



A supplement to *interactions*



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# From the Editor

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## **SIGCHI: Broad and Deep**

This issue represents my one-year anniversary as Editor of *SIGCHI Bulletin*. Looking back on this year, I realize that I have learned an immense amount about SIGCHI and the CHI community. When I accepted this position, I was well familiar with the CHI conference and a few of the other SIGCHI-sponsored conferences; I was active in a struggling local SIG; I even went to the annual SIGCHI business meetings where I would hear, year after year, that SIGCHI had money to support the development of the field.

But I had no idea how broad and deep the impact of SIGCHI was, not just at conferences, but in activities and chapters around the world.

I've learned a lot in a year. Over the past year, I've served as a member of the SIGCHI Executive Committee, struggling alongside a group of dedicated volunteers to figure out how to better serve our members and grow the field. I've also been the only person to read *every single article* submitted to the *SIGCHI Bulletin*. In the process I've had a glimpse into the breadth of CHI-related activity around the world and the depth of CHI-related activity in dozens of subfields and specialties.

I am taking the occasion of this anniversary column to reflect on just a couple of these learning experiences.

### **A Community of Communities**

One of the first things I learned on the EC was that the "CHI Community" includes a set of highly diverse sub-communities. Researchers and technologists and designers and usability process professionals have not only different backgrounds, but also different ways of expressing themselves and their work. SIGCHI has been struggling with the question of how to meet the diverse needs of these communities, particularly when the volunteers running the conferences, publications, and the SIG may not be drawn from these communities. I am delighted to note dramatic progress in working with the design community--CHI 2001's design expo, along with Elizabeth Dykstra-Erickson's appointment as SIGCHI's Adjunct Chair for Design, are great strides forward.

### **Being Global**

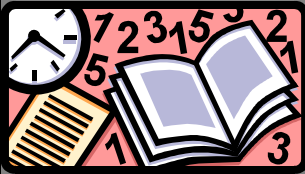
What does it mean to be a global organization--especially when you are part of an American one? SIGCHI, like ACM itself, has been struggling with what it means to be global without unfairly competing with national organizations. The local SIGs model has been one success; there are many examples of local SIGs that are bona fide national organizations (e.g., SIGCHI.NL). But the question remains challenging; how often can we hold conferences in Europe or Asia? Will holding CHI abroad help or hurt national and regional conferences?



## From the Chairs

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The Chairs' column will next appear in the November/December issue of *SIGCHI Bulletin*.



## hard questions have no answers

Although it will be a new academic year when this issue comes out, at the time of writing it is in the middle of examination board season in the UK. A few weeks ago, final-year students sweated in examination halls up and down the country, but they have now finished and are drinking wine, having all-night parties, falling in rivers and in love, savouring the sweet taste of freedom. Whilst they relax in the sun, in darkened rooms academics sit huddled over endless piles of papers and spreadsheets deciding their fate: who fails, who passes, the honours and the wooden spoon. Whereas the Greek Fates, Clotho, Lachesis and Atropos, spun and measured out men's lives with thread and then cast it on the fire, here the future lives of young women and men are reduced to lists of numbers and grades.

In education we literally play with peoples lives.

I hate setting exams and hate even more marking them. Partly because it's a lot of work, but more because I dread that final judgement. Formative testing is hard work, but you are giving feedback to grow your students. Exams just label them.

One thing that makes me feel better about marking exams is my knowledge of statistics. I know that my marking is not totally consistent, the marks at the start of the pile are not the same as those at the end of the pile. If I do half the marking one day and half the next it will probably matter whether I got a good night's sleep in between. Although we make every effort to avoid it, marking is inevitably a process with a large random element. However, the nice thing about random effects is that they average out to give a true reading. Each exam has many questions, each question has several parts, each course may have several assessments and the eventual degree is based on many exams and other assessments.

One accidental benefit of changing institutions mid-year has been (shh! don't tell my colleagues) no exams to mark! (To be fair I did set some at Staffordshire before I left and left extensive sample answers, so I haven't been entirely negligent.)

Although I've escaped exam boards at my own institution, I haven't escaped entirely. In the UK we have a system of 'external examiners'. The old saying is "who polices the policeman". Well in UK academic circles the answer is "the external examiner" – I don't know if the same holds true in other countries. The external examiner's job is partly to verify that judgements are arrived at in a fair and unbiased fashion and partly to ensure a (probably mythical) consistency of standards between institutions.

Consistency of standards – is a degree in institution A the same 'standard' as one in institution B? In countries with a single nationally prescribed syllabus across all institutions this is perhaps easier to assess, but for those where every course is different? It's a bit like fairness within an exam. It is possible to be totally fair and totally consistent, simply have a universal syllabus, and test it with multiple choice questions. Very fair, consistent and totally useless at measuring anything of value. And of course if we really are worried about a fair and consistent educational system, it may be worth getting rid of all teachers (must make a difference) and even doing something about poverty, health provision and early educational access ...

Probably the most interesting of my external appointments is as "Chief External Examiner of the Post-Graduate Modular Scheme" at Cheltenham and Gloucester College. Each subject has its own individual exam board overseen by external examiners in its own discipline and I get to attend cross-disciplinary boards which receive the results of the subject boards and award Masters degrees based largely on formulae and recommendations from the relevant representative. Sounds exciting huh? Happily everyone there agrees and the box ticking parts happen as quickly as possible only stopping to consider the difficult cases.

It is of course always these exceptional, marginal cases which are most challenging and lead to broader questions. What does it mean to have a 'Masters' degree when you consider subjects as diverse as Fine Art, Computing and Theology? Consistency is one thing within a subject, but can we have a touchstone for 'post-graduateness' that covers this sort of range? Phrases like 'analytic approach', 'maturity', 'reflection' spring to mind, but it is not clear whether any such list is universally applicable and even less whether they can be interpreted uniformly! And, after that, capturing this in rules – rules that ensure levels of consistency whilst still allowing appropriate discretion. Sounds familiar – it's an archetypal socio-technical design problem assigning roles to the human and automatic parts of a system so that the whole works together. Such systems won't be free of human frailty, bias and mistakes, but will benefit, when rules don't apply, from our unique abilities to make hard judgements and, of course, our willingness to accept responsibility for them.

