

Usability News is a free web newsletter that is produced by the Software Usability Research Laboratory (SURL) at Wichita State University. The SURL team specializes in software/website user interface design, usability testing, and research in human-computer interaction.

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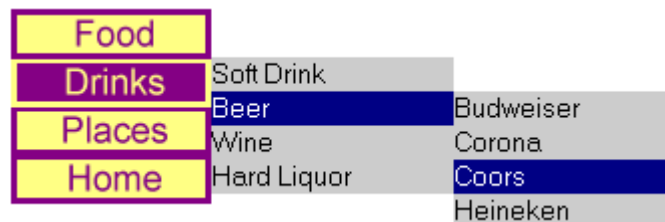
Mouse-Over vs. Point-and-Click: It Depends!

By [Barbara Chaparro](#), Gary Minnaert, & Chad Phipps

In our last issue of [Usability News](#), we discussed two selection techniques - mouse-over and point-and-click - and which was better. In studies we conducted with target acquisition tasks (where a user simply places the cursor over a designated target on the screen), the mouse-over technique proved to be faster, but less accurate than point-and-click. Though target acquisition tasks are prominent in many user interfaces, we are also interested in investigating the mouse-over technique with more complex selection tasks, such as menu item selection. Menu item selection is a more complex task because the user must read the menu text and select the appropriate item. An example of this is the Windows' 98 "Start" menu - a mouse-over technique is used to expand the hierarchical cascading menus.

In our study, we asked users to find particular menu items in a cascading menu structure that consisted of three levels of 4-item menus (see Figure 1), using either a mouse-over or point-and-click technique. The mouse-over technique required users to position the mouse over a menu item to expand the cascading menus. The user then clicked on a desired item in the third menu to select it. The point-and-click technique required the user to click the mouse on a menu item to expand the cascading menus and to select an item on the third menu. Mouse-over duration was set to 500 ms, which is comparable to the default duration for the Windows' 98 Start menu. Results from our latest studies indicate that menu selection with the mouse-over technique took significantly longer than the traditional point-and-click technique ($M = 5.25$ and $M = 4.35$ respectively). In addition, error rates with the mouse-over technique were greater than with the point-and-click (4.95% and 2.60% respectively). Subjective comments from our test participants indicate that they "felt more in control" with the point-and-click technique than they did with the mouse-over. In addition, they found the "flashing menus" as they traversed the menu to the selected item to be "distracting." This is an interesting finding given that in target acquisition tasks, the mouse-over technique was found to be faster than the point-and-click technique. Designers should carefully consider the tasks their users will do with an application when considering the types of user interface interaction.

Figure 1. A sample of the cascading menu structure we tested.



REFERENCE

Bohan, M. Chaparro, A., and Scarlett, D. (1998). The Effects of selection technique on target acquisition

movements made with a mouse. *Proceedings of the Human Factors and Ergonomics Society 42nd Meeting.*

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