



National Capital Region Chapter of the  
ACM Special Interest Group on Computer Human Interaction

## **Experimental Research in Human-Computer Interaction**

Thesis presentations by **James Zdralek**, **Cassandra Holmes**, and **Rachel White** from the HOTLab at Carleton University  
Thursday June 26, 2003 at **Adobe Systems Canada** in Ottawa

### **What?**

Our final CapCHI meeting of the season will feature thesis presentations by three MA students who are graduating from the Human-Oriented Technology Lab in the Department of Psychology at Carleton University:

#### **White Space: How much nothing should there be?**

Presented by **James Zdralek**

White space is the empty area between elements in a graphic composition. It is an important design tool used to separate and group parts of a web site. Recommendations about white space on the web have not distinguished the varied uses to which white space can be applied. To assist web designers, greater knowledge of the proper use of space is needed. The purpose of this study is to discern the extent that varying the amount of "gutter white space" used in the design of a web site affects the speed of in-page navigation. Success rate and time lapse were used as performance measures while varying the amount of white space between the groups of content items on several different web site designs. "Page navigation" was used as a basic task from which the effects of white space were separated into visual and motor responses by using a "link pointing" task and "visual search" task as well. Designers and non-designers were studied to determine whether expertise in a visual design skill affects the response to white space.

No differences were found, indicating that a change to the gutter white space on a web site affects neither designers nor non-designers. The separation of the tasks was reexamined concerning the size of the links chosen at random for the experiment. It was found that the separation of the task into components was a valid method of researching web navigation behavior but this exploration also uncovered a possible confound. The effect of target size on the visual search component of the task was opposed to the link-pointing component.

The lack of an effect on task time does not mean that crowding a website with as much information as possible is warranted. Judgments about the use of white space and aesthetics should be balanced with the density of information needed to attract the user without impeding usability.

#### **Collecting Subjective Data in Remote Usability Testing**

Presented by **Cassandra Holmes**

The effects of the presence or absence of an experimenter in remote usability testing, as well as the effects of participants' input method (voice or typing) on the quality of data collected, was examined. Emphasis was placed on information that is normally spoken, such as thoughts, comments, and answers to questions, but consideration was also given to differences in the evaluation of the web site usability as a function of the remote testing conditions. Fifty participants were randomly assigned to one of five conditions: four experimental conditions, all of which were remote, or the local control condition. Differences among groups on test time, ease of use ratings, experimenter communications, and various aspects of the comments were examined. Based on the results of this study, if remote usability testing is to be used, the recommended method is attended/voice as opposed to attended/typing, unattended/voice, and unattended/typing.

#### **Telepresence Goes to School: An Evaluation of the P.E.B.B.L.E.S.<sup>TM</sup> Videoconferencing System for Children**

Presented by **Rachel White**

P.E.B.B.L.E.S.<sup>TM</sup> (Providing Education By Bringing the Learning Environment to Students) is a videoconferencing robot designed to reconnect ill children with their classmate and teachers. P.E.B.B.L.E.S. was developed by a research team at Ryerson

University, led by Dr. Deborah Fels. You can learn more about P.E.B.B.L.E.S. at [www.ryerson.ca/pebbles](http://www.ryerson.ca/pebbles). The purpose of this study was to assess the impact of PEBBLES on children's telepresence-related behaviours and perceptions in the classroom.

Ten laboratory sessions with four children each were conducted to compare PEBBLES against a standard desktop computer with videoconferencing capability. In each school-like session, one child participated remotely while the other children and a teacher participated from a classroom.

There were no differences between PEBBLES and the desktop system in number of glances made towards the remote child, amount of participation of the children, feelings of group-integration, or descriptions of the experience. There was a tendency for the remote children to speak less often, but for longer amounts of time, on average, than the children in the classroom.

Remote children in the PEBBLES and Desktop conditions raised their own hands equally often. However, remote children in the PEBBLES condition also used the PEBBLES hand the same number of times as they raised their own hand. Nearly all of hand-waving behaviours were successful at getting attention.

Implications for the design of PEBBLES and the measurement of telepresence are discussed.

## Who?

**James Zdralek** received a Bachelor degree in Industrial Design from Carleton University in 1995 and later worked for Nortel on contract, developing prototypes for usability testing. After moving to Hawaii as a side effect of some allergy medication, James then returned to Calgary where he taught Multimedia Programming in a technical college. Returning to Ottawa in 1999 he worked for NetPCS in a graphics and web capacity and then on to Nortel as a Rapid prototyper and Interaction Designer. James returned to University in 2001 after cut backs at Nortel. He currently runs a consulting company out of his home.  
<http://www.deziner.com>

**Cassandra Holmes** is a recent graduate of the Carleton Human-Oriented Technology Lab. She has just recently completed her M.A. Cassandra completed her Honours B.A. in psychology at Brock University in St. Catharines, Ontario, in 1998 under the supervision of Dr. Stanley Sadava. Her topic dealt with alcohol expectancy theory. She has had a number of contracts in HCI related work, the two most recent being for the government of Canada.

**Rachel White** received her B.A. Hons. in Psychology from Carleton in 2000. Her area of research was child social development. She joined the Human-Oriented Technology Laboratory in 2000 as a Master's student. Since then, she has worked on HCI-related projects with AmikaNow! Corporation, Mitel Networks, NRC and Carleton University. Her love of children inspired her Master's thesis, which examines how children respond to technology.

## When and Where?

The meeting takes place on Thursday June 26, 2003 at 7:00 PM in the Rideau 1 Conference Room at **Adobe Systems Canada** in Ottawa (please enter at link between the two towers)

785 Carling Avenue (located near Dow's Lake, between Rochester and Preston streets)  
Ottawa, ON K1S 5H4 Canada

- Free parking available on site after 6:00 PM; entrance is on Rochester Street.
- **Bus routes 6 and 85** pass in front of the Adobe Systems Canada office on Carling Avenue.
- **Bus route 3** stops on Preston St at Carling Avenue, near the Adobe Systems Canada office.
- **Bus route 4** stops on Bronson Avenue at Carling Avenue, near the Adobe Systems Canada office (10-15 minute walk)
- The **O-Train** stops at Carling Station; you can walk east long Carling Avenue from the station (3-5 minute walk).

**Note:** All attending will be required to register with security. Please arrive 5-10 minutes earlier to allow for registering.

The meeting fee is \$5 for non-members and free for CapCHI members (\$20/year). Membership is for the session period (September 2002-September 2003) - anyone can join!

Refreshments will be provided for the meeting.