Inter*faces*

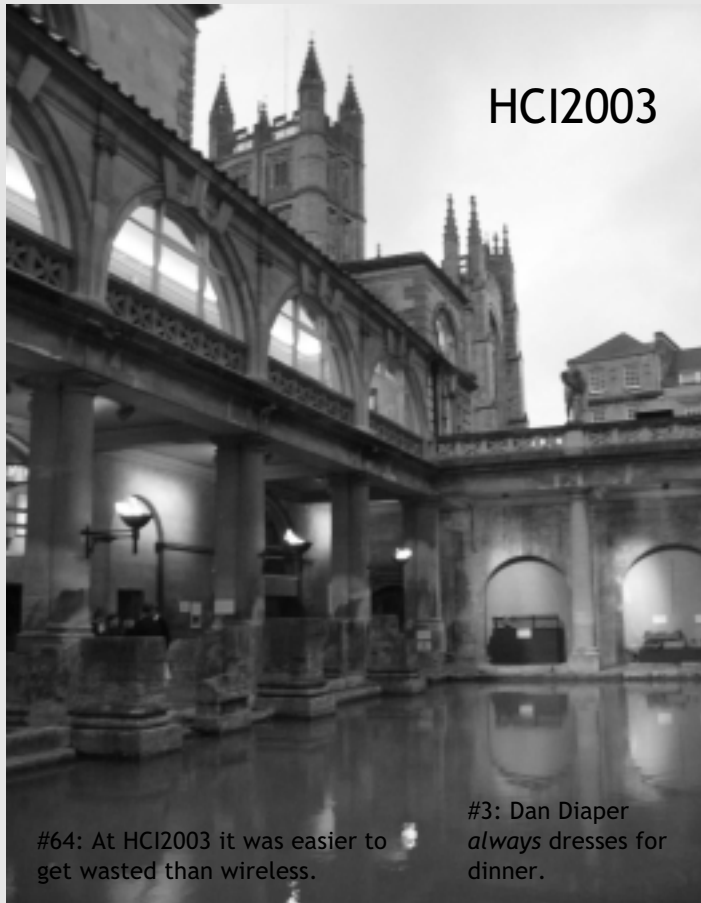**57 • Winter 2003**

conference trivia from the Purple Press …

HCI2003

#43: Tom McEwan once played a gig in the Claverton Rooms at Bath University.

#64: At HCI2003 it was easier to get wasted than wireless.

#3: Dan Diaper *always* dresses for dinner.

#22: 84% of UK Internet users still use a 56k modem.

#86: Users don't really have goals. (Dan)
#99: Users really do have goals. (Gilbert)
#20: Maybe they're just objectives? (Russell)

#37: It doesn't matter how many trendy gadgets you carry, when your batteries fail you have to make do with a pen and paper like everyone else.
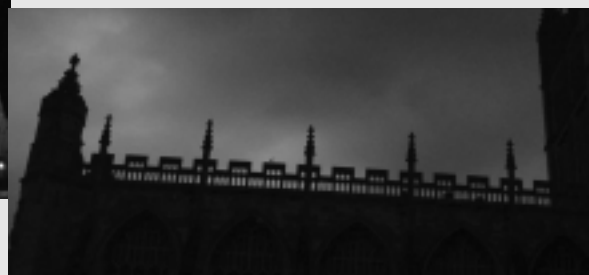
#1: Making a cup of tea is far more complicated than you thought when you involve a task analyst.

#11: Only 11–12% of UK use the 12,500 UK government public services websites.

#7: People do get embarrassed at having to squint closely at their companion's chest in order to read their name.

#12: If CHI don't accept your paper, make a movie instead.

#77: HCI2003 conference bags didn't contain a free HCI2002 highlighter.

#108: HCI2003's conference bags are more usable than HCI2002's.

#15: Bath Uni has a very complicated room numbering system in which you can have 2 1/10 of a room.

View from the Chair
Affordance for the British HCI Group

Based on the wide range of contributors saying so in Usability News, HCI2003: Design for Society was a successful conference in lots of different ways. The final bills are still being paid but it looks as though Eamonn O'Neill and Pete Wild have carefully shepherded it past solvency into a small surplus, despite lower than hoped-for numbers, and the continued thin availability of sponsorship. But the days of the huge conference surplus are clearly well gone.

