

Aging Users are Still Users

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Abstract. Today's tech-savvy boomers will remain comfortable with technology as they age, though they may need different interfaces. They need help with evaluating technical resources, but they will continue to adapt, tailor, configure, and program those resources. They need assistants, not supervisors".

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1 Internet Demographics

Although only 32% of the elderly in the US currently use the Internet, 65% of people ages 50-64 do, and they are aging into the elderly population. As a result, "wired seniors" are the fastest-growing Internet demographic. Adults living with a disability or chronic disease are less likely than other adults to use the internet, but they are avid consumers of health care information; about 43% of these adults are getting health care information online, but they typically do not critically evaluate the sources of the information. The design of assisted living systems should respond to both the prospect of tech-savvy users and the lack of critical assessment of sources. Three issues arise: creating interfaces that compensate for disability; providing ways to help elders decide which online resources to trust, and designing assistance systems in such a way that they allow user participation, tailoring, integration.

2 End Users, Programming, and Confidence in Sources

Computer Science usually emphasizes reasoning based on "high ceremony" evidence, namely formal verification, results from trusted automatic generator, systematic testing, and empirical studies in operation. End users are usually not comfortable with this sort of evidence. They rely instead on "lowceremony" evidence such as "best X" reports, editorial reviews, advertising claims by vendors, recommendations by co-workers, seller reputation, and checklists. There is a research opportunity to provide usable ways to evaluate the credibility of online resources. In particular, there is an opportunity for online health information search to be part of a "coached care" system to help people get the most from their health care.

There are already large numbers of end users. For example, we predict that by 2012 over 90 million US workers (out of 165 million workers) will use computers in the workplace, and distinct populations approach the work with different sets of cognitive skills. Only 2.5 million of these workers will be professional programmers, and many, perhaps most, will engage in programming-like activities, taking programming in the broadest sense. It is fair to conclude that by 2012 a substantial fraction of the elderly will be freely using internet resources and adapting those resources to their own needs. There is a research opportunity to make the process of tailoring, configuring, and programming resources more accessible to end users.

As tech-savvy boomers age into the elderly population, they will not be satisfied with assistance that does not provide them visibility into information and control over the automated processes. We should therefore aim for integrated and nondistracting systems that provide assistance, not for invisible systems that provide supervision.

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