# Computers and Kids

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## The Changing Landscape of Children's Technologies

### A Toy or Technology?

Ever wonder if something your child is playing with is a toy? Or could it be a computer technology? This confusion is not surprising given the fact that "Smart Toys" are being trumpeted from such gatherings as the New York Toy Fair and being amplified by the popular press. There are any number of robot dogs these days that react to sound, touch and more (e.g., Sony, Fischer Price). There are numerous physical toys that plug into the computer as input devices that control adventure games (e.g., Zowie's Magic Garden or Pirate Ship). For a while, stuffed animals such as Barney or Winnie-the-Pooh seemed to be everywhere helping children explore animated stories (e.g., Microsoft's Actimates). Today there are even toy blocks that enable children to be composers of music (e.g., Neurosmith's Music Blocks). Some of these smart toys need a traditional computer to "become smart." Others have sensors, acutators, and the computer built right in. What the commercial landscape is showing us is that children's technologies no longer a need to be restricted to desktops with plastic boxes. They can look like any traditional toy but be embedded with computational power.

For children, the importance of familiar toy objects such as stuffed animals, blocks, and toy ships cannot be minimized. A critical part of a child's early cognitive development is in negotiating the physical world. A number of researchers over the past few decades have combined the power of computation with the familiarity of a child's world. One such group can be found at MIT, led for years by Professor Seymour Papert. Since the 1970s, this group of researchers has been exploring concrete ways for children to use what they intuitively understand about the physical world. They have combined the children's programming language of Logo with mechanical turtles, LEGO gears, motors, and programmable bricks. In more recent years, their work has been commercialized in the popular Mindstorms Robotic Invention System. Other researchers have concentrated on robotic stuffed animals that enable children to listen to stories or tell their own. Such research initiatives include the MIT Media Lab's SAGE and the University of Maryland's PETS.

### Lots of People are Talking

This convergence of toys and technology has gathered enough steam to finally bring together representatives from industry and academia to discuss issues that need to be addressed in this emerging area. One such group is the PC-Enhanced Toy Working Group (PET-WG). According to Rand Potter, one of the leaders of PET-WG, "toy companies, toy inventors, toy technologists, research organizations and technology companies interested in toys come together to meet in this group. We discuss and explore ways to make toys more robust by using the home PC to provide a level of processing power, intelligence and interactivity previously unavailable to toys. The PET-WG requires no membership fee and no contract or intellectual property rights agreements. Presenters are asked to only present public information that does not require non-disclosures, but naturally everyone is encouraged to meet privately with any of the attendees for further discussions. We typically meet quarterly and the meetings are rotated among the various attending companies." For more details, visit <http://www.intel.com> and search for *toys*.

As toys and technology become one and the same, there are still a great many questions to consider: What impact do these technologies have on children? What innovations are needed in terms of interface design? How can we get our ideas out of the lab into commercial production? How can we learn from the past to strike out in new directions for the future? Where can I learn more about what others are doing? Some references that begin to answer these questions include:

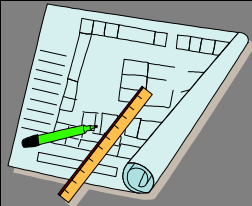
Druin, A., Montemayor J., Hender J., McAlister B., Boltman A., Fiterman E., Plaisant A., Kruskal A., Olsen H., Revett I., Schwenn T., Sumida S., and Wagner R. "Designing PETS: A Personal Electronic Teller of Stories," in *Proceedings of CHI '99* (Pittsburgh PA, May 1999), ACM Press, 326-329.

Umaschi, M. "Soft toys with computer hearts: Building personal storytelling environment," in *Extended Abstracts of CHI '97* (Atlanta GA, March 1997), ACM Press, 20-21.

Maddocks, R. "Bolts from the blue: How large dreams can become real products," A. Druin, and J. Hender (eds.), *Robots for kids: New technologies for learning*. Morgan Kaufmann, San Francisco CA, (2000).

Martin, F., Mikhak, B., Resnick, M., Silverman, B., and Berg, R. "To Mindstorms and beyond: Evolution of a construction kit for magical machines," A. Druin, & J. Hender (eds.), *Robots for kids: New technologies for learning*. Morgan Kaufmann, San Francisco CA, (2000).

Strommen, E. "When the interface is a talking dinosaur: Learning across media with Actimates Barney," in *Proceedings of CHI '98* (Los Angeles CA. April 1998), ACM Press, 288-295.



## Update on Human Computer Interaction Standards, Part 3: More International Standards

This column is next in a continuing series of updates on human computer interaction standards. Last time we began by discussing international HCI standards in ISO, the International Organization for Standardization. We covered two main efforts of the ISO Technical Committee on Ergonomics of Human Computer Interaction (ISO TC159/SC4): First, the completion of ISO 9241, the multipart standard on hardware and software associated with visual display terminals, and, second, ISO 14195 on designing the integration of media in multi-media user interfaces. Both of these efforts are happening in one subcommittee, Working Group 5 (WG5) on Software Ergonomics and Human-Computer Dialogs.

This subcommittee is also working on a Technical Report on accessibility of computer applications for users with disabilities. ISO/DTR 16071 "Guidance on Accessibility for Human-Computer Interfaces" will complete its first international vote in August of 2000. This is a first stage vote for conferring Committee Draft status on this working draft. Readers may remember from two columns ago that Part 2 of the HFES 200 also covers Accessibility. (That U.S. document, by the way, is right now in the midst of canvassing committee review to become an ANSI standard in the United States.) There have been liaisons and several technical exchanges between the HFES 200 committee and ISO TC159/SC4/WG5, so that the ISO Technical Report will contain much of the concepts provided in the U.S. standard. Note, however, that 16071 will be a technical report, and not a standard. The ISO committee does expect that the Accessibility material will become a standard at some point in the future, but made the decision to issue the material as a report at this stage in order to gauge the feasibility and world reaction to standards for Accessibility.