Ours is not the only conference to face this challenge, and the group would face annual losses if it wasn't for the fact that the organising committee not only work for free, they also comprise a fair chunk of the paying audience! The conference also benefits greatly from coverage in this publication and Usability News. These are funded by you, the membership, but, more significantly, by rapidly depleting the conference surpluses realised several years ago. The rate of depletion is such that Usability News will close in December 2004, unless we can find the revenue to fund it.

We all want to prevent this closure. UN is a remarkable success and a quality product, building an enduring archive. The newsfeed alone guarantees that scores of HCI sites worldwide link to articles you may write.

During the last few months we have been disentangling the costs and the benefits to arrive at a sustainable model that ensures the survival of both publications and the conference. Put bluntly this means looking for money from outside the British HCI Group to help us achieve our core objective – to ensure that information technology serves people.

We want to sustain our current activities, and we want to develop them, e.g. making Usability News fully interactive. Totalling current annual sponsorship income and the current rate of depletion of reserves, we need to attract, in addition to membership income, £30k a year to stand still, more to do more. Members' subscriptions, by comparison, amount to around £10k. The people and committees listed on the back page of this publication need your ideas for how we can fill this gulf of execution, and we need them pretty quickly.

Tom McEwan, Communications Chair
t.mcewan@napier.ac.uk

contents

Editorial

I don't know about anyone else but I had a fantastic time at HCI 2003. I'm not just saying that so that people who didn't go will be jealous either. Well, maybe a little bit…

Apart from the interesting presentations and intelligent discussions, I also found that the conference provided a convenient pool of willing writers from whom I could coerce contributions for this issue of *Interfaces*. Particularly handy were the social events: the Lindy-Hopping at the Green Park Brasserie and the conference dinner at the Roman Baths. For example, two student delegates agreed, over dessert, to share their research with *Interfaces*, including Dennise Bell who wrote the My PhD column for this issue.

Interfaces 57, therefore, contains a fair amount of coverage of the conference, with reports on workshops, paper sessions, panels, and tutorials, and even selected lowlights from the Purple Press. Thank you to everyone who contributed something, including those of you who thought you were contributing to UsabilityNews and ended up in here, and also those whose submissions I've had to save for next issue because I ran out of space.

After an entertaining conference presentation by Dave Clarke and Claire Paddison on the work they did to make UsabilityNews accessible, they and Ann Light, editor of UN, agreed to write for *Interfaces* a two-part article on their work. The second part will appear next issue (Spring 2004). In the meantime, see the results of their work for yourself at www.UsabilityNews.com.

Another recruit was Russell Beale, *Interfaces*' new regular columnist, who, this issue, loiters along the information

Post-pie at Brown's Restaurant, Bath

superhighway and calculates the Ultimate Interface. Alan Dix, who began the calculations, this time opts to cogitate on cognition.

With Gilbert deflecting HCI myths, Cassandra venting her security bulletin frustration, and Sandra's collection of book reviews, here's another issue of *Interfaces* landed on your doorstep!

Laura Cowen
laurajcowen@yahoo.co.uk

RIGHT TO REPLY

Make *Interfaces* interactive! We invite you to have your say in response to issues raised in *Interfaces* or to comment on any aspect of HCI that interests you. Submissions should be short and concise (500 words or less) and, where appropriate, should clearly indicate the article being responded to. Please send all contributions to the Editor.

To receive your own copy of *Interfaces*, join the British HCI Group by filling in the form on page 27 and sending it to the address given.

NEXT ISSUE

Interfaces welcomes submissions on any HCI-related topic, including articles, opinion pieces, book reviews and conference reports. The next deadline is **15 January**, but don't wait till then – we look forward to hearing from you.

with thanks to commissioning editors:
Book Reviews: Sandra Cairncross, s.cairncross@napier.ac.uk
My PhD: Martha Hause, m.l.hause@open.ac.uk
Profile: Alan Dix, alan@hcibook.com
Photo credits: Laura Cowen, Tom McEwan, Nadia Pervez

Deadline for issue 58 is **15 January 2003**. Deadline for issue 59 is **15 April 2004**. Electronic versions are preferred: RTF, plain text or MS Word, via electronic mail or FTP (mail fiona@hiraeth.com for FTP address) or on Mac, PC disks; but copy will be accepted on paper or fax.

