



SIGCHI

Bulletin

A supplement to *interactions*



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From the Editor

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Changes Ahead

SIGCHI Bulletin is undergoing another round of substantial changes to keep up with your needs as SIGCHI members. In this column, I'll review the recent history of *Bulletin* changes and give some indication of where things are going.

Many of you may remember the "old" *Bulletin*, a journal-sized quarterly that often arrived chock-full of research reports, industry practice articles, and other contributions. For decades, this format met the needs of the SIGCHI membership as a venue for everything from research results to workshop reports to society business.

Several years ago, however, the SIGCHI landscape started changing. The introduction of *interactions* magazine and *Transactions on Computer-Human Interaction* provided new outlets--beyond the CHI conference and specialized conferences--for research contributions and practitioner-oriented articles. When I assumed the editorship of the *Bulletin* in mid-1999, it was with the understanding that we needed to create a more lightweight and flexible *Bulletin* that would provide the types of content not available through other sources.

The current *Bulletin* debuted in Fall 2000. We increased publication from quarterly to six issues per year. But, more important, SIGCHI had decided to send *interactions* to every SIGCHI member, making the *Bulletin* more of a society-news supplement. We no longer accepted research papers, and limited workshop and event reports to a half-page (more or less) to keep each issue small and readable. Your feedback suggests that we succeeded.

Alas, times and needs continue to change. Over the past six months, a group of volunteers has explored the future of the *Bulletin*. First, we identified the challenges the current format creates:

- Paper publication schedules result in our reporting society news only after decisions are made and actions taken. We'd prefer a model that allows us to inform you about upcoming issues and solicit your input and advice.

- As our members have more and more content competing for their attention, even a 16-page *Bulletin* is often too heavy-weight.
- The slow turnaround and nature of print publishing have significantly limited the amount of interaction in the *Bulletin*. Despite repeated invitations, the number of "letters to the editor" and similar contributions over the past years can be counted on one hand.
- Finally, the *Bulletin* hasn't adapted to take advantage of successful new forums for disseminating information and conducting discussion. Event reports and topic discussions, for example, are held much more successfully on CHIplace than they can be in the *Bulletin*.

The result of this study is a new concept of what the *Bulletin* is, and will become. This concept is evolving, but some key elements include:

- Discontinuation of the current printed *Bulletin* after the May/June 2003 issue.
- The creation of a new on-line *Bulletin* that serves primarily as a vehicle for society news. This content will be better integrated into the SIGCHI website (www.sigchi.org), and will focus on timely information to encourage member participation.
- Migration of other valuable forms of content to more suitable venues (including *interactions* and web sites such as CHIplace).
- The introduction of *Bulletin* update e-mail, for members who want a quick overview of new content. This concept is being developed and will evolve to an appropriate level of personalization.

From my perspective as Editor, these changes are well-needed, but a great deal of work. I am particularly pleased to announce that Jonathan Arnowitz has agreed to take over as Editor and oversee this migration. He and Hans de Graaff have been instrumental in developing the vision and technical plan for this conversion. They deserve our gratitude, and I have full confidence that their work will benefit our organization and its membership.



Top 10 Reasons to Come to CHI 2003

Every year I am asked by many people whether they should attend CHI (I always answer *Yes!*). So (with apologies to David Letterman) I thought this year I would share with all of you my top reasons for saying *Yes!*

10. Hear Neil Budde talk about his experiences moving the Wall Street Journal online to the Web, and Don Norman talk about his new work in emotion and design. Do plenary sessions get better than that?
9. See the latest and greatest research. Spot the next big trend in HCI and computing before the rest of the world knows it.
8. Update your skills and knowledge. CHI 2003 is offering great tutorials – many new for 2003 – that focus on the needs of HCI professionals in the 21st century. Learn how to design for the aging “baby boomer” population, or how to design wireless devices and services. Learn about search engine and recommender engine systems. Or learn how to integrate HCI techniques into new development approaches such as Extreme Programming.
7. Find a new job.
6. Find a great person to hire.
5. Three words: Florida in April.
4. Catch the e-learning wave. CHI 2003 is highlighting e-learning as a special theme. There are tutorials, papers, panels and other sessions where you can get caught up on this hot trend, learn about the technologies that enable it, and explore the design issues surrounding effective e-learning.
3. Go to a panel session, and talk about the hot issues facing us today. Spam. Electronic voting. Cultural issues in design. Privacy and trust.

2. See cool technology demonstrations. New displays, devices, and visualizations. Design tools. Videoconferencing systems. And the stuff that’s so new we didn’t even have time to print it in the conference program.
1. Because this is the one time a year that the HCI community all comes together. This is our community, and this is our best opportunity to network with our colleagues. As we all know, you can’t communicate everything by e-mail; for some things, you need that face-to-face connection.

I had great difficulty narrowing this list down to 10; I didn’t get a chance to mention so many other terrific parts of the conference, such as workshops, SIGs, the fantastic reception the CHI committee has planned, student posters...

There is one more reason I feel compelled to mention, though, which is the presentation of the CHI Lifetime Achievement Award and CHI Service Award, and induction of members of our community into the CHI Academy. As a community, it is critical that we publicly and formally recognize and thank the people who have contributed to the strength, depth and validity of our field and affirm the value of their contributions. We will be doing so at the opening plenary session at CHI 2003, and I hope you will all join me for this.

When you pass me in the hallways at CHI, please stop and say hello. I would love the chance to hear your thoughts on how CHI and SIGCHI can better serve your needs, and I’ll happily buy you a cup of coffee in exchange.

See you in Ft. Lauderdale!

Kevin

Local SIGs

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New SIGCHI Bylaws - What Changes for Local Chapters?

It has been many years since we started hearing about possible changes in SIGCHI bylaws, as a way to update them and reflect the current needs of the organization. Now the new set of bylaws has been approved by SIGCHI Executive Committee (EC) and is in the process of being approved by ACM, before it can be voted on by our members. In this column I would like to take the opportunity to explain what are the proposed changes for SIGCHI Chapters and some of the issues we should discuss and decide upon at our annual workshop at CHI 2003.

SIGCHI recognizes its chapters as an important part of the organization and would like to support them the best way possible. One step in this direction has been to have a representative of the Local Chapters as a voting member of the EC, so that this person participates and is able to influence decisions being made. This has already been implemented since 2001, the previous Adjunct Chair for Chapters is now called Vice-Chair for Chapters and has the vote that used to belong to the Advisory Board. In the new set of bylaws this position is officially created. This position, as others of the new proposed EC, will be appointed by the Chair of SIGCHI and approved by elected officers. The reason for this is that the EC should guarantee that the person nominated has the required skills to perform the job well.