There is also another HCI-related subcommittee in the ISO Ergonomics Technical Committee organization. This is Working Group 6 (WG6) "Human-Centered Design Processes for Interactive Systems." In complimentary relationship to its sister subcommittee, WG6 concentrates on the process of user centered design in organizations, in contrast to the content-focused dialog design standards of WG5.

There is one completed International Standard, ISO 13407, now available for use, entitled "Human-Centred Design Processes for Interactive Systems." Human-centered design, in this context, is a system development process

which is specifically engineered to make systems usable. The standard provides an overview of activities which constitute human-centered design, directed principally to project managers. Basic design process concepts familiar to most user interface design professionals are introduced: involvement of users, understanding user and task requirements, iteration of design prototypes, etc. Design activities are classified and discussed in four categories: (1) Specify the context of use, (2) Specify the user and organizational requirements, (3) Produce design solutions, and (4) Evaluate design against requirements. The standard ends with a sample procedure for demonstrating conformance to the recommendations.

Currently in development and review in WG6 is a follow-on document to 13407: ISO/CD TS 16982, entitled "Ergonomics of Human System Interaction – Usability Methods Supporting Human Centred Design." Like ISO 16071, this document is being developed as an ISO Technical Specification (TS). The TS class of document was previously referred to in ISO as ISO Technical Reports. The purpose of this document is to elaborate upon ISO 13407 by providing more background to project managers with no professional training in user-centered design. The current version of the document identifies and explains eleven classes of design methodologies (e.g. task analysis, questionnaires).

Finally, WG6 has recently polled ISO international member bodies regarding a new work item: a technical report on "Ergonomics of Human System Interaction – Human-Centred Lifecycle Processes Descriptions." This document will present a formalized model of user-centered design in the product lifecycle. I will update the current status and eventual fate of this proposed document in future columns.

Next time I will complete my series of overviews on ANSI and ISO HCI standards with a report on activity in ISO/IEC JTC1. Future columns will expand my coverage to telecommunications and World Wide Web standards and I will review the current status of usability testing standards at the U.S. National Institute of Standards and Technology. I will also devote some future columns to specific areas of notable interest, such as accessibility, voice technology, design process, and Internet standards.

*Any opinions expressed in this article may not be those of ACM, SIGCHI, or AT&T.*

# Local SIGs

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<http://www.acm.org/sigchi/local-sigs/>

## Shaping the Roles to be Played During the 21st Century by Local Chapters of ACM SIGCHI

The annual CHI conference serves as a benchmark of sorts for SIGCHI. How well SIGCHI is doing seems to be reflected in the nature and success of this conference and is discussed by lots of conference attendees and presenters and extensively at the SIGCHI Extended Executive Committee meeting that immediately follows the conference.

The annual CHI conference has increasingly served as a benchmark of sorts for CHI Local SIGs as well. How well CHI Local SIGs are doing seems to be reflected in the nature and success of the full-day CHI Local SIGs workshop held during the CHI conference and is discussed increasingly by conference attendees and presenters and increasingly at the SIGCHI Extended Executive Committee meeting that immediately follows the conference.

As we enter the 21st century, the success of SIGCHI, the success of the CHI conference, and the success of CHI Local SIGs have become intertwined. The overwhelming success of CHI 2000 in The Hague, The Netherlands has been attributed in no small amount to the increasing number and success of CHI Local SIGs in Europe and to the support provided by SIGCHI.NL, The Netherlands chapter of ACM SIGCHI. Yet, CHI Local SIGs still feel undervalued by SIGCHI, and some people don't appear to be particularly fond of the increasing proliferation of CHI Local SIGs around the world.

Here is a peek at some of the goings-on at CHI 2000 regarding CHI Local SIGs. First are some words about my 4th annual Local SIGs workshop, then come portions of my oral report to the SIGCHI Extended Executive Committee about the state of CHI Local SIGs, and lastly are a few words about what some call SIGCHI's attempt to "colonize" the world.

### The CHI 2000 Local SIGs Workshop

Representatives of 27 CHI Local SIGs from 18 countries came together for a full day during CHI 2000 to consider the roles their organizations now play and might play during the new century. Those assembled represented a wide variety of CHI Local SIGs: some had been officially chartered by ACM, others were in various stages of startup; some were student chapters, others were professional chapters; some were the first CHI local sigs to be formed, others were newly prospective; some served large geographies, others served small areas; some served large numbers of people, others served only a few; some served entire countries, others served metropolitan regions, one served three entire U.S. states.

We examined the relationships of these Local SIGs with:

- *their constituencies*

Perhaps not surprisingly, the roles played and to be

played by the represented Local SIGs vary considerably. We discussed these many roles as well as the different roles members of the constituencies (individual chapter members, non-members, volunteers, sponsors, organizations, ...) play in the life of the Local SIGs.

- *the Internet*

The Internet is playing an increasing role in the success of CHI Local SIGs. We looked at how the Internet has been changing some Local SIGs and explored how it might change others.

- *SIGCHI, ACM, and other CHI Local SIGs*

At the CHI 99 workshop, we considered proposals to link SIGCHI and CHI Local SIG membership and to establish a Local SIG Congress. We reexamined these concepts and their motivation, and we identified other ways in which these key relationships could be improved.

- *other HCI organizations*

We examined the relationships other HCI organizations have with Local SIGs and with SIGCHI, and we discussed the implications for all involved. Uncertainties about some of these relationships have been largely responsible for some people's criticism of the spread of CHI Local SIGs around the world.