Send to: *Interfaces*, c/o Laura Cowen, Mail Point 095, IBM United Kingdom Laboratories, Hursley Park, Winchester Hampshire, SO21 2JN
Tel: +44 (0)1962 815622; Email: laurajcowen@yahoo.co.uk

and copy email submissions **to Fiona Dix, *Interfaces* production editor; email: fiona@hiraeth.com**

PDFs of *Interfaces* issues 35–56 can be found on the B-HCI-G web site, www.bcs-hci.org.uk/interfaces.html

Deflections
Is HCI just all fashion and fad?

Gilbert Cockton

Deflections initially responded to events in the HCI world (often involving me). To avoid the risk of incestuous narcissistic tedium, I must find something more worthy of deflection in the 700 words or so that Laura allows me.

HCI is beset with myths: within and without; in research and practice; in education and public policy. *Deflections* alone can't change the world, and there are so many places to start. How do I prioritise? In menu design, I could order options by frequency, importance, risk or alphabetically. So, I could prioritise myths in one of these orders. Have a look at the first box for one ordering (it failed user testing).

HCI Myths Alphabetically

Affordances can be intangible
Bobby works
Common sense is enough
Desktop metaphor
e-anything
Five test users are enough
GUIs are intuitive
HCI is all fashion and fad
Interface design is wholly subjective
Jakob Nielsen is the voice of usability
Keyboards will disappear
Laboratory studies generalise
Menus should never have more than 7±2 items
Natural language is natural
Object-oriented UIs are flexible
Patterns can encapsulate good design
Reality is contextual
Scenarios are a design method
Tasks exist
Users don't know what they want
Virtual reality
Windows support multi-tasking
Xmas comes every day with usable systems
Yale Style Guide
Zealots make good usability practitioners

If I set my priorities alphabetically, I'd have to debunk affordance myths first, but if no-one listens to Don Norman, why should they listen to me? On frequency, the five users myth comes high in the charts, but I've already done that one (search Google™ with Cockton Woolrych). By importance, the world must understand that there's more to usability than Jakob (Respect!) Nielsen. On risk, if we debunk the task myth, we could empty the HCI larder! Fortunately, 'T' is way down the alphabet.

It's a good job that HCI is a design science. When bereft of good existing options, it's time to be creative. I've got my beret and painting smock on (no false moustache). I am innovating as I type. I will prioritise myth debunking by *cruelty* order. I will start with the cruellest and work down to the kindest. My kindest is 'Reality is contextual' as it keeps ethnographers off the streets. I'll leave that one until last.

So, mirror mirror on the wall, what is the cruellest myth of all? If I could drop any myth here, I'd drop me aitch (it ain't

done Fintan Culwin no 'arm): HCI is all fashion and fad? True or false? Look in the box: affordances, e-anything, GUIs, Jakob Nielsen, OO, patterns, scenarios, tasks, virtual presence, windows, Yale style. Aren't we just people of the moment, blown on the breeze from one fad to the next?

I would suggest otherwise. To test out my position, I've a second alphabet box of enduring priorities in HCI. These will always matter. These common threads should shine though all fads and fashions in HCI (of which the alphabet box is the latest and best!) They are the basis for the expertise that marks out HCI experts from imposters. Feel free to send in your own boxes to *Interfaces* (user testing indicates that omitting and repeating initial letters eases the task).

An Alphabet of Enduring HCI

Advocacy for end-users
Books ~ communicating HCI and its benefits
Creativity ~ imaginative approaches to emerging problems
Design expertise ~ understanding interaction options
Evidence ~ demonstrating fit, quality and value
Fitting designs to the expected context of use
Grounding personas, tasks, scenarios, needs and value in the hard data
HCI ~ humans interacting with computers
Iterating ~ wisdom in the face of uncertainty, complexity and scarce resources
Jakob Nielsen ~ well-established and hopefully a few more decades to go
Kludge ~ when our best is nothing to boast about
Leadership ~ educating stakeholders, policy makers and developers on HCI
Measuring performance and user experience
Needs ~ establishing worthwhile value for new systems
Openness ~ honesty on the current limitations of HCI
Professional practice ~ accountability and partnership
Quality ~ delivering efficiency, effectiveness and satisfaction in use
Rationality ~ justifying design decisions
Stakeholders ~ balancing needs of primary, secondary and tertiary users
Trade-offs ~ managing conflicting requirements
Useworthiness ~ delivering quality with value
Value ~ delivering systems worthy of use
Wisdom ~ making hard choices with good grace
Xcellence in aspiration, if not reality
Youth ~ acknowledging our immaturity
Zeal ~ being passionate (but not a pain) about useworthiness

Gilbert Cockton
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Information superhighway or back street hustle?

