AARON MARCUS

aaron.marcus@AMandA.com

FAST FORWARD

people

When in Rome, Do as the Romans Do: HCII 2005 Recap

What's Up with HCI International?

What a vibrant, slightly chaotic venue, but interesting, Human-Computer Interaction International (HCII) conference. The latest incarnation took place in Las Vegas at Caesar's Palace during a heat wave. Fortunately, many attendees did not even have to venture outside with the thousands of slot machines, the indoor shopping mall, Elton John, and Celine Dion to keep them entertained outside of conference sessions.

Earlier in 2005, when I mentioned HCII 2005 to a famous computer-science researcher in a USA university, he pooh-poohed the conference as beneath his dignity to attend because of its easygoing review process. This snobbish attitude has characterized the view of some CHI community and conference participants. So, why were such luminaries as Ben Shneiderman and Jenny Preece from the University of Maryland and Brad Myers from Carnegie-Mellon University in attendance? In the minds of many attendees, the HCII conference had "grown up" or "matured." The current conference was organized by HCII's founding father Professor Gavriel Salvendy of Purdue University, USA, and Tsinghua University, China, together with his assistants. The previous one was primarily organized by Dr. Constantine Stephanidis, head of a computer-science research center near Heraklion, Crete, Greece, who will also be organizing the next conference in Beijing in 2007.

Perhaps after 20 to 30 years of conferences around the themes of CHI/HCI, it is time that someone wrote a careful socio-anthropological-technological analysis of these communal professional rituals, complete with analysis of cult objects (the exhibit-booth giveaways as well as the shoulder bags, pens, and proceedings). My commentary is *not* that study. What follows are informal and eclectic impressions gained from attending this HCII 2005 conference, in comparison to other similar conferences offered by CHI, UPA, SIGGRAPH, AIGA, the International Institute for Information Design (IIID), and other organizations, which I have attended on four continents in eight countries in the last few years.

HCII 2005 STATS

According to Dr. Salvendy, HCII 2005's 2,300 registered attendees came from 63 countries. This international representation is, to my knowledge, a greater percentage than CHI and UPA can claim, and is one of HCII's chief attractions. It is possible to discover interesting, novel developments. A surprisingly (to me) large contingent came from France, while large European delegations from Finland and Germany and from Asian delegations from China, India, Japan, and Korea were more expected. At least one representative came from Saudi Arabia, which hints at the large market in Moslem countries spread throughout Europe, Africa, and Asia. The large attendance and diverse subject matter partly derives from six joint conferences, including virtual reality and augmented cognition. The last subject seemed heavily related to and endowed by DARPA, the Office of Naval Research, and the National Science Foundation, among other sponsoring organizations.

CHI in recent years, as well as UPA, were pleased to see conference attendance numbers and membership growing stronger in the past two years following the recession of 2002-03 (interestingly, there seems to be a pattern of recessions: 1982, 1992, and 2002). HCII takes a longer view because of the two-year build-up to its biannual conference, whose venue bounces around the world. While UPA ventured to go "international" for the first time by holding its conference successfully outside the USA in Montréal, Québec, and CHI has occasionally ventured abroad to Europe to hold its conferences in the Netherlands and Austria, HCII has regularly featured worldwide and exotic locations in North America, Europe, and Asia. This international character is reflected in its attendance figures: 57 percent of the 2005 attendees came from outside the U.S.A., a very high figure, and higher than for CHI and UPA, to my knowledge.

There were 62 exhibitors, 22 parallel sessions, and 230 posters. The CD seems to contain 1672 papers. These figures alone are impressive. The exhibits and posters took me approximately three to four hours to sample one by one, at least to pass by to determine if each held any specific interest for me.