Those who have been involved with Local Chapters for a long time, have certainly heard Richard Anderson speak of the Local SIGs congress. In the same line of what I believe Richard had in mind, the new set of bylaws creates the Council of Chap-

ters. The idea of this council is that the Local Chapters have their own executive committee that is responsible for representing and fostering the interest of the Local Chapters to SIGCHI. The new set of bylaws does not define how this Council should work or be created, since SIGCHI empowers the Local Chapters to decide what serves them better. The only requirements is that if this council should have its own bylaws, they should be consistent with ACM and SIGCHI bylaws, and that the Vice-Chair for Chapters will be the liaison between SIGCHI EC and the Council of Chapters. It explicitly states that the Vice-Chair for Chapters need not be the chair for the council or even a voting member of it.

Local SIGs have had an annual meeting during CHI for many years now. We can perceive this as the meeting of the Council of Chapters, where every Local SIG has a representative in this council. Although the workshop is always very productive, it is not easy for us to make the items that result from our wish list happen. Having a council working together all year would hopefully change that. We have scheduled the Local Chapters workshop to happen at CHI 2003, on Monday, April 7th. At this year's workshop we will discuss how Local Chapters would like the Council of Chapters to work. In other words, how should its constituency be decided? How often should it meet? What roles should it play? The goal of the workshop should be not only to discuss the issues, but also to define how the decisions made will be implemented and by whom.



Computers and Kids

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When Technology Can Help Children

As I sit here typing, I can hear the screams of three 12 year-old boys, "Wait, wait, wait, it's mine! You got it!! Kill that thing, no it's got you! Move over there, no there!! You're dead man! My turn..." These three boys wandered into the same Internet café that I did. I asked for a quiet place to plug in for a few hours during the Winter holidays, but instead shared my "quiet" with three boys that had a "day to kill" (as one of them explained to me, they had no school over the holidays, so they "hang" here). As I watch them, clearly enjoying their day of Internet gaming, it reminds me yet again that technology for these boys can be a social, motivating, and fun experience. Of course I have to wonder...Are they learning? Are their experiences violent? Can this be good for them? Is technology really necessary? These are all questions that gaming has always raised for me. But what this chance Internet café encounter did remind me of was how important technology can be for young people.

This got me thinking about a few weeks prior. Before I left for the holidays, I finished grading my students' final projects for the semester. Among these final projects was one example that unquestionably showed me that a social, motivating fun experience with technology can be critically important. In the case of my students' project, they were able to use technology to help young children with challenges in eating. They created an "interactive tray" that made amusing sounds and lit up each time a child took a piece of food from a spot in the tray. Thanks to this simple technology, young children were given positive reinforcement and motivation to eat.

What my students had discovered was that approximately 25-40% of infants and small children actually struggle with feeding themselves. This has little to do with negative self-image issues, which older children and adults may deal with during their lives. For a young child, a feeding disorder typically stems from a fear or mistrust of food. The child may have had a dramatic choking incident, or a delayed introduction to solid food, or simply a dislike of certain food textures in their mouth. All of these experiences can negatively color the thought of food for a young child. This in turn can produce anything from a commonly fussy eater, to a less common feeding problem.

For the University of Maryland students that did this research (Barbara Asbury, Miyako Kishimoto, and Karen Yates) they personally came to know children that ran the gamut of these problems. What they found out from their

research was that current treatments for feeding disorders included a combination of medical and behavior modification treatment plans. But none of these treatments included a specially designed technology that would motivate children to eat. This prompted my students to develop something that would be such a technology. What they hoped was that child-controlled electronic sounds and lights could change the feeding experience for a young person from something to dread, to something enjoyable.

Over the semester, they developed this special tray and used it with a number of children, some with severe disorders and the results were quite compelling. Let me describe the case of one particular 2-year old child they worked with. This little boy, who loved trains and dogs, and who could count to ten was flourishing cognitively, yet had never eaten solid food. He was within a month of being placed on a feeding tube. His diet consisted of baby food, yogurt, creamed potatoes and ice cream. He was under the care of specialists since he was born. When he was brought the "interactive tray" to try at home, he put raisins, fruit, and even crackers in his mouth. Instead of dissolving into tears at mealtime, he giggled, experimented, and explored. While he did nothing more than suck on the food before taking the pieces out of his mouth, this was a tremendous step forward for a child who rarely puts anything into his mouth without having a crying tantrum. According to my students, this child continues to use this tray at his mealtimes (going on his second month) and is in the process of moving towards a very different relationship with food. Recently, his eating a raisin produced a family celebration.

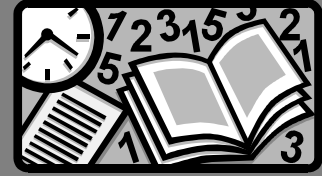
After reading about this child and this technology I could not help but wonder, maybe there really are unquestionable times when technology can help children. A social, motivating, even fun experience can help to change a child's life in a very positive important way.

If you are interested in reading more about feeding disorders for children, my students recommend the sites below.

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Kennedy Krieger Institute, Feeding Disorder Clinic:
http://www.kennedykrieger.org/kki/kki_diag.jsp?pid=1084&bl=1

My ParenTime (2002) Eating Disorders: Children in Crisis:
<http://www.myparentime.com/articles/article202a.shtml>



mastery

This is for the March bulletin so I'm thinking again of March 1st, St David's Day ... and if you don't know your patron saints let me remind you ... David was the child of a rape by a local warlord, who became Celtic monk, archbishop and eventually patron saint of Wales.

In Wales every school has an Eisteddfod on Saint David's Day: singing, dancing, plays, music and poetry.

The Eisteddfod is at the heart of the Welsh culture, although itself largely a Victorian re-invention of an older practice. I recall as a child competing in the Urdd (youth) Eisteddfod and last year I was fortunate enough to see my own daughters' choir win in the International Music Eisteddfod (the Welsh approach to music is rather like the ACM approach to computing: the rest of the world is ranked in a single lumpen).

At the heart of the Welsh National Eisteddfod is the churning of the bard - the word eisteddfod comes from "eist-edd" - to seat. The bard is the master poet, the wordsmith, forming images from sound, playing the listener with language.

And in each school the houses compete with one other, yet try to include each child in some event, moving each to mastery.

