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A. Carmichael. VISTA: Virtual Interface for a Set-Top box Agent. Gerontechnology 2002; 2(1): 124. An overview will be presented of a new multi-disciplinary project examining the human factors issues involved in the provision of a 'virtual assistant' as the interface between digital television viewers and the content and functions of an electronic programme guide (EPG). While it is anticipated that the resulting interface will make accessing EPG information easier for all users, the main target audience will be older viewers who currently experience disproportionately greater difficulty using currently popular GUI style EPGs especially with 'standard' TV/VCR remote control handsets as the input device'. Despite the great potential for improved usability of EPGs, this type of 'conversational' interface is unlikely to prove the straightforward technical panacea it has occasionally been anticipated to be² but rather it will raise a host of new human factors issues, particularly in relation to the needs and requirements of older viewers. Examples of this include, whether the (limited) animated mouth movements of the virtual assistant will help or hinder the intelligibility of the synthetic speech due to the relative reliance of many older listeners on 'speech reading'. Also the extent to which head movement and facial expression may (or may not) help users stay 'on-script'.

Key words: older users, virtual assistant, speech recognition, synthetic speech, user interface.

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References: (i) Carmichael AR. Style Guide for the design of interactive television services for elderly viewers. Winchester: Independent Television Commission Standards and Technology, Kings Worthy Court; 1999; pp 104-2 Morris JM. User interface design for older adults. *Interacting-with-Computers* 1994; 6(4):373-393.

A. Libin, J. Cohen-Mansfield. Palm Pilot use for behavioral observations. Gerontechnology 2002; 2(1): 124. With recent advances in technology, it is now possible to record direct observations of behavior using hand-held computers that contain specialized observational software. We have found that using the Palm Pilot hand-held computer m 100 has greatly facilitated our ability to capture environmental influences, occurrences of individual behaviors, and the interactions of these in our study of elderly nursing home residents suffering from dementia. Adequate inter-rater reliability was found with the Palm Pilot. Advantages of using the Palm Pilot – in comparison to alternatives such as paper-and-pencil, portable laptop computers (Burgio et al. 1994), and Observer software installed on a Psion hand-held computer (Cohen-Mansfield et al. 1997) – are: highly interactive software; ease of using the touch pad; storage of multiple records; automatic assignment of a unique ID number per record, date, and time (which is useful for analysis); capability to transfer data to a database on a hard drive (via hot sync feature); commercial availability; and, physical attributes (light-weight and pocket-sized). On the downside, there is the possibility of losing data during transfer from Palm Pilot to a desktop PC. A summary of our experiences with the Palm Pilot in the nursing home will be presented. [Funded by NIA grant 1 R21 MH59617-01].

Key words: behavioral observation, palm pilot, dementia, nursing home.

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P. Hancock, M. Lesch, L. Simmons, J. Smither, M. Mouloua. In-Vehicle phone use erodes the margin of driving safety especially for older drivers. Gerontechnology 2002; 2(1): 124-125. There is significant contemporary concern for the safety effects of mobile

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phone use during driving. However, it is as yet unresolved as to whether and to what degree, such usage increases collision frequency. We have argued that such uncertainty arises from the fundamental nature of driving which oscillates between a totally attention demanding task to an automated, over-learned response. To evaluate the safety impact of phone use while driving therefore, it is necessary to examine drivers' reactions during critical driving maneuvers when their attention is fully engaged. This report details such a critical evaluation. On a controlled test track facility we evaluated the performance of forty-two licensed drivers who were evenly split between male and female participants and between an older and a younger group. These drivers were required to respond to an in-vehicle phone at the same time that they were faced with making a crucial stopping decision. Of primary importance, we found a critical 15% increase in red light violations in the presence of the phone distraction task. This compliance rate to the red-light activation was modified by driver age such that older individuals were disproportionately disadvantaged by the presence of the distraction. In addition to compliance, which represents drivers' abilities to recognize the presence of the red light, we also noted a slowing of reaction in cases where drivers did recognize the critical red light activation. For example, we found a 36.5% increase in the average time to activate braking and even though drivers tried to compensate for their late response by an increased intensity of braking, we still found a 47.6% decrease in safety margin as represented by stopping distance in front of the light. These combined results indicate that drivers miss more critical external signals in the presence of phone distraction but also show that even when they are aware of critical external demands for stopping, they are much more inefficient in response. The apparent simplicity of driving hides a fundamental complexity that means that it is not possible to specify a simplistic relationship between these distraction effects and outcome crash patterns. However, we can conclude that in-vehicle phone use erodes performance safety margin to a significant and disturbing degree. How such a safety margin can be restored by improved in-vehicle device design is a crucial objective of the transportation telematics enterprise.

Key words: in-vehicle phone use, older driver.

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L. Pearson. Older, Novice, Self-Directed Computer Learners. Gerontechnology 2002; 2(1): 125-126. Findings are reported from a study of older, novice, self-directed computer learners. This study examined the computer learning experience of older, novice learners who acquired computing skills informally and mainly on their own. Specific findings of the study include: the development and change of computing knowledge over the course of learning; the independent carrying out of the computer learning endeavor; the use of people and materials as learning resources; perceptions of the experience of independently carrying out a new and mentally challenging learning activity. The findings of the study are revealing about the learning experience of older computer users, those aged 65 years and more, who for various reasons acquire computing skills without the aid of teachers and support associated with formally organized courses. Specific concerns include how computing knowledge changes over the course of learning as revealed by the types of computing activities engaged in; how the older learners organize, structure, and make decisions about their learning; and how and where support for the learning is acquired. Also of concern are the perceptions of these older computer learners of independently carrying out a new and mentally challenging learning endeavor. Data was gathered using a naturalistic approach that included inter-