- *the government of their country*

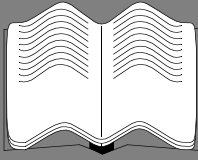
In the past, Local SIG activities and benefits appeared to be differentially constrained by the relationship ACM and CHI Local SIGs had with the government of the Local SIGs' home country. We revisited those constraints to identify steps that should be taken towards changing those relationships, if changes would be beneficial.

Many thanks to all the Local SIG representatives: Verena Giller (SIGCHI Austria), Karin Coninx (BelCHI), Raquel Oliveira Prates (Brazil SIGCHI), Ronald Laurids Boring (CapCHI), Rob Harvie (ToRCHI), Sidney Fels (VanCHI), Pavel Slavik (Czech SIGCHI), Morten Borup Harning (SIG-CHI.DK), Timo Jokela (Finland SIGCHI), Said Tazi (Toulouse SIGCHI), Peter Gorny (German SIGCHI), Avi Parush (Israel SIGCHI), Maria Francesca Costabile (SIGCHI Italy), Cuauht\_moc Rivera Loaiza (CHI-MEXICO), Aldo Paula (SIGCHI.NL), Nuno Ribeiro (Universidade Fernando Pessoa SIGCHI), Jacques Hugo (CHI-SA), Christina von Dorrien & Lena Magnusson (West Sweden CHI), Daniel Felix (Swiss-CHI), Richard Anderson (BayCHI), Donald Day (DC\_CHI), Stacie Hibino (CHI-Squared), Carolyn Gale (KATCHI), Ann Marie McKinnon (GB/SIGCHI), Diane Miller (LowellCHI),

*this article is continued on-line at:*

<http://www.acm.org/sigchi/bulletin/2000.4/sigs.html>

SIGCHI Bulletin



# Book Review

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## Review of *Information Appliances and Beyond*

by Eric Bergman  
Review by John Ford

Bergman, E. *Information Appliances and Beyond*. Academic Press: San Diego, CA, 2000. ISBN: 1-55860-600-9.

My favorite mental image from this book is a Palm Pilot designer walking through his office pretending to write notes on a block of wood. This image communicates the essence of contextual design to both experienced and novice designers. Bergman has collected a set of case studies that illustrate basic interface design principles while making a strong case that PDAs, mobile phones, and even children's toys require fresh thinking about design.

Bergman identifies *information appliances* as specialized devices requiring more focused design than general-purpose PCs. The first chapter, an interview with design expert Don Norman, highlights the differences between PCs and information appliances. Norman hopes that computers will largely "disappear" as they are embedded in these special-purpose tools. The second chapter is an information appliance design tutorial. It advocates five design principles: (1) focus on the task domain; (2) customize the user interface; (3) configure functions according to frequency and importance of use; (4) simplify to a small set of core functions; and (5) design for interruptability and continuous feedback.

Subsequent chapters use conversation and case study formats to present designers' responses to Bergman's question: "What is different about designing software in this domain than designing software for a desktop computer?" These responses largely confirm the importance of the five principles described above.

Chapter 3 discusses "Internet appliances" designed for broad appeal and accessibility through the World Wide Web. A key challenge is presenting content "to suit the tastes, requirements, and device limitations" of such a large number of users.

Chapter 4 is a conversation with one member of the Palm Pilot design team. Filled with examples of design and redesign, this chapter is interesting to Palm users as well as designers.

Chapters 5 and 6 describe the design of Microsoft Windows CE and the EPOC interface in the Psion Series 5, two efforts to design scaled-down personal computers. These

two chapters present very different perspectives on how closely designers should model the familiar PC interface.

Chapter 7 presents design issues for mobile phones and other portable communication devices and includes an excellent overview of the contextual design process. The importance of social and cultural factors in mobile phone design is a key lesson from this effort.

Although it is difficult to find one's way through the large collection of screens, Chapter 8 provides a useful case study of vehicle navigation system design. The presentation is organized according to five conceptual components of user interface design: metaphors, mental models, navigation, appearance and interaction.

Chapter 9 reminds us that toy design is about fun rather than efficiency or productivity. Some of this perspective generalizes to more serious applications. Chapter 10 laments the lack of communication between game designers and the mainstream design community. Key lessons from game designers include the importance of users' emotional engagement and appropriate pacing of interactions.

The final chapter discusses design of "persuasive technologies," which may attempt to change user attitudes and behavior about such topics as safety, health, and personal relationships. This chapter also explores the effects of connecting information appliances to wider networks to keep them supplied with current information and allow them to make real-time reports.

These chapters are well organized and readable. The contributors make effective use of "before" and "after" interface visuals to emphasize the importance of specific design choices. The references listed after each chapter are reasonable pointers into the professional design literature. The book could serve as an introduction to general design principles, although this is not its primary purpose. It provides an important perspective for desktop interface designers who are extending their skills by designing information appliances.

# Visual Interaction Design

Frank M. Marchak, Editor  
chi-Bulletin-VID@acm.org



design our logo! see below.

## What exactly *do* you do?

How many of you, soon after being introduced to someone unfamiliar with computer science, have been asked something similar to the question “what exactly *do* you do?” From conversations with others in the community, it seems that many have adopted a range of responses to such a question, from the detailed, collegial reply to the explanation my parents give the relatives when they inquire about my occupation: “Oh, he does something with computers.”

My thoughts are drawn to this topic in part by an email that I received from someone in a Information and Interface Design and Usability department: “Just read your column/article in the *SIGCHI Bulletin*, April 1999. What exactly is VISUAL INTERACTION DESIGN?”

In the interest of preserving continuity and ensuring precedent, I looked back through previous columns to see how we had defined ourselves. To quote from Maria Wadlow’s first column in the January 1993 issue of the *SIGCHI Bulletin*:

The name, Visual Interaction Design, was chosen because it represents the dual emphasis of our work, the visual aspects of interaction in interface design. We see ourselves as bridging the gap between graphic design and interface design. Visual interaction design differs from traditional graphic design in that it goes beyond visual communication to include interaction. And it differs from traditional interface design because the emphasis is on the visual aspects of the interface.