Some years ago, not long after I had passed the driving test myself (not until I was 27!), I was driving with a friend. She was soon to take her test and I was sitting with her while she practised.

One of the manoeuvres in the test is to reverse around a corner into a road. This was the thing she most dreaded and her tension was clear as she pulled up beside a street and started to drive carefully backwards, trying to remember in the right order the instructions she had been given: "turn the wheel a little to the left, when the kerb is in the bottom corner of the rear window then turn ..."

She finished and the car was reasonably straight and not too far from the kerb. She sighed with relief and I looked backwards down the road. It was a dead end, that's why we had chosen it; one of those suburban cul-de-sacs with a small turning circle at the end. There were no cars parked; it was clear all the way down.

"Try driving backwards" I said "play with the wheel, see what the car does. Don't tell me whether you mean to go straight or swing about."

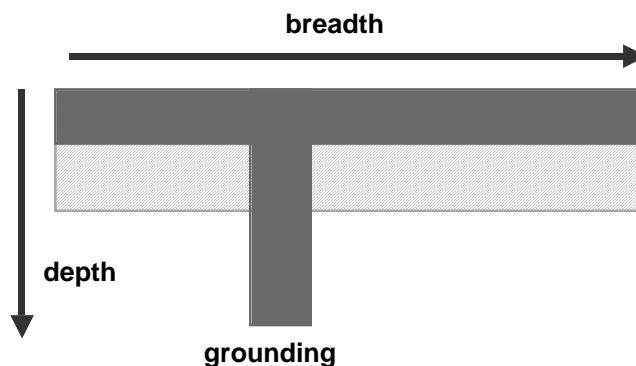
She did it and the car wiggled its way slowly backwards down the road. She stopped. And the look, the shine, the confidence in her face. It is beyond words. Trepidation turned to triumph. She had driven backwards, not by rote, but by herself. Mastery.

Since then I have analysed the reasons for this, the play, the purposefulness too, the deliberate removal of external judgement but enabling of internal judgement, the shift from correct performance to exploration. There are techniques we can learn to help students grow.

In my own teaching I have a thing I aim for, but do not always achieve. I call it the T model of teaching.

When teaching one is constantly faced with a trade-off between depth and breadth of coverage. The solution is often to decide on the breadth that one feels is necessary (perhaps driven by

external curriculum factors), then deal with everything to the maximum depth possible given this. This uniform model is hatched in the picture. Typically students lose track of the material about 2/3 way through any course (so perhaps all curricula ought to be 30% less broad?). The end result is that students may pass exams, but they feel "I'm no good at subject X".



In the T model one still deals with the whole breadth of material, but in overview - knowing what is there, and why it is important, but not in any theoretical or practical depth. This is a sort of road map of the subject area.

In addition, however, one chooses some part of the material, no matter how small, and delves to the very depths, grounding the material theoretically and in real examples. (Solid area in the picture.)

By grounding, the students gain mastery, and from mastery comes confidence.

In the future, when faced with the need for knowledge they know what techniques or information are available because of the broad overview. However, they also feel "I can do this subject" because of the mastery they gained. Knowing that they have been able to master one part of the subject they can go on to learn, when needed, the extra areas required for their purpose.

In the past I have written about the destructive nature of many of our failure-centric education systems, often stemming from fundamentally flawed educational values. In this and the January column I've been looking more towards the opposite. Let's strive to teach in ways that enable students to discover and nurture their strengths and that give them the confidence, control and humility that comes with true mastery.

Note: you can read more about the driving lesson, T model and Eisteddfods (!) at: <http://www.hcibook.com/alan/hci-education/>



Elegance, Simplicity, Flexibility and Change: Resisting Design Erosion

Kevin Mullet and Darrell Sano's *Designing Visual Interfaces* includes a very enlightening chapter on elegance and simplicity, describing the basic principles as unity - a minimal set of intimately related parts with a clear contribution to a common goal; refinement - removal of elements that do not contribute to the task of communication; and fitness - suitability to a particular purpose through avenues that are desirable in their own right.

Edward de Bono has written a whole book on the subject of simplicity, culminating in the following ten rules:

1. You need to put a very high value on simplicity
2. You must be determined to seek simplicity
3. You need to understand the matter very well
4. You need to design alternatives and possibilities
5. You need to challenge and discard existing elements
6. You need to be prepared to start over again
7. You need to use concepts
8. You may need to break things down into smaller units
9. You need to be prepared to trade off other things for simplicity
10. You need to know for whose sake the simplicity is being designed

Clearly, elegant and simple designs do not happen by accident. To make matters worse, for interactive systems - especially those in the volatile world of e-commerce - fitness or suitability is a constantly moving target, requiring relatively constant change just to remain current. Unfortunately, change has an eroding effect on design, with simplicity usually the first to succumb to effects of ad hoc solutions, creeping featurism and poor understanding of users' needs. I believe de Bono's ten rules do a good job of addressing these problems in general terms, but I would like to expand on the fourth rule by introducing the concept of flexibility. As in the natural world, flexibility is an effective defense against erosion. Flexible solutions require fewer changes than those which were merely adequate for the problem as it was understood at the time. And because flexible solutions are designed with alternatives and future possibilities in mind, when change is required, it is less damaging in terms of simplicity and elegance.

Let's consider an example. Most e-commerce sites allow users to select between a number of stored credit cards during checkout. Why? At the simplest level, we are mimicking what

customers can do at a bricks-and-mortar checkout, so we might not be inclined to think any more about it. But if we are looking for a flexible solution, which might anticipate future developments in e-commerce, we should dig a little deeper. What drives customers' choice of credit card in their wallets or purses? Are they trying to spread their spending to keep within credit limits? (In which case, wouldn't it be nice if we could put the balance and credit limit for each card on the page?) Perhaps some customers use different cards for different purposes - business, personal, club or similar? Can we learn any more from this that might help us to design a flexible solution? I believe so. I think it tells us that customers might be acting in different roles when they visit our site. Why not acknowledge this in the design and allow them to create or choose a shopping basket for each purpose? That way they could shop for different purposes simultaneously, without having to sort out the mess themselves at the checkout. ("I want these three items on this card to that address and those two items to the same address, but a different card, etc.") They would just select which basket each item was to be placed in. The basket would have default delivery and payment information associated with it much as the single basket solutions do now. But simple, elegant and flexible solutions like this get us more than just a little added convenience. They also have the potential to improve other aspects of design by more realistically reflecting our users' behaviors. So instead of getting a complete mix of purchasing recommendations based on everything I have ever bought for anyone from a site, I would get recommendation based on the shopping basket I am currently using. So no more pointless promotion of S Club Seven CD's after my annual purchase of a birthday present for my daughter.

