; retrieved November 3, 2008
3. Newell AF, Gregor P. Design for older and disabled people - where do we go from here? *Universal Access in the Information Society* 2002;2(1):3-7
4. Newell AF. Older people as a focus for inclusive design. *Gerontechnology* 2006;4(4):190-199; doi:10.4017/gt.2006.04.04.003.00
5. Dickinson A, Newell AF, Smith MJ, Hill R. Introducing the internet to the over-60's: developing an email system for older novice computer users. *Interacting with Computers* 2005;17(6):621-642
6. Rice M, Alm N. Designing new interfaces for digital interactive television usable by older adults. *Computers in Entertainment*

- ment 2008;6(1);in press
7. Newell AF, Carmichael A, Gregor P, Alm N. Information technology for cognitive support. In Jacko JA, Sears A, editors. *The Human-Computer Interaction Handbook 2*. London: Erlbaum; 2006; pp464-481
 8. Alm A, Dye R, Gowans G, Campbell J, Astell A, Ellis M. A communication support system for older people with dementia. *Computer* 2007;40(5): 35-41
 9. Alm N, Dye R, Gowans G, Vaughan P, Astell A, Ellis M. Living in the moment: An interactive entertainment system for people with dementia. In *Proceedings of*

- the International Workshop on Cognitive Prostheses and Assisted Communication (CPAC2006), Sydney; 2006; pp 16-19
10. Sixsmith A, Hine N, Neild I, Clarke N, Brown S, Garner P. Monitoring the well-being of older people. *Topics in Geriatric Rehabilitation* 2007;23(1):9-23

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OLDER ADULTS' ADOPTION AND USE OF E-HEALTH TECHNOLOGY

As older adults are living longer and more productive lives, it becomes imperative to give them the tools to track and maintain their health¹. One tool is the use of the web to access health information, known as e-health, covering a variety of electronic services such as online health information². It is distinguished from traditional paper-based sources by the sheer volume of information, its immediacy of access, and its ability to be up-to-date. For older adults (64+) who are online, 68% have searched for health information³. However, only one-third of older adults in the US are online⁴. To increase usage of e-health services in the US, the National Institute on Aging (NIA) and the National Library of Medicine (NLM) have introduced a training guide for libraries and community centers to instruct older adults how to search for health information⁵. A parallel effort must investigate how e-health providers can tailor their services to older adults' unique capabilities and limitations.

Access to health information on the web suffers the same long-standing problems as any other type of online information⁶. Because of the wealth of information, it becomes difficult to discern trustworthy, authoritative information from not. Also, health information may come from parties with a commercial interest and the trust

issue becomes critical since older adults may be susceptible to 'illusions of truth'⁷. Information access is made more difficult by basic usability problems combined with limitations of older adults⁸. Presently, we are investigating tailoring the organization of online health information to take advantage of their capabilities. Earlier, we found that organizing the website around flexible keywords instead of rigid categories helped older adults find information more quickly and accurately⁹. The reasoning is that they are able to utilize their wealth of accumulated knowledge to help guide their information search, instead of relying on declining abilities⁹.

Older adults may not adopt a new tool or technology merely because it is available, but rather because they perceive the benefits¹¹. Hirth et al.¹² found in focus groups that non-users of e-health information were satisfied with their traditional sources. Flynn et al.¹³ found that older adults' usage of e-health services was dependent on health status, the timing of the visit to the doctor, and personality variables such as openness to experience. Surveys show that those with a higher stake in health knowledge are more likely to use e-health⁴.

The challenge will be to better understand the unique benefits of e-health services and to convey this to older users. Otherwise, they may be even less likely to perceive the benefits of newer, more inter-