...

We view interface design as an interdisciplinary process in which visual interaction is an integral component. Our intent is to explore the role of visual designers in a design team and to educate others on our contributions to the design process. We feel that as a community we can effect changes within *SIGCHI* to recognize the contributions of visual designers to the field and to support the work of visual designers in conferences and publications.

Next, I tried a web search on “visual interaction design.” The largest number of hits was to references to this column, such as the on-line *SIGCHI Bulletin* Columns. I came across a job posting for a visual interaction

designer in an Information Systems department. The requirements included skills in providing design solutions that improve the usability of software applications and web sites, experience in latest visual design methods, techniques and tools, and a Bachelor’s degree in Fine Arts, Graphic Design, Industrial Design, or similar field.

Another direct hit was the resume of someone who worked as a Visual Interaction Design Intern for the Human Interface Design Center at Apple Computer. The projects noted included tasks such as designing the visual identity for the Location Manager and designing icon families for specific applications. Relaxing my criteria, I looked for any combination of visual design, interaction design or visual interaction. This produced sites that characterize interface design as the intersection of the independent but overlapping areas of visual design, interaction design, and information design.

While there is a large degree of continuity between Maria’s original charter and the characteristics I found on the web, I wondered what notions those of you out there that think of yourselves as visual interaction designers might hold. With the above information as background, I pose the question to you: what exactly *do* you do? What knowledge and skills do those of us who consider ourselves involved in visual interaction design possess? Further, in what ways can this column reflect the state of the field as it exists today, and what can we do to help move it forward in the future?

Let me know your thoughts; think of it as a chance to practice writing that dream job description for your resume. You can post them on the Visual-L list (see end of column for details) or directly to me ([fmarchak@veridicalresearch.com](mailto:fmarchak@veridicalresearch.com)). I’ll assemble the responses and report back the results.

To subscribe to the Visual Interaction Design ListServ group, send email to [listserv@vtvm1.cc.vt.edu](mailto:listserv@vtvm1.cc.vt.edu) with the single line in the body: subscribe VISUAL-L <your name>. You can also access the list via net news: [inter.net.computing.visual-l](mailto:inter.net.computing.visual-l)

**Have a talent for design? Try your hand at designing the "icon" for this column! Send submissions to [chi-Bulletin-VID@acm.org](mailto:chi-Bulletin-VID@acm.org).**

# Workshop and Conference Reports

## Online Communities Workshop:

### Supporting Sociability, Designing Usability

HCIL 2000 Open House - June 1, 2000

Chairs: Jonathan Lazar, Jenny Preece, Jean Gasan

[http://triton.towson.edu/~jlazar/hcil2000/oc\\_workshop.html](http://triton.towson.edu/~jlazar/hcil2000/oc_workshop.html)

With over 20 participants, the second annual Online Communities Workshop provided the forum for a lively discussion focused on three questions regarding online community development: (1) What guidelines should we follow? (2) What key questions must we ask ourselves as we proceed? (3) How do we evaluate and measure success? Online communities for many different audiences were examined through the work of some 15 presenters (<http://triton.towson.edu/~jlazar/hcil2000/abstracts.html>) representing a broad range of academic, corporate and non-profit research and endeavors.

The workshop participants agreed that many factors influence our ability to develop good online community sociability (the interaction of people) and usability (the interface interaction of the individual with the computer), but potential answers did emerge and are detailed at (<http://triton.towson.edu/~jlazar/hcil2000/details.html>). In summary, these sociability and usability themes and areas of continuing research were highlighted during the day's discussions:

- Online communities are not sustainable until a critical mass of participants is achieved. Strategies for creating critical mass and maintaining it are different. Clarity of community's purpose, patterns of use, rules for operating (e.g., rules for posting, moderation and archiving postings), and role in the member's everyday lives can affect critical mass creation and sustainability.
- Community member demographics and characteristics will strongly impact the design and technology implementation for an online community. Issues of shared purpose, need, trust, perceived social and/or educational benefits, roles and motivations are some of the factors that impact the design.
- Online community success is inherently multiple perspective based. Different stakeholders (e.g., owners, users, advertisers, and designers) have different and sometimes conflicting goals. Different measures are required for different goals (e.g. revenue dollars for e-commerce sites, members - belonging and usefulness). There are both process and product oriented views of success definitions.

Next year the workshop will continue its exploration and discussions of current research with a focus on one or two specific topics.

## CHI2000 Workshop Report: Continuity in Human Computer Interaction

Mieke Massink and  
Giorgio Faconti

The CHI2000 Workshop on Continuity in Human Computer Interaction was organised as a two days satellite workshop of the CHI2000 conference by members of the European Funded Training and Mobility of Researchers (TMR) Network on Theory and Application of Continuous Interaction Techniques (TACIT). Work within the network is concerned the design challenges posed by certain novel interactive technologies for HCI, in particular those where the temporal dimension of tasks or actions becomes a significant factor. This concept of "continuity" encapsulates important aspects of integrated multimodal interactive devices, especially those involving human motion.

The first day of the workshop was dedicated to the presentation of two case studies and short presentations. The first case study was an augmented reality application of a white board, called Magic Board, that allows users to use the advantages of both real and electronic writing and drawing in brainstorm sessions. The second case-study was the Map Views application which can be characterised as a distributed real-time application for cooperative navigation involving different platforms with different interface and processing capabilities. The presentations covered topics such as specific usability requirements for continuous interaction, shift in focus of attention, tangibility, the use of metaphors and several proposals for a reference model of continuous interaction that can guide the systematic design of human computer interfaces at various stages in the development.

The second day the proposals for a reference model have been discussed in more detail and a potential layered reference model has been applied to the two case studies. Progress has been made on relating a layered reference model to other theories that focus on different aspects of continuous interaction. These theories include cognitive, architectural and design concerns of continuous interaction.