As with most things, the rewards for this extra attention to flexibility can vary dramatically. The nature of flexible solutions can also vary - some will simply be adaptable, others may allow a greater range of user control and customization. However, given the high cost of design erosion in interactive systems, especially where ad hoc development methods prevail, a little more effort spent in early design and discovery - with an emphasis on elegance, simplicity and flexibility - will normally pay dividends.

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CHI 2003 Conference Preview

By looking more closely at special areas of focus, the Human-Computer Interaction community will attempt to broaden its influence on user interfaces. CHI 2003, the next annual conference sponsored by ACM SIGCHI, will include the successful program tracks of the past CHI conferences, and add three special areas: Mass Communication and Interaction, emotion and e-Learning. "Since interactive media are increasingly used to communicate, teach or entertain (and not just to 'do work'), these special areas are expected to generate significant interest for the HCI community since these areas touch all of our lives" note CHI 2003 General Co-Chairs Gilbert Cockton, University of Sunderland, and Panu Korhonen of Nokia. To look into these and many other issues, the strong technical program from previous years continues.

Neil F. Budde, former Publisher of *The Wall Street Journal Online* will open the conference. Budde will share his experience in bringing the *Wall Street Journal* online and building the largest paid-subscription news site on the Web in his plenary presentation, *Racing with the Wind: Publishers Learn to Navigate in a Multimedia World*. "We chose Budde to open CHI 2003 because of his experience of successfully merging the print and online worlds" says Korhonen.

Don Norman, the "Guru of Workable Technology," will close the conference with his plenary presentation, *Emotion & Design*. Norman says, "Usable products don't have to be ugly. In fact, the brain works differently when happy rather than anxious, so products can actually be easier to use if they give fun and pleasure, along with beauty." Norman is with the Nielsen Norman Group and Northwestern University. In the past year he has been catching up on the scientific work in emotion. The result is a new theory of emo-

tion, with implications for the development of autonomous machines and robots as well as to design. "We chose Norman to close CHI 2003 because of his deep roots into the HCI community and his expertise with emotion and design" says Cockton. Last year Norman received the CHI Lifetime Achievement Award.

Special Areas

Three special areas support the conference theme of communicating via interactive digital media: mass communication and interaction, emotion and e-learning. Several presentations throughout the conference will address these areas. Three panels, one each day of the conference will focus on the special areas:

UK-based design and technology writer Nico Macdonald will host a panel on Mass Communication and Interaction, for which he is CHI 2003 Special Area Chair. Macdonald observes that, "In the digital age, publishing and broadcasting have tended to follow their earlier models rather than investigate and take advantage of the new possibilities with which they are presented. With the proliferation of media those people seeking to communicate, be informed, and be entertained require new approaches - a challenge which HCI can rise to." This panel will investigate these challenges and discuss ways in which they should be addressed. Lisa Neal, CHI 2003 Special Area Chair for eLearning, Consultant for EDS and Editor-in-Chief of ACM's *eLearn Magazine* (eLearnMag.org) will host a special panel on eLearning. Neal says "advancements in technology have enhanced our potential to create and deliver e-learning. Nevertheless, instructional developments and research for e-learning have not exploited or directed technological developments to take full advantage of these opportunities. Emphases on economy and reach have taken precedence over

CHI 2003 Conference Preview

instructional effectiveness, innovation and creativity." Her panel will examine the successes, challenges and new directions.

Jodi Forlizzi, CHI 2003 Special Area Chair for Emotion and Assistant Professor at Carnegie Mellon University will moderate a special panel on emotion as it relates to new technology products. Forlizzi will lead a discussion with product designers, interface designers, and social scientists about emotional responses to products and interfaces.

Traditional coverage for CHI conferences that will continue this year includes technical material on the World Wide Web and other hot user interface topics, an opportunity for networking and discovering what is new in the field.

Andreas Girgensohn and Alison Lee, CHI 2003 Tutorial Co-Chairs, have put together a broad selection of tutorials. "This year's tutorial program offers opportunities for practitioners and researchers from academia and industry to learn the leading edge of Human-Computer Interaction" says Lee. The CHI 2003 Tutorial Program contains 24 full-day and 10 half-day tutorials to choose from: 14 of them are new to CHI and 20 of them are back-by-popular-demand. Tutorial topics include Field Research Methods, Usability Techniques, Web Site Design, Information Visualization and Retrieval, Handheld, Mobile and Wireless Design and Usability, Persuasive Technology, Vision-based UI, and Augmented Reality. For something different or something provocative, there are tutorials on Generating and Presenting Speculative Design Ideas, Innovation and Entrepreneurship, Extreme Programming, and Drawing Skills.

CHI 2003 is the premier worldwide forum for the exchange of information on all aspects of how people interact with computers. On April 5-10 over 2000 researchers, practitioners, educators, and students from over 45 countries will meet in Fort Lauderdale, FL, USA to explore the new horizons of human-computer

interaction. This year's conference features six days of world-class presentations including 35 tutorials, plenary speakers, dynamic panels, paper sessions and more. For the complete conference offering consult the CHI 2003 Advance Program on the Web at:

www.chi2003.org

The anchor's up, and it's time to come aboard CHI 2003 and help us steer a course... bring distant shores into view... chart new routes to new destinations. Explore new horizons at CHI 2003, the premier international forum for the exchange of the latest information on all aspects of Human-Computer Interaction. Plan to attend CHI 2003.

CHI 2003 is sponsored by ACM's Special Interest Group on Computer-Human Interaction (ACM SIGCHI). In addition to ACM, various organizations support CHI 2003. Champion sponsors include: Diamond Bullet Design, Microsoft, Unisys and Yahoo!. Contributing sponsors include: eLearn magazine, Menlo Technology Group, Nokia, Sun Microsystems and User Interface Engineering.

For further information visit the World Wide Web site:

www.chi2003.org

or contact the CHI 2003 Conference Office at:

+1 312 321 4096 (phone)

+1 312 673 6961 (fax)

chi2003-office@acm.org (e-mail)

April 5-10, 2003
Fort Lauderdale, Florida USA

Today's computers are portable, held in the hand or carried in a pocket, worn as part of clothing and embedded in offices, homes and automobiles. As a result, Human-Computer Interaction as a field is increasingly concerned with a growing community of people more diverse in their background, skills and training than were yesterday's typical users.