Russell Beale

The internet is one of the greatest achievements of modern computing. It has transformed the PC from a beige box in the corner of a darkened room into a window onto the world of humanity. People who like computing were once viewed as anti-social techno-geeks who couldn't relate to real people: now if you don't have an email address you are weird, and pretty much everyone can access the web within 30 minutes of wherever they are.

The browser has done a lot to foster this takeup – simple interface, single clicks, multimedia – it's all there to draw in the interests of the consumer. And by giving the same parity to reading and being read, by allowing the masses to publish to the masses, it has grown into the marvellously connected, immensely useful, utterly bizarre system we see today. We had a great hand in this – we have worked with many others in pushing the technology, the concepts, the designs and the developments. We should be proud.

But this superhighway, with its promise of freedom, access to knowledge and ease of communication, is being slowly transformed from this sparkling, utopian vision. It's supposed to be a wide highway that you can cruise along, unflustered, passing libraries, bookshops, cinemas, music outlets, and shops in one district, the street performers and soapboxes down one junction, artists and householders down another. But it isn't.

Using the internet nowadays is much more like prowling down a seedy back street, past the hustlers, spivs, pimps and con-artists. Real highways used to suffer the same fate. In certain areas, there'd be the sex shops, the dope cafes, the dodgy dealing. But we understood that – you could choose to go there if you needed, or you could avoid it. It reflected society, that contradictory, partitioned world in which we all pretend to dislike certain aspects and wonder at our neighbours who must be creating the demand. Always our neighbours, never ourselves. And that was fine, acceptable, normal.

Try to surf the web today and sex will leap out of the screen at you, no matter where you are or what time it is. You will have won one million dollars, you will be able to see people doing strange things to others, you will need to cover your tracks, you can spy on your friends. Finding stuff is hard, so we turn to search engines for help, and they tend to respond like fanatics: ask the right question and you get a sensible answer, but phrase it slightly wrong and they release a torrent of all sorts of stuff with questionable relevance all over you. Whoa – it's not safe to go out now.

Let's stay in and read our email instead. Much more sensible – we can help out the son/daughter/lawyer of a Nigerian/Ethiopian/Zimbabwean politician/pontif/banker and receive millions for very little effort, have porn delivered right to us and also sufficient supplies of viagra so that we can actually make use of it all. I can remortgage my house at rates that are the cheapest for years, and spend the new money on schemes that will make me hugely wealthy if I only buy this one book for $15.

Someone has kidnapped our baby. The greatest interactive achievement of humanity, nurtured and continually developed by people like us, has gone to a cult, and we can't work with it any longer. We have to get it back.

You can argue that we are working on it: technically, spam blockers and web site filters are improving. Popup stoppers and advert removers are developing. Careful creating of new sites allows them to be easily found and less easily abused. However, socially, we're failing miserably. One of the reasons for this is because there has developed a strongly puritanical zeal amongst those working on these issues. Sex and adverts are bad, no-one wants porn or to get rich quick.

This is patently rubbish – there is plenty of demand for this in the real world and there's no reason the web should be any different. But we need to develop web-based social districts, where we can kind of guess what we're getting into, whether it's the clear road to the commercial district, the leafy streets with individuals and artists in residence, or the darker streets and seedier corners.

I need to be able to get to the library, to work, to the art gallery, and still meet and greet my friends. I also need to be able to slink into the darker recesses, for vicarious or specific purposes, and be able to come back again into the daylight, unobserved and still an acceptable member of society. We have to work with all facets of society to develop a web in which they can all address their markets in a socially acceptable way.

It is our responsibility to reclaim the best thing to happen to people, to computers, for the good of the world. We are the ones who can both see the problems and work technical, legal, moral and social miracles to make it happen. And if we don't do it, who will?

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Advanced Interaction Group
School of Computer Science
University of Birmingham

CALL FOR CONTRIBUTIONS

2AD: Second International Conference on Appliance Design
May 11–13, HP Labs, Bristol UK

2AD: The Second International Conference on Appliance Design is the international forum for the new discipline of appliance design that will reach across historical and discipline boundaries, blending physical, functional, interactive, graphical, and information design for new information appliances. Of paramount concern to the broadcasting, entertainment, computing and telecommunications industries, appliance design represents a coherent approach to the design of new media and information appliances and the systems in which they are embedded.