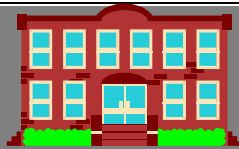
A full version of the workshop report can be found in the electronic SIGCHI Bulletin at <http://www.acm.org/sigchi/bulletin/2000.4/tacit.html>. Details on the reference model, the TACIT project and the poster produced at the workshop is available via the TACIT web site: <http://kazan.cnuce.cnr.it/TACIT/TACIThome.html>

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# CHI Student Volunteer

Erika Orrick



As has been the custom after each CHI conference, a Student Volunteer has produced a column on the “CHI-experience” from an SV perspective. A lot of what you will read this year is the intangible experience, thoughts and feelings on participating in this conference. It is our hope that this insight will not only encourage other students to participate as volunteers but also allow non-students to see the benefits of the Student Volunteer program.

First--a brief rundown of the Student Volunteer program for those of you unfamiliar with it. Each year 140-160 students from around the world are selected through a sign-up/lottery process to work at CHI. In exchange for working 20 hours at the conference, these students are given a complimentary conference registration and may attend one tutorial for free. The jobs that fill these 20 hours of work vary, for example, Student Volunteers hand out registration badges, help speakers, direct traffic, and do whatever other odd jobs the conference office comes up with. In other words, the SVs do a lot of the little jobs that most people don't think about, but that are vital to a smooth-running conference.

Below I have gathered comments from several students who served as Student Volunteers at CHI2000. Some were neophytes, and some were returning veterans.

Henry Rodriguez writes: “This is the second time I am a SV at CHI. The most important for me is that I get in touch with many other students that belong to different cultures; that feeds my soul as a person. This also gives me the opportunity to understand people from the human point of view. People indeed are different and our cultural background plays a big role in it. I am into computer science and studying HCI. Being a SV at CHI have given me a great lesson about communication, coordination, and sharing with people with the best of the teachers: The People.”

Gabe Johnson: “This was my first time working as an SV at CHI this year--and it was quite a horizon-expanding experience. I finally had the chance to meet some of the folks whose work I have been studying. And I met many other SVs that will probably go on to be noted researchers in HCI. Overall, student volunteering is an excellent way to go new places and meet great people--I recommend it to any student interested in this field!”

Harry Koehler: “I worked together with people from the US, from Portugal, and from Italy, Venezuela, Germany, France, Holland and so on... Everyone had this

feeling of being part of something challenging, and then we had our nice bright orange T-shirt and this united us more as the big SV-Group 2000. Everyday at dinner we met and talked about our work and experiences from the day. To be a Student Volunteer means a little bit of work, a lot of new friends from all over the world and experiences you can't get anywhere else!”

Miguel Villarroel: “[It] may be CHI2000 was one of the most important events in my student life. Being a student volunteer at CHI multiplies all the benefits that you can get in the conference. The opportunity to participate directly in the organization side gives you invaluable abilities in order to collaborate in this kind of activities at your own university. And, of course, making friends (from the entire world) is one of the best parts of all. All the knowledge, all the contacts, all the friends, all the INTERACTION!”

.....

I (Erika) have served as a Student Volunteer for three CHI conferences. My first experience was in Atlanta where I was bewildered, excited, and exhausted all at the same time. In the years since Atlanta, the bewilderment has abated somewhat, while the other two have remained steady. In the Netherlands, I had the opportunity to serve as a “Super-SV.” The Super-SVs are 6 or so veteran Student Volunteers who spend their 20 hours working in the SV office helping the Student Volunteer co-chairs run the SV program as smoothly as possible during the actual conference week. This was in some ways more stressful than being a “normal” SV, because all of a sudden, people expect more of you, assigning jobs fairly, making sure we have SVs where we need them--up to and including getting on stage in front of 2000+ conference attendees to thank this year's SV co-chairs for doing a wonderful job. I have a new appreciation for the job that Tom and Garrett did this year, and all the Student Volunteer co-chairs did before them. Thanks everyone.

### ***Special Note:***

*If anyone is interesting in contributing to the revived Student Column of the Bulletin, or had ideas of what resources should be available here, please do not hesitate to contact Erika Orrick at [chi-Bulletin-Students@acm.org](mailto:chi-Bulletin-Students@acm.org).*



# SIGCHI Minutes

Barbee Teasley, SIGCHI Vice Chair of Communications  
chi-VC-Communications@acm.org

Complete minutes can be found in the on-line edition at:  
<http://www.acm.org/sigchi/bulletin/2000.4/minutes.html>

## Meeting of the SIGCHI Extended Executive Committee The Hague, The Netherlands April 7-8, 2000

### Input from Distinguished Advisors

The SIGCHI Distinguished Advisors attended the morning session of the EEC meeting on April 7. They were asked to address the issue of whether SIGCHI is serving its members in the best possible way and, if not, how we can better meet their needs.

### New Appointment

Steven Arnold has agreed to take over the position of Adjunct Chair for Information.

### Report on CHI 2000 Conference

The registration for the conference was the highest ever, at about 2,543. Registration for the tutorials was about 3890, which is the second best ever. Income from sponsors and contributors was in excess of \$218K, plus in-kind contributions.

The Co-chairs recommended that in the future tutorial instructors should receive a higher honorarium. They also recommended the continuation of scholarships for authors with accepted admissions who come from soft currency countries. They suggested that the CHI Kids program be re-evaluated. The expenses for the program were about \$15K above donations and fees. Thus, the conference spent about \$1K per attendee.

The EEC expressed their appreciation to CHI 2000 chairs Thea Turner and Gerd Szwillus for a highly successful conference.

### Future Conferences

A motion that the CHI 2003 conference should be in Europe, unless it process financially or logistically impossible, passed 8-0-0.

### Conference Operations

Due to excessive demands on his time, Angel Puerta resigned his position as Vice Chair for Conferences. The EEC expressed their appreciation to Puerta for his work to date in this position.