What are the important problems for today's designs?

What are the solutions to these problems?

The anchor's up, and it's time to come aboard CHI 2003 and help us steer a course... bring distant shores into view... chart new routes to new destinations. Explore new design horizons at CHI 2003, the premier international forum for the exchange of the latest information on all aspects of Human-Computer Interaction.

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The annual CHI conference is the premier worldwide forum for the exchange of information on all aspects of how people interact with computers. CHI 2003 features a full program of presentations, demonstrations, tutorials and exhibits and is sponsored by ACM's Special Interest Group on Computer-Human Interaction.



CHI 2003
NEW HORIZONS

CHI 2003 offers 35 Tutorials presented by leaders in the field of Human-Computer Interaction design.

Tutorials include:

- Web Sites That Work:
Designing With Your Eyes Open
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- Handheld Usability
- Motivating and Persuading Users
- Designing for the Aging Population
- Google on Web Search Engines
- eLearning



I'd like to complain about this software...

by David M Nichols

Software is often frustrating. You need only walk past a group of users to hear exclamations of annoyance as the users' expectations and the software interface clash head on.

Each one of these mini-incidents contains a small but useful piece of information - information that is almost always lost. Most user problems don't generate any sort of report that is passed back to the developers; they are short-lived episodes that are not recorded anywhere. A 'report' could be a simple as a one-click 'I've just experienced a problem' button, or semi-structured text allowing users to say 'how can I put a UK phone number into this form which only accepts US formats?'

Hartson at Virginia Tech has shown that users are actually quite good at critical incident usability detection but most software doesn't have any built-in facilities for reporting. This increases the cost to the would-be reporter who has to search through menus and linked web sites to find a way to complain (I've just tried this with Microsoft Office XP and failed to discover any channel to complain through. How do I complain about that?!). With the Mozilla web browser at least I can enter a bug at Bugzilla (<http://bugzilla.mozilla.org>), if I'm prepared to register and deal with a lot of technical vocabulary. This is better but still requires me to leave my application and fill out a web form. On the other hand, if Mozilla crashes then a talkback-enabled build allows anyone to easily send a crash report. Why isn't it as easy to submit a usability issue as a crash report?

Another reason users don't complain is that think they won't see any benefits. Complaints in many organizations (not just software companies) often seem to disappear into a black hole, never to be heard of again. Again the open source bug database, whilst not perfect, does at least provide a transparent mechanism for tracking progress.

Although companies may have good commercial reasons for not opening up their entire development process that doesn't mean there isn't an intermediate position where users can participate without dealing with technical or confidential material.

The net effect of the lack of easy feedback channels is that the average user feels a sense of frustration and powerlessness. They get really irritated by their software and no-one is listening. At least when you enter a Bugzilla bug you feel if you have done something constructive. Maybe, just maybe, someone sometime in the future will experience a better interaction thanks to your report.

Nielsen suggests that the first rule of usability is not to listen to users (Alertbox, August 5 2001), mainly as self-reports are unreliable. However, if the reports immediately follow the problem and are supplemented by objective data from the program - then we probably should be listening to the users. Usability reporting has an advantage over Mozilla-style crash reporting in that more program information is available: e.g. the actions the user took just before the problem. Although there are privacy issues and the problem of dealing with potentially large amounts of data (what if every user sent a report whenever something went wrong!) decentralized, contextual, user-reported usability issues could (and should) be a valuable mechanism for software improvement.

Open source projects have provided mechanisms for coders around the world to participate in software development. So far, this has tended to be constrained to developers and technically literate users. Can we do for users what open source development has done for coders? We all know about participatory design - what about participative usage?

Beyond the Desktop

Gregory Abowd, Editor
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Smart Homes or Homes that Smart?

by Gregory D. Abowd, with Keith Edwards and Beki Grinter

The following is a summary of challenges for ubiquitous computing in the home that Edwards and Grinter first published in the Proceedings of UbiComp 2001.

The past few years have seen an explosion of interconnected technologies in the home. For example, Jupiter Research predicts that 28 million US households will have a home network by 2006. Devices on the home data network are typically connected to allow printer and file sharing, and to facilitate multiple broadband users. Further, paralleling this increase in the number of interconnected data-centric devices is a corresponding increase in the complexity of the home audio/visual "network." We use the term "network" here because many home entertainment systems consist of multiple components, typically connected through analog and digital cables, and controlled through a number of remotes often equal to the number of components. Increasingly, these data-centric and media-centric networks are beginning to overlap, as users want to share content across both types of devices.

The complexity of the home network already presents great hurdles for current users, even including many technophilic "early adopters." These problems will only get worse as the number and types of interconnected devices in the home grow. The HCI community must address a number of challenges before these technologies will become, as Mark Weiser termed it, calming, rather than an infuriating morass of incompatibility and opaque functionality. These challenges are not purely technical. Rather, they raise cross-cutting issues in the technical, social, and design domains.

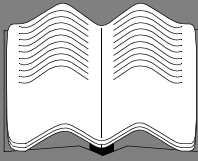
For example, consider the tangle of cabling that lurks behind most home stereo installations. As confusing and opaque as this is, the move to wireless interconnections between components has the potential to make usability even worse. When physical connections are present, you know what's connected to what (even if you may have difficult tracing a particular cable), and further, what can be connected to what. A system with physical connections is also relatively stable; bar kicking loose a connector, I know that the system will stay in the same configuration as when I last touched it. This is not the case when wireless technologies are used: connections are "invisible," interconnectivity can potentially change without any apparent indication of the

change, and "debugging" a problem is not as simple as following a cable. Paradoxically, while it is the "invisibility" of wireless connections that make them appealing, it is this same invisibility that brings a new host of problems. One challenge, therefore, is to bring the positive affordances of physical connectivity forward into the wireless world or-alternatively -to produce entirely new metaphors of wireless connectivity that are easy to understand, reliable, and- perhaps most important -predictable to the users.

Richly interconnectable devices in the home will also change users' expectations about what they should be able to accomplish in their homes. For example, a user might reasonably expect that a newly purchased video camera with a wireless "connector" should "just work" with a home theater system that also uses wireless; further, the user might reasonably expect that such an interconnection could be made to occur without the presence of a full-time systems administrator, or an understanding of IP addresses, DHCP servers, and discovery protocols. Our experiences with interoperability of current computing devices suggest that the odds of this happening are small indeed.

