

10.2. Navigation of information spaces: connection to visual perception

Navigation is one of the key aspects of a website. It is like a road map to all different section and information contained within the website [5], but this does not mean it needs to be very complicated or over designed. It should be designed in a simple, clear, consistent, and functional manner that allows users to find the content they want by moving through the web site. There are several options for navigation in website design: top horizontal bar, vertical bar/sidebar, tabs, footer, search, hypertext, ...etc. Studies have argued that good website navigation should let users answer the following questions at any time in a website: Where am I? Where have I been? and Where am I going? [5,3] This essay will look on how visual perception could be applied to the navigation design to help answering these three questions. It will also show how perceptual organization could be applied to have a consistent design.

Where am I?

Navigation should give users a clear and unambiguous indication of where they are on the website [3]. Imagine you want to attend a talk at UBC in a room that you have never been in before and you are looking at the building map. If the map is well designed, one of the most prominent features will tell you “You are here” so that you could orientate yourself.

One of the common ways used on websites, having few pages, to indicate users’ location, is the use of brightness contrast. As shown in figure 1, the section a user is in changes to a brighter or darker color, to remind the user where they are within the website. It helps users to quickly and simply orient themselves to their current location on a website after following a link [2].



Figure1: Apple homepage illustrating how navigation brightness conveys user’s current location

Where have I been?

Letting a user know where they have been on a website is one of the fundamental principles of website navigation design [3]. With hypertext navigation, when a link is clicked its color changes suggesting that destination has been visited. The standard colors

28 used in websites for hypertext are blue for unclicked links, and purple for those that have
29 been clicked [1].

30 **Where am I going?**

31 Color or brightness could also be used to help users know where they are going. When
32 links are placed close together, changing the color or brightness of the link when the
33 mouse rolls over helps the user to know exactly which link they are about to select [1].

34 **Consistency**

35 Consistency is critical for a successful navigation. It helps the users developing a mental
36 model of the website [3] enabling to get used to the website, feeling comfortable
37 browsing it, and making it much simpler to navigate [4]. The website navigation controls
38 should be grouped together to simplify the display and reduce the mental effort on the
39 part of the user [6]. This is achieved by applying Gestalt principles of perceptual
40 organization [7]: proximity and similarity. These navigation controls should also be
41 consistent within the website by making them appear in the same location on every page
42 of the website while maintaining similar style, size, and colors. If navigation controls are
43 inconsistent, users most probably will get frustrated and confused which may cause them
44 to leave the website.

45 Understanding how visual perceptual mechanisms work, will help designers to develop
46 better navigation controls that allow users to find and access information effectively and
47 efficiently. This essay has illustrated how perceptual organization, color, and brightness
48 can be used to help users to create a mental model of a website, locate themselves and
49 find their ways within the website at any time.

50 **References**

- 51 1. Charlotte (2009) 10 Principles Of Navigation Design And Why Quality Navigation Is So Critical.
52 Available at <http://www.onextrapixel.com/2009/07/03/10-principles-of-navigation-design-and-why-quality-navigation-is-so-critical/>
53
- 54 2. Dunn, Z. (2009) Principles of Effective Web Navigation. Available at
55 <http://buildinternet.com/2009/09/principles-of-effective-web-navigation/>
- 56 3. Lazar, J. (2001). User-centered web development. Sudbury; MA: Jones and Bartlett Publishers.
- 57 4. Miller, E. Five Rules of Effective Website Navigation. Available at
58 http://graphicdesign.about.com/od/effectivewebsites/a/web_navigation.htm
- 59 5. Nielsen, J. Designing Web Usability: The Practice of Simplicity. Indianapolis, In: New Riders,
60 2000.
- 61 6. Tomori, O., Moore, M. (2003). The Neurally Controllable Internet Browser (BrainBrowser). In:
62 CHI 2003, April 5-10 2003
- 63 7. Ware, C. (2004) Information Visualization: Perception for Design. Morgan Kaufmann