### Operational Issues

A motion that the Chair oversee the creation or updating of the EC Operation Plan, Conference Operational Plan, Budget Summary, EC Job Descriptions, Core Conference Document, and Model Conference Document passed by a vote of 7-0-0. A motion to contract for an external audit of operations passed 5-2-0.

### Publications

A motion to provide *SIGCHI Bulletin* only to members, not to others who subscribe to *interactions*, passed 8-0-0.

A motion to make access to SIGCHI materials in the digital library a membership service passed 7-0-0. A motion to support an interactions editorial board meeting, with a request for ACM to pay half the costs, passed 8-0-0. A motion to fund a hit rate analysis on the Digital Library, for \$2K, passed 8-0-0.

ACM approached the CHI conference organizers to discuss making videos of the conference tutorials part of the ACM Digital Library. A motion to do a trial release of one video passed 7-0-0.

### Finances

Jean Scholtz reported that we are in very good shape financially.

The EEC again addressed the issue of the CHI Conference contingency fund. The conference is required to return 8.2% of their budget to the EC. In addition, ACM requires a contingency of 6.8%. A motion that the required return be reduced to 2% passed 7-0-0.

### Awards

Olsen reported on the ongoing efforts to establish a SIGCHI service award. It is proposed that the stipend be \$2500. A motion to create the award passed 8-0-0. A second motion to include conference registration and travel expenses for recipients passed 8-0-0. A motion to create CHI Fellows, similar in nature to ACM Fellows, passed 8-0-0.

### Member Growth and Retention

A motion to budget \$10K for advertising SIGCHI at related conferences passed 7-0-0.

Tremaine will appoint an Adjunct Chair of Design. Their charge will be to inform the EEC of how we can best meet the needs of the design community. A motion to provide up to \$10K for a small workshop for 4-5 designers in conjunction with the EEC's August meeting passed 7-0-0.

### Local SIGs

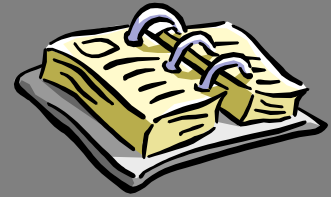
More countries were represented at the workshop this year. The primary complaint is that local SIGs feel undervalued by SIGCHI. Areas where there could be improvement include involving local SIGs in the selection of conference sites and conference development; public representation of accomplishments; and informing new or renewing members of SIGCHI that there is local SIG in their area (if this is the case). Local SIGs would like additional help from SIGCHI in dealing with ACM.

### CSCW 2000 Tutorials Announced! (<http://www.acm.org/sigchi/cscw2000>)

- T1: A grand tour of CSCW research*
- T2: A technical overview of CSCW*
- T3: Activity theory: Basic concepts and applications*
- T4: The theory and practice of fieldwork for system development*
- T5: Contextual inquiry: Gathering customer data for system development*
- T6: Developing Web-based collaborative applications -- Social and technical Issues*
- T7: Theoretical foundations of collaboration and learning*
- T8: CSCW and groupware: Experiences, state of the art, future trends*
- T9: Distributed Cognition: Applying theory to the social, and the cognitive in CSCW design and evaluations*
- T10: Recommender systems: Collaborating in commerce and communities*
- T11: Behavioral evaluation of CSCW systems*
- T12: Community knowledge*
- T13: Distance Learning*
- T14: Computer-supported community work -- Fundamentals and applications*
- T15: How social science findings inform CSCW design*
- T16: An introduction to collaborative construction*
- T17: Computer-supported community work -- Building a research and action agenda*

# Events

Ronald Laurids Boring, Editor  
[chi-Bulletin-Events@acm.org](mailto:chi-Bulletin-Events@acm.org)



## Upcoming Conferences

**September 5 – 8, 2000**

### **HCI 2000: Conference of the British HCI Group**

General conference for practitioners and researchers of CHI.  
Sunderland, UK  
<http://www.bcs.org.uk/hci/hci2000>

**September 27 – 29, 2000**

### **HCI-AERO 2000**

Forum for current research and industrial innovation in CHI and aeronautics.  
<http://www.eurisco.onecert.fr/events/hci-aero2000.html>

**October 23 – 25, 2000**

### **NordiCHI 2000**

Conference highlighting Scandinavian contributions to HCI, with a particular emphasis on design.  
Stockholm, Sweden  
<http://www.stimdi.se/konf/nordichi2000/>

**November 5 – 8, 2000**

### **UIST: User Interface Software and Technology**

Forum stressing techniques, tools, and technology for constructing high-quality, innovative user interfaces.  
San Diego, California, USA  
<http://www.acm.org/uist/>

**November 16 – 17, 2000**

### **CUU 2000: Conference on Universal Usability**

Conference on making software and hardware accessible to all users.  
Washington, DC, USA  
<http://www.acm.org/sigchi/cuu>

**November 28 – December 1, 2000**

### **APCHI: Asia Pacific Computer Human Interaction**

Conference featuring industry and academic research on CHI and human factors in Asia.  
Singapore  
<http://www.drc.ntu.edu.sg/users/c2000/>

**December 2 – 5, 2000**

### **CSCW: Computer Supported Cooperative Work**

Forum for presenting and discussing research and development concerning the use of computer technologies to support collaborative activities.  
Philadelphia, Pennsylvania, USA  
<http://www.acm.org/cscw2000>

**December 4 – 8, 2000**

### **OZCHI 2000**

International conference on all aspects of human factors and computer-human interaction, with a particular emphasis on research in Australia and New Zealand.  
Sydney, Australia  
<http://www.emis.csiro.au/ozchi2000/>

**January 14 – 17, 2001**

### **IUI: Conference on Intelligent User Interfaces**

International forum for presenting research on intelligent user interfaces.  
Sante Fe, New Mexico, USA  
<http://www.iuiconf.org>