As these technologies find their way into homes, our expectations as UI designers will evolve. It's almost cliché to say that users will adopt technologies, and adapt them to their particular needs, in ways that the original designers did not expect. This is doubly true in the home setting. The home environment is laden with implicit, and often unspoken and even unstudied, rules that govern the use of its space and the activities of those that live there. The social history of home technologies is rife with devices, including the telephone and even electricity itself, and also newer technologies such as IM, that users appropriated in unexpected ways, often in the face of staunch opposition from the original designers of those technologies.

In our roles as designers, builders, and evaluators of the technologies that will soon be interwoven into the domestic routine, we must be careful that the drive for "smarter" homes addresses the desires and needs of our users. But we must ensure that we do this while providing the predictability, reliability, and calmness that are characteristic of the best home technologies.



Review of: *The Support Economy: Why Corporations are Failing Individuals and the Next Episode of Capitalism* review by Peter Morville

The Support Economy: Why Corporations are Failing Individuals and the Next Episode of Capitalism by Shoshanna Zuboff and James Maxmin. ISBN:0-670-88736-6, \$27.95 Viking Press, 2002

If you have ever wondered why most companies fail to embrace user-centered design, you must read this book. In *The Support Economy*, Zuboff and Maxmin deliver a brilliant treatise on the inherent defects and imminent demise of the reigning corporate paradigm of managerial capitalism, and then daringly propose a new enterprise logic that combines an economy based on relationships and the ubiquitous Internet to provide advocacy and deep support for individuals.

In a recent interview, Don Norman blames slow progress towards usable computers and gadgets on "the fact that the usability advocates don't understand business." I respectfully disagree. We are not the problem. The barriers to usability are rooted in today's models of corporate governance which fail to align the incentives of powerful executives and stakeholders with the long-term interests of customers, employees and shareholders.

As Zuboff and Maxmin explain, no visionary executive or strategy consultant (or usability advocate) can spark a customer-centered revolution as long as they operate from within an organization that is based on current corporate structures and goals. This chilling assertion is not served up carelessly, but is grounded in the results of Zuboff's exhaustive research conducted between 1988 and 1994, sponsored by the Harvard Business School.

The book opens with this declaration: "People have changed more than the business organizations upon which they depend. The last fifty years have seen the rise of a new breed of individuals, yet corporations continue to operate according to a logic invented at the time of their origin, a century ago. The chasm that now separates individuals and organizations is marked by frustration, mistrust, disappointment, and even rage. It also harbors the possibility of a new capitalism and a new era of wealth creation" (p.3).

Following up on this opening, Zuboff and Maxmin describe the individual as "history's shock absorber," trapped between opposing historical forces. While individuals search for psychological self-determination, organizations sap time and freedom from employees and withhold

service and support from consumers, all in the merciless pursuit of cost-efficient (read value-starved) transactions.

The authors argue that this "transaction starvation" leads to loss of care, and explains the callous shrugs we receive from airline employees during our frantic attempts to negotiate airline bureaucracies when our flights are cancelled. Airline employees are not bad people. They have simply entered a state of learned helplessness. This also explains our frustrations with the healthcare industry, corporate web sites and customer service in general, and suggests that our rising appetite for large houses, home schooling and self-employment are actually indicators of people seeking refuge from a growing societal malaise.

Anyone involved in designing the "user experience" should read this book, if only for the critical analysis of obstacles to customer-centered design. But Zuboff and Maxmin step beyond gloomy prognosis to boldly predict a new episode of capitalism that incidentally holds great promise for those with a passion for designing useful, usable and desirable information systems, knowledge networks, and social software.

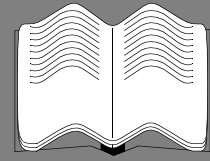
They cast the revolutionary zeal surrounding the Internet in the 1990s as a symptom of "pent-up demand for sanctuary, voice, and connection" (p.290). They also contend that a pervasive digital medium is a necessary but insufficient ingredient in the recipe for a new economy.

Transformation from the self-support model of today's Web to the deep support model of tomorrow's "federated networks" requires a new enterprise logic. Zuboff and Maxmin propose a set of principles that describe this new enterprise logic, and that place individuals at the center and organizations at the periphery of wealth creation processes. This is a Copernican revolution for the economy that is "the commercial equivalent of the Vietnam Veterans Memorial Wall...(which) reflects the great psychological reformation of the second half of the twentieth century" (p.324).

The book offers up examples and scenarios but falls short of painting a picture of this new economy and the path that will lead us there. That's okay. The authors are describing a road un-travelled. *The Support Network* is intended as a wake-up call, alerting us to treasures still hidden in uncharted territory.

Book Review

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Review of: *Interaction Design - Beyond Human Computer Interaction* review by Sri Hastuti Kurniawan

Interaction Design - Beyond Human Computer Interaction by Jennifer Preece, Yvonne Rogers, and Helen Sharp. ISBN:0-471-49278-7, \$57.95 John Wiley & Sons, 2002

This new book by information systems specialist Jennifer Preece, cognitive scientist Yvonne Rogers, and software engineer Helen Sharp raises two questions. First, in what ways is this book different from their first excellent and well-known textbook on HCI? Second, in what ways does this book indeed cover issues that are 'beyond human computer interaction'?

The diverse experience and expertise the authors bring to the table provides a positive background for this book. Their approach succeeds in making the book appropriate for a varied audience, including students, designers, and researchers. The authors also positively differentiate this book from their first work by extending their pedagogical approach through the incorporation of examples, exercises, assignments and interviews with prominent figures in HCI community. They were also able to extend and enrich the content of their first book. Furthermore, they provide an accompanying web site with links to online resources, practical examples, and templates for conducting various usability evaluations. This is a big plus for academics adopting the book as a textbook for HCI courses.

The book consists of 15 chapters which, unlike the authors' previous book or some other HCI textbooks, are well structured around the different stages of a system development cycle. More specifically, Chapters one through five cover the basics of HCI, starting from conceptual design and requirements solicitation, with treatment of issues related to the social aspects of computing. Chapters six through nine focus on system analysis and design, covering issues like use cases and prototyping. Finally, for an introductory HCI textbook, chapters 10-14 give a very extensive coverage of usability evaluation methodologies.

Although there is some repetitious content (which may be designed to recall previous sections, but that is unnecessary for more advanced readers), the book provides a smooth read. In terms of content flow, the choice to cover evaluation methods early on may help students get their hands wet with evaluating actual interfaces much earlier in a course. For some students, this approach may be more effective than a singular focus on HCI theories and paradigms.