Submission deadlines: Full papers: 15 December 2003
Other categories: 12 January 2004

Further information from

http://www.appliancedesign.org/2ad/

Sponsors: HP Invent, The Appliance Studio Ltd, IDEO, Inmarsat, Nationwide, Steelcase. In cooperation with EPSRC, ACM, BCS-HCI Group

Freeeee food

Oh but it's good to be back home. And to a conference where the food is supplied. After a week of expense account lunches in Zurich I am impoverished and filled with things that I wasn't really that fondue of. £7 for a salad and a fruit juice. Makes you realise that the Interaction at Interact was between your pocket and the catering operation's tills. But fear not, the lunch doesn't cost at HCI2003, least as long as you don't lose your delegate badge.

Mere Stripling

Where to go? Ask Zeus!

Comparison are odious … but the delegates in Zurich helpfully received a small 'what's on' brochure, with maps of the city and the excellent transport system (but why did they keep rotating the city by 90 degrees?) plus details of places to eat, drink, watch movies, and, ahem, (by the time you get to the last ten pages), the sort of places that one finds very hard to itemise truthfully in the expenses claims.

Eamonn has detected this absence from the information presented to HCI2003 delegates, perhaps because houses of ill repute in Bath have generally tended to be those where the wrong cutlery is supplied with fish, or men and women take tea together in public. While some of our visitors from North America may find this refreshing, our readers generally want to know 'where do we get pizza?'. Well, doesn't the conference assistant meet every need?

Mere Stripling

Ten years after…

This is my first HCI conference in 10 years, but it's good to see how little has changed since 1993. Sure, we may all be obsessed with 'Accessibility' now rather than mental models, but there are a number of constraints.

When I arrived on Monday, I opened the conference proceedings to find a paper on Task Knowledge Structures by Johnson & Johnson. It was like I'd never been away.

What else has remained the same over ten years? Alan Dix's hair, Dan Diaper's 'Miami Vice' suits with charity shop ties. Phil Gray clearly still has the portrait in his attic. Oh, and I understand there's no longer a governmental e-Envoy. Just like 10 years ago, really.

Renaissance Man

Haroldian Blues!

Many of you will be aware of the tragic history of Harolds at this conference, but for the uninitiated let me confabulate!

The first British HCI Conference suffered a tragic outcome through unexpected linguistic interface difficulties when William, later known as 'the Conqueror', introduced a somewhat pointed response into the interface of Harold, then leader of the British HCI community. It needs to be said that it was a number of years before the British HCI community felt comfortable in working with their French colleagues!!

Last year, the demise of Professor 'Harry' Dumbledore caused shock waves throughout the community, as his tried and tested 'No one could conceivably use this popularly utilised interface' paper fell on deaf ears, and his follow-up 'You all hate me but I don't care' workshop failed to reinstate his reputation. Professor Dumbledore is believed to be living in a Home for the geometrically-Challenged somewhere in London!!

Now, we find ourselves in the unbelievable position where the respected clinician in hyperattenuated parabolic rotational representation, Dr Harry Pinder, has vehemently denied his immediate resigna- tion, in six months time, from his vaunted position with Helen Sharp's team as broomstick-tester-in-chief. Harry was responsible for ensuring appropriate knowledge transfer in these latest technol- ogy broomsticks to the broader community, promising much increase in funds for broomstick development in the process.

Sadly, it now appears that his nimbus is not the evidence of deity but a dirty big raincloud instead. So, is there a curse at work or is this simply coincidence – our watchwords must be 'Beware, Harry, beware!!'.

The Hagrid Connection

My Lindy has Hopped!!!

Rarely in the seedy and unlikely history of the Purple Press have we doffed our cap to any of the self-promoting and, let's not be fair, self-loving elements of the HCI Community, and this is no exception.

Rashid, currently on display in Furnishing Catalogues throughout the known SAGA world, had questioned the wisdom of linking rhythmic activity, alcohol and HCI Research and, through sheer perversity, we denied him!!

His revenge, albeit enacted in the only moving Soft Furnishings advert in HCI history, was manifest in our inability to respond to the urgings of King Louie and his team of manic accomplices. Some defied the trend, Jo 'Shake yer Booty' Hyde demonstrated some posterior and anterior manœuvres that have left your correspond- ent, and his underwear, in something of a tangle.