The exhibits were surprisingly profuse and elaborate. Because of DARPA and other military-related funding sources, these exhibits featured a worrisome number of rifles on display, some used as "mouse pointers" in virtual-reality games. There was even one military jeep-like vehicle perched at a angle on a small fake hill, with an anti-aircraft machine gun on top. I don't recall the exact subject matter of the exhibit, but the sheer cost of these exhibits called to mind the feeling of SIGGRAPH exhibits in the 1980s, when CAD/CAMCAE system vendors funded much of commercial product development,

and budgets were ample for booths and giveaway toys. In fact, the exhibits felt more like the robust SIGGRAPH exhibits of past and now, again, current years. One exhibit representative even commented that her group had debated whether to exhibit at SIGGRAPH or HCII, and had decided on the latter, because the SIGGRAPH exhibits seemed to her too narrowly focused on the film/animation industries.

Among the exhibits, I was intrigued to notice two booths featuring a four-aroma computer-controlled scent display developed at the Institute for Creative Technologies, University of Southern California (http://www.ict.usc.edu). The device was like a horse's harness placed on the shoulders, and several "thinking caps" monitored neural activity (see, for example, www.quasarusa.com and www.b-alert.com). The sheer cleverness and curious mixture of high technology, game simulation, and virtual reality recalled the excitement of SIGGRAPH's perennial experimental new technology exhibits, at which innovative prototypes, art works, and first-generation commercial solutions have been shown.

Posters varied greatly; some, as at CHI, looked no better than high-school science reports, while others were very professional in appearance and content. Among those that caught my eye, and mind, were Kim and Poggenpohl's Institute of Design, Illinois Institute of Technology, study of movement phenomena based on Werttheimer's 1923 gestalt principles of form (e.g., similarity, proximity, continuity, and good form). Their adaptation seemed intriguing and useful for distinguishing different kinds of motion phenomena. The extension to sound and even haptic display seems inevitable.

I was also pleased to see yet another augmented reality system being demonstrated with a single-hand chording keyboard that appeared to be comfortable and easy to use. The wearer, Kent Lyons, a PhD student from Georgia Institute of Technology, said that he had been using a similar system for several years, as he entered my contact data into his database discretely with one hand while I verbally recited it to him.

Caesar's Palace provided fitting accompaniment to the opening ceremonies with a much-heralded appearance of stand-ins for Antony and Cleopatra.

In the conference program, DARPA-flavored augmented cognition topics were featured heavily. Dr. Gerald M. Edelman of the Scripps Research Institute and the Department of Neurobiology at the University of California-San Diego discussed progress with brain-based devices. His talk was followed by an Alexander Singer film about the future of augmented cognition. Much of this high-technology seemed oriented to military applications, with occasional spin-offs, e.g., to equipment that aided cognition-disabled children with input devices suited to their accessibility levels.

Mobile sessions also commanded significant attention. Dr. Martin Boecker, Siemens, Germany, presented three-dimensional, animated avatars for delivering SMS and email phone messages. They experimented with both realistic and more abstract, cartoon-like depictions of informal "agents." He commented that a particular green "cute" creature was unexpectedly interpreted as a dragon in China, but nevertheless was appealing. Dr. Boecker also made a presentation on behalf of a multi-company consortium including Siemens, Sony-Ericsson, and Nokia, which reported on emerging conventions in mobile phone user-interface controls and information display. This admirable example of coordination was a welcome piece of good news for the benefit of users worldwide.

Marta Ray Barbarra, in my session, reported on a successful launch of a BankInter, Spain, SMS-based banking system, which used simple password-code plastic cards to ensure security. The very high rate of satisfaction achieved was impressive for a solution that did not attempt the most radically innovative technology, but rather was satisfied with achieving a usable, practical approach to guarantee marketplace acceptance and use.

