

# Senior Web Surfer

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## ABSTRACT

Lots of older people use the Internet and its services: they communicate with their friends and family by e-mail and instant messaging, manage their bank accounts, book travel, compare prices and sometimes even shop online. Around 2020, there will be more 60 year-olds than there are 20 year-olds. Senior citizens will be a preferred target for online services. European Legislation and Web Standardization Committees are already addressing this question. This video aims to educate the designers of tomorrow about the difficulties faced by seniors. Through testimonials, they will learn about the various aspects they must take into consideration to facilitate the use of their interfaces by older people.

## Keywords

Accessibility, Elderly people, Web usage

## INTRODUCTION

Everyone recognizes that the internet is being used by increasingly younger children. But the real challenge that the scientists of the 21st century will have to resolve, will be the use of computers by increasingly older people. According to reference [1], for the moment in Europe, there are 77 million senior citizens, demographers believe that in 2050, there will be 129 million, more than twice the number of 14 year-olds. Life expectancy for men will rise from 75 to 82 years and for women from 81 to 87 years. This will completely change the landscape of our society. In particular, to take just one example, online commerce's main target will be people over 65 or even over 70. They represent the largest number of potential purchasers.

## LITERATURE REVIEW

Our literature review (of references [2-14]), lead us to decline the difficulties of the elderly according to the sensory changes encountered : vision, hearing, motor skill and cognition are affected.

Failing eyesight affects all seniors and causes reading difficulties especially when small size and special fonts are used. Vision decline also raises problems while distinguishing clickable elements and catching message from animated elements. A lot of seniors also encounter

color perception weakening so that they need high contrast ratio between text and background to read easily.

Hearing loss also affects a lot of seniors but raises fewer difficulties for surfing the web. However, catching message from audio resources may become challenging.

Motor skill diminishing affects a majority of the elderly, so that doing a precise aim with the mouse becomes arduous. Scrolling menu especially cause problems.

A lot of studies show that the ability to perform mental operations changes with age. The mental abilities affected by aging are essentially information processing, attention, memory, executive functioning, visiospatial abilities and language. While surfing the web, seniors trend to loose themselves virtually and encounter difficulties to detect and use the navigation mechanism. They slower process data and are therefore often overwhelmed by the information stream on a web page. Finally, cognitive decline also affects adaptability ability so that the elderly often refuse new techniques.

This literature review was widely helped by the interactions of Isabelle Motte in the W3C WAI-AGE working group [15] working on the second version of W3C accessibility guidelines [16].

## THE VIDEO SCREENPLAY

The interviewed people are six seniors, a specialist in sociology of science and technology, a general practitioner and a voluntary trainer for a senior group. These different speakers alternate to introduce the major question of population aging, to present some activities of seniors on the web and to underline their specific difficulties. We tried to illustrate as much as possible the difficulties referred in our literature review trough sequences presenting testimonials with seniors.

## CONCLUSION

Our aim was to make young designers aware of the question of population aging and of the specific accessibility difficulties of seniors. We studied literature and structured the seniors accessibility difficulties according to the sensory changes associated to aging. The final video implies different speakers among which seniors

filmed during web surf sessions. The film was produced by the SAVE (Service Audio-Visuel et électronique) of the University of Namur.

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