Seniors web accessibility

by Isabelle Motte in june 2008

Depending on the studies, the « seniors » category begins after 55, 60 or 65. The main difficulty in that group is that it is absolutely not homogeneous : each person is concerned by one or some of the difficulties from the list below.

According to european studies, 15% people are older than 65 and in the year 2020, 20% people would be more than 65.

The recommandations for seniors accessible websites often overlap WAG of W3C but the priority level of some rules should be higher.

View decline

Most of seniors suffer from view troubles that can decline under several forms : closely visual acuity decline, color perception modification, contrast sensibility decrease, light glare and visual field reduction. The eyes diseases linked to aging are presbytie, macular degeneration, cataract and diabetes.

- Actual difficulies in reading small size fonts.   [1,2,3,4,5,6,7,8,9,10,11];
  => default font should be large enough for all text of the site; [1,2,3,4,5,6,7,8,9,10,11]
  => use sans sérif fonts; avoid condensed, capitalized fonts, justified text and italic; [3,4,5,7,8,10,11]
  => titles should be in a much larger size than the default font; [7]
  => use relative fot size that may be enlarged [1,4,7,8,9]
  => give explicit possibility to enlarge and reduce the font size [1,4,7,8,9]
  => produce well-spaced text to make reading easy; [3,4,5,7,8]
  => avoid to use graphic titles for navigation menu (they can not be enlarged); [4,7]

- Difficulties in color perception. The seniors' web lecture performances are affected by the background/text color contasts. More specifically, there is often a perception deterioration in blue/green perception. [1,2,3,4,5,7,10,11]
  => the best solution is to produce a site with blank background and black font; [1,4,5,8,10,11]
  => avoid graphical background; [4,7,10,11]
  => at least respect WAG constrast rules (as for color-blind persons); [2]
  => use very contrasted colors for background and font; [1,4,5,8,10,11]
  => avoid much saturated colors for font (yellow for example); [4,11]
  => do not use color to differenciate links (underline is the best); [1,2,3,7]
  => make your site understandable and usable without color perception; [1,2,3,10,1]
  => give possibility to visitor to choose the font color; [4]
  => keep perception color problems in mind while composing graphics; [4]

- Difficulties to distinguish clickable elements; [1,2,3,4,7,8,9,10,11]
  => propose an « onmouseover » state or/and a clear label for clickable elements; [1,7,8,9,10,11]
  => distinguish links with undeline font (and use underline font only for links) [1,2,3,4,7,9]
  => when an element is unavailable, it has to take an inactive form (grey for exemple)

and when rolling over such an element, explainations are given on how to make this element active; [1]
– <mark>Use of a specific computer, not necesseraly old but with a special configuration : screen resolution 800x600 even screen allows higher resolution, for example;
=> sites must function on 800x600 resolution screen; [1,9]</mark>
– Difficulties to perceive messages from medias (animations, video, ... and even images)
 [1,3,4,5,7,8,10,11]
=> use few animations and medias and dubble message with text;
   [1,3,4,5,7,8,10,11]
=> use few images and make good use of it; [7,8]
=> better to use actual object images than abstract graphics; [10]
– Blurred effect in the center of visual field and/or eduction in visual field
[1,2,3,4,5,7,8,10,11]
=> <mark>set important informations above screen; [1,2,3,4,5,7,8,10,11]</mark>
=> <mark>present one unique navigation menu (above) ; [1,2,3,7,8,10,11]</mark>

Hearing loss

Above 60 year old, one over two person suffer from hearing loss and for 20% of them, problems are not light.

=> <mark>Dubble sound feedback with visual feedback visuels (and vice versa). [2,10,11]</mark>

Motor skill diminishment

The major cause of mobilility problems of seniors is arthritis. After 65 years old, one person over two encouters arthritis problems. The Parkinson's desease, begining with light symptoms, is a second cause that may not easily be measured. Osteoporosis may also cause motricity problems.

– Difficulty to do a selection in a scrolling list; [1,2,3,4,6,7,8]
=> prefer interfaces with all options presented for a selection; [1,2,3,4,6,7,8]
– Difficulty to do a precise aim with mouse; [1,2,3,4,7,8,10,11]
=> <mark>produce big buttons and links and make clickable area larger than button or text; [1,3,4,7,8,10]</mark>
=> <mark>let space between clickable elements to avoid errors; [1,7,10]</mark>
=> avoid as much as possible interfaces based on rolling over the elements; [1,2,3,7]
=> avoid opening new window or new tab; [4,7,8,10]
=> set keyboard shortcut for links; [10]
– Difficulty to scroll; [2,3,7,8,9,10]
=> avoid (at least) horizontal scroll; [2,3,7,8,9,10]
=> avoid as much as possible scrolling while decomposing content in several screens
   [4,10]
– Difficulty to make a dubble-click [8]
=> avoid duddle-clicks [8]

Cognitive decline

Getting older, memory deteriorates and especially episodic memory. This compound of long term memory allows us to remind lived events in context. Seniors are also confronted with concentration problems.

- Major trend to lose themselves virtually, with difficluties to find one's way in website after some clicks; [1,3,6,7,8,10,11]
  => always give possibility to go back to homepage, to sitemap; [1,3,7]
  => use « breadcrumbs » to clearly situate the visitor in the site; [1,7,8,10]
  => propose a site map; [3,7,8]
  => present visited links in a different color; [4,6,8,9,10]
  => structure information with low level arborescence; [7,8,10,11]
  => the site must present a search engine; [9]
- Difficulties to detect navigation toolbar, to distinguish between primary and secondary navigation tool; [1,2,3,4,7,8,10,11]
  => build site with same navigation tool for all pages; [1,2,4,8,10]
  => use menu labels that are simple, distinct and complementary; [1,7,8,10]
  => use the same label for links pointing toward the same page; [7,8,10]
  => build menus while giving rapid acces to most common users tasks; [7,8,10,11]
  => build website while using stylesheets for all website coherency; [4,8]
  => concentrate the navigation toolbars at one place (above); [1,2,3,7,8,10]
- Difficulty to extract important message of a page and trend to read the whole pages; [1,2,3,7,8,9,10,11]
  => avoid overloading pages with optionnal elements; [1,2,3,7,8,9,10,11]
  => use bold font to emphasise text exclusively; [1,4,7,8]
- Difficulty to navigate within pages with frames; [3,4]
  => do not use frames [3,4]

Low level web experience

A important discussion in our team is that it is important to sort difficluties that should disappear while time passes. Future seniors won't be beginners. We tried to separate the difficulties linked to low level web experience, but that a quite difficult task ...

- Beginner level on the web; [1,2,3,4,5,6,7,8,9,10,11]
  => guide visitor along site (structure operations in different steps with explicit feedback); [1,3,11]
  => use non technical vocabulary; [1,2,3,4,5,7,10,11]
  => avoid as much as possible interfaces based on fly-out mechanism; [1,2,3,7]
  => propose an online help or a telephone help; [3,8,11]
  => give simple and clear feedbacks when visitor make errors; [3,4,6,7,8,9,11]
  => avoid new window opening; [4,7]
  => use conventionnal syntax for search engine; [3,6]
- Trend not to click on reactive images; [1,2,3,11]
  => dubble reactive images with text links; [1,2,3,11]
  => do not use interactive images for menus; [4]
- Afraid of installation of plugins and programs (and not only to download) [1,9,11]
  => do not use Flash animations and other medias that require plugins; [1,9,11]

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