In the cross-cultural area, Dr. Nuray Aykin, The New School, New York, had chaired an impressive number of sessions in her track with international, global, and cross-cultural themes. Papers of interest included stud-

ABOUT THE AUTHOR *Aaron Marcus is the founder and president of Aaron Marcus and Associates, Inc. (AM+A). He has degrees from both Princeton University and Yale University, in physics and graphic design, respectively. Mr. Marcus has published, lectured, tutored, and consulted internationally for more than 30 years.*

done in the context of a market that increasingly expects enterprise software to have the same polish and panache as consumer-oriented software.

"Software in general is becoming much more consumer-oriented," Ashley points out. "For example, Google has set the standard for search. Why can't we search the same way in enterprise applications? Standards are continually being set in terms of what users expect from the user experience. Enterprise software is not immune from this trend."

My advice for dealing with the complexity? I'm feeling philosophical today. Accept the fact that it's a chaotic world we live in, and we only have limited control. Embrace the confusion, look for and leverage design patterns when you can, push for open standards and interoperability, and put your hard-won design experience to use in the fight against entropy. ✦

ON THE EDGE

tem installed, and those that exist do not see much use.

An interaction designer or researcher might now start thinking about how we could make that on-board computer easier to use by replacing the interface with something more suitable. But a better solution might be to take a step back and try to figure out what it is that the policemen really *need* in the car. Do they want to do the same things that they can do at the desktop? Or perhaps they are looking for something else entirely?

In fact, many policemen have installed their own piece of information technology: a small cut-out piece of whiteboard-like material that goes on the dashboard, in the same place where the computer screen would have been. They use this to scribble important information when they are sent on an assignment, to take notes when talking to a colleague on the radio, to write down orders for pizza, and to pass information along to the next team that is going to have the car. When the information has been used, it is easily wiped off. None of this functionality is available in the in-car computer.

It seems the people who made the police-car system were fixated on the idea of a *computer*, whereas the policemen just have a job that needs to be done. And it is not at all clear to me that any new computer interface would actually make that job easier. Perhaps the policemen do not need a computer at all; they just need some way of taking notes and passing information along to each other. If so, a small piece of whiteboard could be the best—and certainly cheapest—solution.

Only by looking at what people are actually doing can we figure out what they really need. Research in new interaction techniques will never be of much use unless we have some problems to solve in the first place. Whereas the desktop interface came out of a specific need—making interaction with digital documents easier for the non-expert—many recent ideas seem to be solutions in search of a problem. By trying so hard to break out of the computer box, we might just be building another set of boxes to be confined in.

In the 20th century, it seemed like a funny idea to put a computer in a car. In the 21st century, it is still a funny idea, but for different reasons. As long as we think computer first, and problem second, it doesn't matter how we interact with it. Perhaps it is time to try to leave the very *idea* of a computer behind and concentrate on figuring out how digital technology can solve real problems—no matter what the interface looks like. ✦

URLS The Blues Brothers. *1980. Directed by John Landis, starring John Belushi and Dan Aykroyd.* www.imdb.com/title/tt0080455 *The Public Safety research group at the Viktoria Institute* ww.viktoria.se/groups/ps

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ies of users in different countries, differences of attitudes toward color and imagery, and different techniques used to gain user feedback. Among memorable presentations was Apala Lahiri Chavan's, Human Factors International, Mumbai, which discussed the value of adding "Bollywood characteristics" to spice up use scenarios to make them more attractive and involving for Indian users.

CONCLUSIONS, AND LOOKING TOWARD BEIJING

HCII 2005 was an impressive success in many ways. Although it suffered some logistics problems, the success of the HCII 2005 conference should give CHI 2006 planners something to think about. The continuity of the organizers of HCII conferences during the past two decades means that inherited wisdom of things done right, and avoidance of past mistakes, can be retained in organizational memory, unlike the annual leadership transplants that take place every year at CHI. As CHI and *<interactions>* rethink themselves, the operations and content of a successful conference like HCII 2005 should provide important evidence and trend information that could benefit the CHI community. HCII's 2007 conference in Beijing promises to be an attractive alternative to world CHI/HCI/UI/UX events. ✦