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

Attentive User Interface

Interacting with Groups of Computers

Presented by **Roel Vertegaal** from the Human Media Lab at Queen's University

Thursday May 15, 2003 at **NRC-CNRC IIT** Montreal Road South Campus, Building M-50

What?

Moore's Law for user interfaces would state that the number of computers per user will double every two years. In the past four decades, we have moved from many users sharing a single mainframe computer through command line interfaces, to a single user with a personal computer using a Graphical User Interface (GUI). Today, increasing numbers of users are surrounded by multiple ubiquitous computing devices, such as BlackBerries, Palm Pilots and cell phones. As our devices connect to a global wireless network, we become members of a 24-hour global society Ð one where we are always connected, and always on. Such benefit comes at a cost of being available Ð at any time or place. Rather than mitigate this cost, our computing devices currently exacerbate it, as their user interfaces were designed to act in isolation, monopolizing user attention.

In this presentation, Roel will discuss how Attentive User Interfaces may make devices more sociable and efficient in use by taking cues from the turn taking process employed in human group conversations. By observing eye contact with users, devices may determine the focus of their users and his preferred channels of interruption. By continuously modeling the user's attention, devices may understand when to await their turn and leave the floor to others. By taking the foreground only after progressive signaling, devices may become less disruptive. Several prototypes recently developed in the ::human media lab:: at Queen's University in Canada will be presented. These include eye contact sensors and ecsglasses; eyepliances that contextualize speech recognition on eyecontact ; eyeproxies: robot eyes that communicate device attention; auramirror, a mirror that visualizes user attention; and gaze-2, an attentive video conferencing system.

Who?

Roel Vertegaal is a professor in Human-Computer Interaction and director of the Human Media Lab at Queen's University, Canada. He holds degrees in Computer Science from Bradford University, UK, and Twente University, The Netherlands. Roel also holds a degree in Music from Utrecht University, and spent time as a visual artist and photographer at the Vrije Academie, The Hague. His current interest lies in the psychology and design of nonverbal computers. For more info, see http://www.hml.queensu.ca.

When and Where?

The meeting takes place on Thursday May 15, 2003 at 7:00 pm in the Auditorium in Building M-50 at the **NRC-CNRC IIT** Montreal Road South Campus location,

1200 Montreal Road, Building M-50
Ottawa, ON K1A 0R6 Canada

- Bus route number 2 goes right past NRC campus on Montreal Road and there's a stop at the campus (at M60 on the map on our web site) - get off, head south (5 minute walk) past M60, M55, towards M50 (see map on our web site).
- Bus route number 95 stops at Blair Transitway station, and you can walk north from there (12 minutes).

Visit our web site for more details and a *map*… www.capchi.org/nextmeeting.html

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.