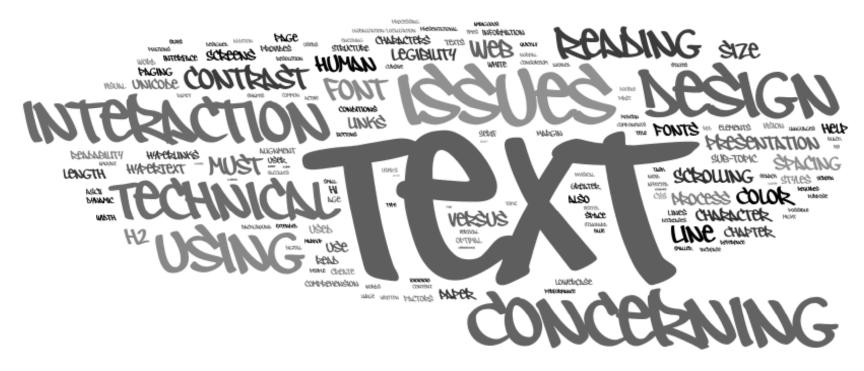
Chapter 12: Text



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Chapter 12 Text

- Human Issues Concerning Text
 - The Reading Process
 - The Reading Purpose
 - Paper versus Screens
- Using Text in Interaction Design
- Technical Issues Concerning Text



Human Issues Concerning Text

- The Reading Process
 - Saccades: Quick, jerky movements
 - Fixations: Intermittent pauses on areas of interest
- Visual and cognitive processing occurs during fixation but not during saccades.
 - If text is difficult to comprehend, if it includes long or unfamiliar words, fixations increase in duration

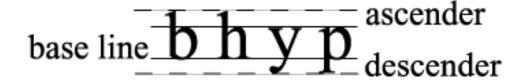


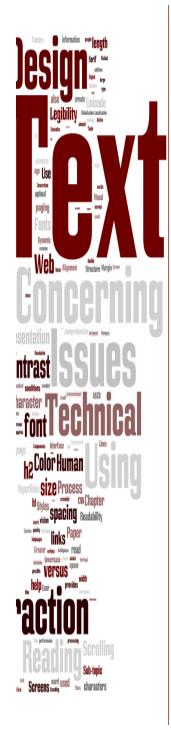
Human Issues Concerning Text

The Reading Process

We read extended text passages more quickly in lowercase than uppercase

- Lowercase presentation is more common
 - Lowercase words have more distinctive shapes





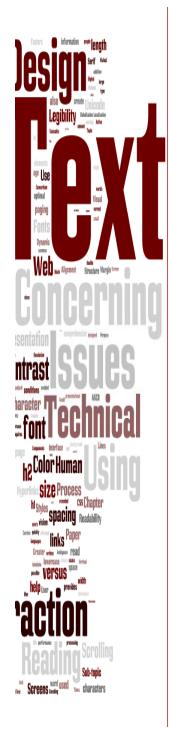
Human Issues Concerning Text

- The Reading Purpose
 - Continuous process (novel)
 - Scanning
 - Reading from screens or paper
 - Paper is more flexible than electronic media
 - We often rely on our spatial memory when we search for information

Place holders



- Commentary/Instrumental
- Legibility
- Readability
- Physical Factors



- Commentary Text that informs
 - The most common form is help text (information website fall into this category)
 - Contextual help provides immediate assistance to users without requiring them to leave the context in which they are working, such as popup menus.
 - **Procedural help** provides the steps necessary for carrying out a task.
 - **Reference help** serves as an online reference book.
 - Conceptual help provides background information, feature overviews, or processes.



- Instrumental Text that does work
 - Controls: the control's function and its label are viewed as one entity
 - Buttons
 - Checkboxes
 - Radio Buttons
 - Icons
 - Hyperlinks



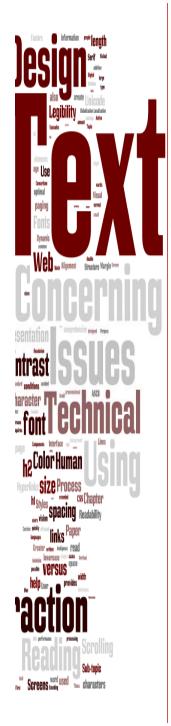
Hypertext

Hypertext links must give unambiguous indications of the target destination

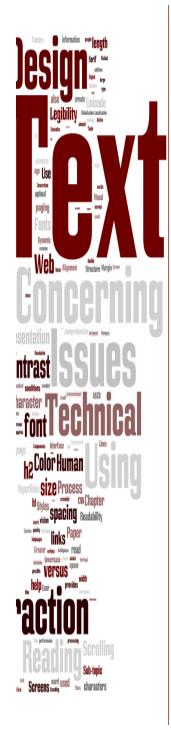
- Krug *Don't Make Me Think* (2006) suggests that what is important is not so much the number of links that a visitor must click but rather the quality of the links
- Visually impaired screen readers will tab between links and read the link text.
 - The most unhelpful links are multiple 'click here'



- Legibility Legibility is an essential first step in the reading process
 - font size
 - foreground/background contrast
- Take environmental conditions into consideration
- Consider age and possible vision impairments
 - Our capacity to perceive details decreases with age