**March 13 – 17, 2001**

### **IEEE Virtual Reality 2001**

Conference featuring research on all aspects of virtual reality, from hardware implementation to 3-D CHI.  
Yokohama, Japan  
<http://www.vr2001.org>

**March 31 – April 5, 2001**

### **CHI 2001: Human Factors in Computing Systems**

SIGCHI's annual conference focused on all aspects of computer-human interaction.  
Seattle, Washington, USA  
<http://www.acm.org/sigchi/chi2001/>

**July 9 – 13, 2001**

### **INTERACT 2001: IFIP Conference on HCI**

Conference emphasizing reliability, usability, acceptability, and user satisfaction of human-oriented computer systems.  
Tokyo, Japan  
<http://adam.cs.inf.shizuoka.ac.jp/interact2001/>

**August 5 – 10, 2001**

### **HCI International**

Forum for the dissemination and exchange of scientific information on theoretical, generic, and applied areas of CHI.  
New Orleans, Louisiana, USA  
<http://hciei2001.engr.wisc.edu/>

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# Real World

Lon Barfield, Editor

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## Specifications

There is a story that the Mathematics building at Manchester University was built back-to-front. The architect specified it all on paper and then went on holiday (very silly!). When he got back, the foundations were nearing completion and everything was facing the wrong way. It would have cost too much to dig it up and start again, so the specifications underwent minor modifications and the tower was completed back-to-front. I don't know if the story is true or not but the tower certainly does seem to have a back-to-front feel about it, and the main entrance is on the second floor.

The specifications that pass between designer and constructor take many forms and the new discipline of user interface designer is still struggling with the ideas. Research groups are continually coming up with languages for describing interactive systems, and yet the commercial world in general is only just starting to take user interface design itself seriously, let alone specification languages for the area.

One of the key factors with specifying interfaces in a real-world, commercial environment is the threshold of effort needed to make a complete specification. Often the approach is to do briefings (rough verbal 'specifications'), and refine them as the construction process continues. This requires regular monitoring, but in the end might cost less effort than meticulous specifications at the beginning. Also, it allows input from the person doing the construction ('Errm, I hate to say this but aren't we building it all back-to-front?').

One interesting observation is that specifying a user interface could be easy. If you are specifying a digital communication protocol then the requirements (security, error checking) are such that the thing you end up specifying is complex. However, one of the key requirements of a user interface is that it is easy to follow and understand; the concepts must be as few and as simple as possible. It follows then that there should be some simple way of specifying it, and if it isn't easy to specify, then it could be because the interface is badly designed. (If you explain an interface to a group of people and no one understands it then the chances are that it is a bad interface). So what we need is a language that is close to the designer, that uses high-level, designer-concepts and has nothing to do with how the design is implemented.

The danger is the loss of elemental specification. With any specification language it should be possible to express all possible ideas. Some kiddies' construction kits are geared up for building houses; there are large roof chunks, walls and windows. Building any variety of house you want is simple and fast. But if you want to build an aeroplane then it is almost impossible. In contrast, basic Lego blocks allow you to build whatever you want, but their elementality means that what you gain in flexibility you pay for in that it takes a higher level of

investment to get the same results. What you need is the best of both worlds; a house building kit where the walls and roofs are prefabricated chunks made from many Lego bricks. You can put houses together very quickly, but if you want to make alterations or create something completely different the large chunks can be deconstructed and you have the flexibility offered by separate Lego bricks.

I opened with the suggestion that a complete specification is often too time consuming compared to refinement during construction. Another point is that complete specifications are very rarely complete. There are always gaps. Sometimes such gaps are intentional, they form part of a top-down approach to specification, but sometimes the gaps are unintentional and then they are filled-in in one of the following ways:

Unknowningly by the implementers; no-one notices the gap and it is just filled in without thinking.

According to implementers preference; the implementer is aware of the problem but just fills it in with whatever is easiest from a technical point of view.

Implementers guess of the designers preference; the implementer is aware of the gap, doesn't consult with the designer and makes a guess as to the best design to fill the gap.

In discussion with the designer; the implementer (who has already implemented a large part of the solution) draws the gap to the designers attention and together they sort out a solution, usually resulting in a compromise.

A wonderful example of this last approach is Apple's experiences with Giorgetto Giugiaro the top Italian designer and his studio. After several problems with the joint design process they discovered that the Italian designer's way of producing models was completely different from their own. In America the model shop gets detailed design specifications and follows them to the letter. In Italy the model makers are carrozzerie - craftsmen - and actually take over part of the design process themselves; acting on partial specifications, they refine them to produce the final models. The magic doesn't happen in the design studios but in the interaction between the designers and these craftsmen.

Maybe introducing specifications into design always precludes that vital spark of genius that defies specification.

The Italian designer story is from the compelling book *Apple Design* by Paul Kunkel (Graphics Inc. NY).

# SIGCHI at a Glance

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**Scope.** ACM SIGCHI embraces work on the hardware and software engineering of interactive systems, the structure of communication between human and machine, characterization of the use and contexts of use for interactive systems, methodology of design, and new designs themselves. SIGCHI serves as an international venue for specialists in human-computer interaction, education, usability, interaction design, computer-supported cooperative work, and other related areas.

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**Future CHI conferences.** (<http://www.acm.org/sigchi/conferences>)

CHI 2001 — Seattle, Washington, USA — March 31 - April 5, 2001

CHI 2002 — Minneapolis, Minnesota, USA — April 20-25, 2002

**E-mail Discussion Lists.** (<http://www.acm.org/sigchi/listserv>)

Several discussion lists are maintained by SIGCHI on topics ranging from education to social action to the web. The moderated chi-Announcements list is used to reach the broader HCI community. Information on joining the mailing lists is found at the listed URL.

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SIGCHI has more than fifty local special interest group chapters. Contact information can be found on the local-sigs web page (above). Locations of current and forming local SIGs include:

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