Unfortunately, the authors were less clear in demonstrating how this book goes 'beyond' human-computer interaction. HCI is defined by the ACM as "a discipline concerned with the design, evaluation and implementation of interactive systems for human use and with the study of major phenomena surrounding them". While this book does go beyond the standard ways of presenting HCI concepts that other textbooks may have adopted and does an exceptional job in applying methodologies of HCI to the study of interactive systems, it leaves it as an exercise for the reader to determine in which way the materials presented in the book go beyond traditional definitions of HCI.

Another drawback of the book is that although its title indicates that it is about interaction design, this term is never clearly defined. One of the interviewees featured in the book stated that "interaction design is a design discipline." Then, in the preface, the authors define interaction design as "designing interactive products to support people in their everyday and working lives." Later, the authors use a quote to define interaction design as "the design of spaces for human communication and interaction." While it is useful for readers to get various views of interaction design, more terminological rigour is needed to help the readers clearly understand the various nuances of meaning.

In summary, this book is pedagogically well structured and presented, and so is recommended for use in teaching HCI classes. However, given the lack of rigour in defining the discipline of interaction design, it is perhaps premature to call it an interaction design book.

Workshop Reports

Redesigning Email for the 21st Century

A CSCW 2002 Workshop Report

Workshop Organizers: Jacek Gwizdka and Steve Whittaker

Participants: Brian Amento, Ross Baker, Richard Boardman, Robert Cook, Nicolas Ducheneaut, Shelly Farnham, Danyel Fisher, Ben Gross, Jacek Gwizdka, Victor Kaptelinin, Anton Leuski, Todd Miller, Paul Moody, Michael Muller, Carman Neustaedter, Chris Neuwirth, Steven Rohall, Ian Smith, Josh Tyler, Matt Westhoff, Ka-Ping Yee

The workshop served two main goals: overviewing current email research and determining future research directions. Workshop presentation topics included: design of novel email user interfaces, visualization of email data, task management in email, studies of email use, and email interface evaluation. Problems with handling email were widely acknowledged. Current research seems to be focused

almost exclusively on the desktop text-based email systems. This may be not that surprising, if we consider that email interfaces have actually changed very little since email's invention and that user issues with desktop email have not been solved. This also explains why workshop participants expressed primarily empirical rather than technological concerns. At the current stage, there are many new ideas about how to "fix" and "improve" email interfaces. These include better techniques for task management, presenting relationships among messages, message summarization and exploiting social relations among one's correspondents. Little is known, however, about how to evaluate these new interfaces and visualizations and how to measure the improvement. The workshop participants felt there was a pressing need for the development of methods for evaluating novel email interfaces.

A longer version of the report and position papers are available on-line at: <http://www.emailresearch.org/>

Analyzing Collaborative Activity: Representing field research for understanding collaboration

A CSCW 2002 Workshop Report

Peter H. Jones, Redesign Research, USA
Cristina Chisalita, Vrije Universiteit, Amsterdam

A CSCW workshop for researchers in technology-supported collaborative practice explored the analysis and representation of collaboration. Participants shared multi-method and multi-theory approaches in field research, ethnography, and contextual studies. The workshop focused on translating field data to meaningful representations, for both understanding and design. Both theoretical and practice models were shared as current knowledge and issues in analysis of collaborative practice. Contributions ranged from empirical questions of field research to theoretical integration. We promoted exploration of a "middle ground" of inquiry, with field researchers inquiring into design issues, and theoretical investigators looking at applications. See papers and information: www.redesignresearch.com/cscw/.

A second workshop is planned with the CSAPC 2003 conference - Cognition and Collaboration - Distributed Cognition in Complex Processes (www.cs.vu.nl/~csapc03/), in Amsterdam, September 2003.

Workshop Issues Sessions

Four issues sessions grouped presenters around similar issues raised in the position papers:

- Integrating theory and analysis frameworks
- Ethnography and system design
- Representing knowledge in practice
- Researching artifacts

Themes of the Workshop

A number of themes emerged from discussion, including the following key issues:

- **CSCW?** A trend toward expanding beyond cooperative work extends to learning, play, and more generally, "practice." As technology evolves, we see the field extending into *cooperative technology for collaborative practices*.
- **CSCW for:** Design, Products, Organization, Community, Work Practice. Opening up the space for cooperative activity and opening up technology discloses further possibility for applications. Some articulated "designing for" as *intervention*.
- **Adoption of interpretive frameworks.** Several reported findings interpreted from distributed cognition or activity theory. Theoretical frameworks function as "Lenses," focusing attention on behaviors interpretable by the theory.
- **Understanding Values.** Design and collaboration research have evolved to require interpreting the influences of human, cultural, and organizational values.
- **Beyond Contextual Design.** Contextual Design models are now widely used across both ethnographically informed research and design-oriented research. Due to the wide uptake of CD, as responsible researchers we might further explore, critique, and evolve its representations.
- **Multidisciplinary researchers and practitioners.** We found high disciplinary (and method) variance, ranging from anthropologists to social scientists to design researchers. Although all participants might be considered interdisciplinary to some extent, we still found need to smooth out variations of understanding, which takes time. We might attempt to build more bridges of background in advance of future workshops.

Events

Ronald Laurids Boring, Editor
chi-Bulletin-Events@acm.org



Upcoming Conferences

April 5 - 10, 2003

CHI: Human Factors in Computing Systems

ACM SIGCHI's annual conference on all aspects of computer-human interaction.

Fort Lauderdale, Florida, USA

<http://www.sigchi.org/chi2003/>

<http://www.chiplace.org>

April 15 - 17, 2003

Gesture Workshop 2003

International forum for gesture and sign-language based HCI.

Genova, Italy

<http://infomus.dist.unige.it/GW2003/>

May 18 - 21, 2003

STC: Society for Technical Communication

Annual conference devoted to innovative practices and design methods for print and online documentation.

Dallas, Texas, USA

http://www.stc.org/50thConf/fact_sheet.html

June 5 - 7, 2003

DUX: Designing for User Experiences

Conference about all facets of product and service development lifecycle in terms of shaping user experiences.

San Francisco, California, USA

<http://www.dux2003.org/>

June 11-13, 2003

SoftVis: Software Visualization 2003

Conference on design, implementation, use and evaluation of software visualizations.

San Diego, California, USA

<http://www.softvis.org/softvis03.html>

June 22 - 26, 2003

User Modeling 2003

Conference on user modeling plus adaptive models and techniques in HCI.

