browsing of vocabularies and the automatic suggestion of plausibly useful proper names, words, and sentences. **Results & discussion** Testing of an early version of Friend Forecaster[3] with a real estate agent in his 60s who reports name recall difficulties yielded encouraging results[4]. The first version of Marco Polo currently supports browsing of several thousand words and sentences assembled by a stroke survivor in his 60s who has anomic aphasia. Within a month of starting to use Marco Polo on an iPhone, he consistently reports that he now uses it constantly in place of a loose-leaf notebook and traditional AAC device that he had employed for a decade. Building and testing these early implementations of both Friend Forecaster and Marco Polo has yielded insights into appropriate system architectures and interface designs[5]. These insights are currently being applied in constructing a new version of Marco Polo. Implementation and first results from this new context-aware Marco Polo implementation will be reported at the conference.

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S.C.J. Bakkes, B.J.A. Kröse. Pervasive healthcare technology for assisted living residences. Gerontechnology 2010;9(2):191-192; doi:10.4017/gt.2010.09.02.286.00 **Purpose** In the Netherlands, a contemporary way of accommodating elderly people with their desire for independent living takes the form of assisted living residences (In Dutch: 'aanleunwoningen'). These residences are built alongside, or nearby, a traditional nursing home. Senior citizens that are relatively mobile and suffer from no or limited deficiencies in health, are eligible for placement in these residences. Accordingly, the residents benefit from (health care) services provided by the nearby nursing home, while at the same time living independently, and in much more privacy than would have been possible in the nursing home. Current trends are to assist elderly people by means of, among others, telemonitoring of vital signs and video communication. Recently, systems have been proposed that monitor activities of daily living with networks of simple sensors[1]. However, with consideration to the desire for independent and privacy-conscious living, literature shows that any healthcare technology that is perceived as interfering with the daily activities of elderly residents will be regarded as obtrusive[2]. Therefore, in this paper we investigate the requirements for incorporation of sensor networks into the domain of assisted living residences, and examine a design that considers literature-defined factors of acceptability. **Method** Alongside a detailed study of relevant literature, in our investigation we also perform in-depth interviews with three target groups. Namely, we interview (i) healthcare professionals, (ii) managers of healthcare professionals, and (iii) elderly people housed in assisted living residences. The results provide valuable guidelines for the incorporation of pervasive techniques. **Results & Discussion** Results from our interviews indicate that residents may accept potentially obtrusive technology to the extent that it is used solely for the purpose of detecting and responding to emergencies (e.g. falls). However, any additional form of monitoring is received with strong opposition, even if it were to concern slowly developing medical conditions (e.g. cystitis). Interestingly, the latter view is generally shared by healthcare professionals, who reason that additional monitoring techniques are remotely relevant to the domain of assisted living residences. Still, managers of healthcare professionals reveal that additional monitoring may be required in the near future to relieve the work routine of health professionals, and, ideally, provide a higher quality of service for the residents. From these findings, we may conclude that pervasive healthcare technology in the domain of assisted living residences should be focused foremost on detecting and responding to emergencies. Though additional

monitoring directly may benefit elderly residents and healthcare professionals, we posit that their acceptance is determined foremost by the ability to control and influence the technique, and by implication, the (careful) design of the pervasive technology.

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L.P. BEAUDOIN, P.H. WINNE. Implications of psychological principles for designing software to improve memory performance in older adults. Gerontechnology 2010;9(2):192;
doi:10.4017/gt.2010.09.02.228.00 **Purpose** Numerous findings and principles from cognitive science and psychology inform our understanding of human memory. Scientific issues raised in these fields are challenging and adequate design-based theories of intelligence[1] are still lacking. This invites valid scepticism regarding so called 'brain training' products. We posit that scientifically valid studies can guide the development of software to support and enhance memory performance among older adults. In this paper, we synthesize relevant theory and research findings about cognition and affect. We describe how they can be leveraged to create functional specifications (i) for designing integrated client-server software that supports memory performance for computer-literate adults, and (ii) simultaneously provide a test bed for sharpening and extending theories upon which the system is based. A key principle governing our designs is that, like other skills, memory skills are difficult to develop by reading alone (e.g. self-help books[2]. Developing skills requires deliberate practice that (i) articulates content, (ii) regulates the timing of practice and (iii) provides two types of feedback, knowledge of results and process feedback[3]. Pertinent theories and findings for our specifications include: perceived self-efficacy[4,5] goal setting[6], self-regulated learning[3], testing memory and spacing effects[7], cued recall, neuroticism and stress, use of mnemonics8, learning strategies, self-management of knowledge gaps[9] and goal processing[10]. Our integrated-software specifications call for functionality to promote users' off-line engagement in a mixture of aerobic and resistance training, optimal sleep hygiene, and healthful nutrition, which appear to be beneficial to human cognition[11,12]. We examine issues of transfer of skills and conjecture to address them, in particular by helping users to practice the recall of personally relevant information. Our design principles also ensure that products derived from our specification are straightforward and easy to use.

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