



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

Experimental Research in Human-Computer Interaction

Project presentations by **Sheila Narasimhan, Patricia Trbovich, Greg Dunn, and Adam Bronsther**
from the HOTLab at Carleton University
Tuesday June 15, 2004 at **Adobe Systems Canada** in Ottawa

What?

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

Activity Theory and Roles

Feature Bundling for Wireless Technologies

Presented by **Sheila Narasimhan**

Abstract: This research situates a user needs analysis method, called Strategic User Needs Analysis (SUNA) in an earlier study (Narasimhan, 2001), within the framework of Activity Theory (AT). It tests the suitability of an AT framework for classifying work roles for the purpose of studying the relationship of these roles to the uptake of PDA features by two strategic market segments, namely mobile and non-mobile professionals. Mobile professionals work outside their office for at least 30% of their working hours while non-mobile professionals spend less than 10% of their working hours outside their office. These two groups were considered early adopters of PDAs in an earlier study (Narasimhan, 2001).

A field test was conducted on 24 users using a 2X2 ANOVA design to compare mobile with non-mobile professionals as well as comparing Palm Pilot users with Handspring PDA users. In this study, SUNA used an automatic log of feature usage as a springboard to jog participants' memory with respect to the context of usage of the two features they use most often. Information concerning their work roles and the ways they used the PDA features was examined along with their nominations for additional features. The value of a generic role classification to investigate strategic questions pertaining to the development of new products and feature bundling is discussed. The results suggest that AT is a suitable theoretical framework for SUNA. Specifically, results concerning the way roles interface with PDA features and how role-based requirements are shaped by the rules and praxis of the communities in which these roles operate are in line with the predictions of Activity theory. The findings further suggest that SUNA is capable of predicting subtle differences in PDA feature usage, and that subjective estimates of the features used are quite accurate, but frequency-of-use estimates are not when the sample of features is small.

Online Auctions

The Impact of Context Upon Formation of Trust

Presented by **Patricia Trbovich**

Abstract: Establishment of trust is critical to Electronic-Commerce (E-Commerce). This research examines the primary antecedents for development of trust in an online vendor, and subsequent intentions to purchase. Specifically, this study examines the impact of contextual factors upon formation of trust and intentions to purchase through online auctions.

Symbols of E-commerce

Trust Do Third Party Branding Icons Increase Perceived Trustworthiness of an E-commerce

Presented by **Greg Dunn**

Abstract: Third party branding icons are symbols that are:

1. placed on a given e-commerce website,

2. provided by a separate business entity (third party), and
3. are designed to reassure consumers that the security or business practices of that e-commerce website meet set criteria.

This study investigates the efficacy of third party branding icons on consumer's trust. Sixty-four undergraduate participants were asked to view eight different website homepages. Homepages varied along four levels of third party branding icons. Participants were asked to provide a trust rating, either questionnaire or investment of money, for each homepage. Results are discussed in terms of familiarity, recognition, and effectiveness of third party branding icons on consumer trust, as well as differences between trust measures.

A Comparison of Audio-Visual Animated Lessons to Equivalent Static Graphics

Presented by **Adam Bronsther**

Abstract: This study replicated tutorial materials created by Mayer et al., (Mayer, Heiser, & Lonn, 2001b) to compare animated graphics to static graphics containing narrations, text, and narrations plus text. Participants were 90 primarily undergraduate students. Participants viewed a lesson on the formation of lightning and were asked to answer questions that measured factual learning and transfer. Animations with narrations plus text resulted in better factual learning performance than animations with text only. Animations with narrations enhanced transfer performance, but not factual learning, when compared to static graphics with narrations, but this finding must be interpreted with caution. Participants assigned to text only conditions spent significantly longer waiting at the end of lesson segments than participants in narrations only conditions. Possible interpretations of the results, methodological issues and future research were discussed.

When and Where?

The meeting takes place on Tuesday June 15, 2004 at 7:00 pm in the Rideau 2 Conference Room at Adobe Systems Canada in Ottawa, located at 785 Carling Avenue (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 2003-September 2004) - anyone can join!

Refreshments will be provided for the meeting.