- Physical Factors
 - Comprehension is affected by:
 - Line length
 - Line spacing
 - Formatting
 - Margin width
 - Scrolling
 - It is also affected by grammatical issues, such as semantics and syntax



- Font size
 - Factors that affect font size: (Horton, 1994)
 - **Reading Distance**—Greater distances require larger text.
 - Screen Resolution—Smaller text requires greater resolution to keep the characters clear and legible.
 - **Text/Background Contrast**—Negative contrast is optimal (black type on a white background).
 - Visual Acuity of User—Not all users have 20/20 vision.
 - **Type of Reading**—Text can be scanned, read word by word, or read character by character



- Font size
 - General benchmark formula for font size, given normal vision and optimal conditions

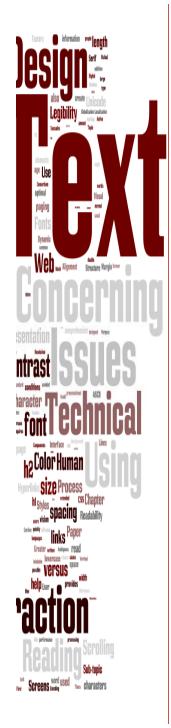
Font Size = $2d(\tan(/2)) \times DPI$

- Line length
 - Line length affects reading performance but not comprehension
 - Lines of greater length are read more quickly
 - People prefer medium line lengths

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- Margin width
 - Shorter lines—4 inches—with large margins increased reading performance
 - Maximal use of white space
- Vertical line spacing
 - The spacing between lines of text (single spacing, double spacing, etc.) is called leading
 - Double spacing has been shown to improve reading speed
 - It might necessitate a smaller font size to increase the amount of visible information per screen
- Alignment
 - Use left or justified
 - right and centre are harder to read because can't easily find beginning of the line



• Contrast - Contrast sensitivity decreases

significantly with age

TEXT
TEXT
TEXT

TEXT
TEXT
TEXT

TEXT
TEXT

TEXT
TEXT

TEXT
TEXT

- Color Contrast
 - Because black and white have the highest contrast the addition of any color will reduce the contrast
 - Luminance contrast is more significant than color contrast



- Scrolling versus paging
 - Scrolling facilitates maintenance and printing
 - The choice of paging versus scrolling depends on task and layout

Scrolling

3.6.7.1. When Paging is Appropriate There are two possible alternatives to scrolling through a web page. We can use the 'page up' and 'page down' keys to jump to different locations

Viewport

approximately one page (browser window) away. The designer can also group the text in smaller chunks and then disperse the chunks on separate pages. We would then use hyperlinks to access the different pages of the document. This process is known as paging.

Studies have shown that people prefer paging over scrolling. It has also been shown that paging is superior to scrolling for reading and revising text

Paging

Viewport

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- Components of Digital Text
 - Character Set = Character Repertoire +
 Character Codes + Encoding Scheme



- ASCII (American Standard Code for Information Interchange)
 - Basic ASCII uses 7-bit encoding, which allows it to represent 128 characters.
 - Including alphanumeric and some nonprinting characters such as line feed and carriage return
 - ASCII was extended to 8 bits, allowing for 256 characters, many confusing names for most popular set:
 - ISO/IEC 8859-1:1998, Latin-1,
 Western (ISO-8859-1),



Unicode

- incorporates other coding systems and has representations for all (modern and many ancient) written languages.
- 16 bit encoding, or more complex, adaptive encodings.
- Still insufficient support in many applications.





- People still argue whether serif or san serif is easier to read on a screen
- Cursive text requires high-resolution screens
- Variable-width font ioioioio
- Fixed-width font ioioioio



Fonts



• H. Berthold AG, Berlin 1898



Courier

This is an example of a fixed-width, serif font.

Times New Roman

This is an example of a variable-width, serif font.

Arial

This is an example of a variable-width, sans serif font.

Century Gothic Specialty Fonts can make Headlines interesting

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useit.com: Jakob Nielsen's Web

Permanent Content

useit.com: usable information technology

Alertbox

Jakob's column on Web usability

<u>Users Interleave Sites and Genres</u> (February 6)
When working on business problems, users flitter among sites, alternating visits to different service genres. No single website de the user experience on its own.

Year's Best Intranets (January 23) Search Englines (January 9) Internet Growth (December 19)

All Alertbox columns from 1995 to 2006

Hypertext

Hyperlinks have three states

Hypertext links at Useit.com

- Normal blue
- Active red
- Visited purple

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- Hypertext
 - Hyperlinks must be obvious
 - Try to avoid 'click here'
- Important difference between standard HTML format and Wikipedia
- Links of several words
 - In standard HTML: continuous underline
 - In Wikipedia: not distinguishable from single word links.





Hover and active links on the Amazon.com Web site

Side navigation links





- Globalization/Localization
 - Direction
 - Alignment
 - Space
 - Collating sequences
 - Delimiters
 - Diacriticals



Other Issues Concerning Text

Directionality is an issue not only for text presentation, but also for the design of the entire interface

A translation will not use the same amount of space as the original text

Abbreviations and acronyms must be used carefully



Putting it all together

- Design Scenario (p 494 505)
 - Uses an example to discuss the variety of issues that need to be considered
- Well worth a careful read. ;-)