Johnstown, Pennsylvania, USA

<http://www2.sis.pitt.edu/~um2003/>

June 22 - 27, 2003

HCI International

International HCI forum hosted jointly with the Symposium on Human Interface Japan, the International Conference on Engineering Psychology and Cognitive Ergonomics, and the International Conference on Universal Access in HCI.

Crete, Greece

<http://hcii2003.ics.forth.gr/>

June 23 - 27, 2003

Usability Professionals' Association Conference

Annual conference focused on exchange of ideas among usability practitioners.

Scottsdale, Arizona, USA

<http://www.upassoc.org/conf2003/>

July 27 - 31, 2003

ACM SIGGRAPH

Conference showcasing the latest developments in computer graphics and interactive techniques.

San Diego, California, USA

<http://www.siggraph.org/s2003/>

July 28 - August 1, 2003

ACM SIGIR

Major forum for new results of research and development in the area of information retrieval.

Toronto, Ontario, Canada

<http://www.sigir2003.org>

September 1 - 5, 2003

INTERACT

Platform for HCI practice and research with an emphasis on furthering traditional and novel methods of HCI.

Zurich, Switzerland

<http://www.interact2003.org>

September 8 - 12, 2003

HCI 2002

Conference by the British HCI Group covering all aspects of HCI.

Bath, England

<http://www.bcs-hci.org.uk/hci2003/>

October 13 - 17, 2003

Human Factors and Ergonomics Society Conference

Conference that brings together research by human factors, ergonomics, and HCI practitioners.

Denver, Colorado, USA

<http://www.hfes.org>

November 2 - 5, 2003

UIST: User Interface Software and Technology

Conference on techniques, tools, and technology for developing human-computer interfaces.

Vancouver, British Columbia, USA

<http://www.acm.org/uist/>

To submit an event listing, send email to:

CHI-Bulletin-Events@acm.org

SIGCHI & acm

ACM SIGCHI's scope consists of the study of the human-computer interaction process and includes research and development efforts leading to the design and evaluation of user interfaces. SIGCHI serves as a forum for the exchange of ideas among computer scientists, human factors scientists, psychologists, social scientists, systems designers and end users. SIGCHI sponsors the annual CHI conference, co-sponsors additional conferences and workshops, and offers its members "Member Plus" publication packages. *Interactions* magazine, the *SIGCHI Bulletin* newsletter, and access to SIGCHI Publications in the ACM Digital Library is included with SIGCHI membership.

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UIST: Symp. on User Interface Software and Technology (November)	\$15 <input type="checkbox"/>	\$4 <input type="checkbox"/>
IUI: Intelligent User Interfaces (January)	\$12 <input type="checkbox"/>	\$4 <input type="checkbox"/>
C&C: Creativity and Cognition (October)	\$14 <input type="checkbox"/>	\$4 <input type="checkbox"/>
CSCW: Computer Supported Cooperative Work (December; even years)	\$17 <input type="checkbox"/>	\$7 <input type="checkbox"/>

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Is it on?

I have an electric water-kettle with a little red light on it. The interaction design is enough to make your hair curl; the light goes on when the kettle is plugged in and it goes off when you press the switch to boil the water. Straight away there are problems because the kettle is using one light for three states; off, on and not-plugged-in-you-git. Furthermore, the two states that are furthest apart in terms of what the user wants are the two states that are represented with the light off. Namely the state of; 'kettle is on, heating up and everything is just fine, you will be drinking hot coffee in just a few minutes', and the state of; 'kettle doesn't even have any power you idiot, it will be ages before it starts boiling because that will never happen. In about ten minutes you will wonder why you are not drinking a cup of hot coffee and then you'll figure it out'.

I also used to have a toaster that solved the 'not-plugged-in-you-git' problem by not keeping the toast-in handle down when there was no power. You put a slice of bread in, pressed the handle down, the toast holder slides down into the machine, you let go and instead of staying in there the bread just popped up straight away. There can be problems with misinterpretation of this, I have watched visitors to the house repeatedly banging away at the handle to press the bread down thinking that the toaster was a bit old and didn't stay down properly. Understandable they didn't immediately think to check the power supply.

Computers too have on/off indicators. Sometimes they are a simple red LED, but sometimes they are more involved. There are good designs and bad designs. Early Sun computers, (and I mean early here; pre-IBM PC, when Perq was just a gleam in Sun's eye) had an awful design. A Sun work-station in that time was an industrial-strength collection of grey units connected by thick, coiled cables. The on/off indicator was a row of red LEDs next to the power socket on the back of the system box. To show that the computer had power these LEDs would be flashed in sequence from left to right and then again from right to left, the effect was of a little bright red dot zipping from side to side continually. Some tech-

nician somewhere had obviously said; 'Hey, if we put a line of LEDs in we could do this – it would look really cool'. Fortunately it was tucked away on the back of the unit. Unfortunately these units were often placed back-to-back in shared office spaces so that the user could see the LEDs on the back of the unit opposite, with the result that their gaze was being continually distracted by whizzing bright red lights in their peripheral vision. Much later, a Silicon Graphics machine (was it the Indigo?) had a different approach; one LED that indicated the machine's status by its colour; red = power on. Yellow = booting up, Green = ready. Black = not-plugged-in-you-git. In my next book ('Design for New Media' - out in May)

I mention the standby mode indication in the Apple G4s when they were first introduced. It was on/off with an edge; the light 'pulsed' on and off like something from a 50's Sci-Fi movie. The communication was both functional and emotional. Not just 'I am on and in standby mode' but 'I am super powerful and am waiting like a crouching tiger for your next command'.

By far the most annoying 'is it on' syndrome occurs when setting things up to switch on in the future, things like video recorders and alarm clocks. Especially unfamiliar and cheap digital alarm-clocks in hotel rooms. Is it going to wake me up at 7.30 so I can finish my presentation slides or not? As well as problems with things being on or off in the future there are also usability problems with things having being on or off in the past. Heat falls into this category; the clothes-iron switched off and put in the cupboard, the electric ring on the cooker that was on a minute ago. The indicator light is off, but that is not the important fact as far as the user is concerned, the user should be told if it is hot or not and there is not a one-to-one relationship between being on and being hot. This problem is elegantly solved by the Braun hair-curler which has a nice heat-sensitive blob on the end that changes colour according to whether it is hot or cold, irrespective of power being on or off. Now that really is a bit of interaction design guaranteed to make your hair curl!



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