The English Footie crowd were over- whelmed by their team's magnificent destruction of the might of Lich-something, before retreating into a corner to cry and, in keeping with many an HCI conferencer before them, curse the selection policy!!

But, for the rest, the only options were drink and avoidance – HCI 2004 was planned, or at least Janet 'honest I was sober and drug- free when it happened' Finlay confused a number of friends and colleagues, which passes for conference organisation at this stage – I'd like to claim that HCI 2005 began to be organised, but all that happened was that the man with the moothie self-destructed somewhere in the House of the Rising Sun and we decided, yet again, that it'd be in Edinburgh!!!

And, somewhere in the midst of the dramatic heat of this new technological dawn, Bath pasties were eaten.

Lachlan McKinnon

wired and sound

I am quite impressed with both the tablet- and the wireless network now that whale gatepost the leaRning Curve. (have been transferring data from my laptop which has a cheap£23 wireless card to the tablet and 42Mb took only 4 minutes it seems that any shared drive on the network appears in my network places so make sure pwd protect! As you can probably tell it's not a hundred percent good at reading my writing, and the signal dips unaffectedly em unexpectedly. But it's better than poke midcourse em in the eye on a Tuesday afternoon. This message was written on atlas let in mealtime and wwirelessed in. "written on a tablet and..."

Tom McEwan

Waiting for Interface!!

Lachlan "I'm waiting for interface!!"
Deborah "Not a problem, do this (meaning- less technical gobbledegook) and all will be well."
Time passes.
Yet more time passes.
Lachlan "I'm waiting for interface!!"
Deborah "Ah, that will be because you haven't sublimated your proxy cache, opened your heart to the DHCP server and embraced 802.11b/g."
Time passes.
Yet more time passes.
Lachlan "I'm waiting for interface!!"
Deborah "Ah, but have you both sublimated and desublimated your proxy cache, denied your father and mother, reimplemented your browser to incorporate eye-tracking, and used the name of the beloved Gilbert as your SSP guardian?"
Time passes.
Yet more time passes.
Lachlan "I'm waiting for interface!!"
Deborah "You must refuse to share, adopt meaningless numerical progression, whistle in a tuneless fashion to the God of Servers, and accept all inputs, whether insecure or not!!"
Time passes.
Yet more time passes.
Lachlan "I'm waiting for interface!! Ah, wait, I have a failure message which reads 'U R ¬worthy'. To hell with this, I'm going to the pub!!!!"
Deborah "Oh ye of little faith!"

Extracted from a seminal work in 27 one- hour sessions by Lachlan 'Godot' MacKinnon. [Sponsored by IEEE and Wireless 'R' Us of Bath.]

HCI Educators – a tail in two cities (or a leg in both camps)

Tom McEwan

I wrote up the Zurich workshop (mainly on the usefulness of Problem-Based Learning for HCI Education) for UsabilityNews (*http://www.usabilitynews.com/news/article1278.asp*) and it has bewilderingly become my most cited piece of writing ever. It seems to have leaked into every blog on the planet (probably without human intervention after Ann – goes to show the power of UN!!!)

Anyway, one interesting aspect of Zurich was the fact that the lifecycle model suggested by 'purer' HCI people to teach applied HCI was very close to that already employed in professional multimedia – with Interaction Design straddling the divide. Much of the discussion centred on re-use. The emerging LTSN-ICS HCI repository and the proposed IFIP 13.1 repository are probably the same thing if only BHCIG could broker it! Despite only (I think) Beryl Plimmer (NZ) and myself being at both, there seemed to be a seamless connection between Zurich and the HCI2003 Educators workshop, which took various issues, such as the threat of the 'commoditisation of HCI Learning', deeper.

In Bath, we formed into four groups and discussed possible solutions to the age-old problem of not wanting to write fresh lecture notes. OK, that's a bit cynical, but you know what I mean. Who has the time to go off and do the same thing that Dix, Sharp, Beale, etc (all of whom were present amongst an attendance of around 20) had already done to bring their books to fruition.

Each group began by identifying a 'parable' for the lot of the HCI Educator. Our suggestion of the Bank Manager of thirty years ago (autonomous, knew what was good for you, had to be 'kept in with') versus the 'customer advisor' of today (offers pre-packaged products, monitors against quality criteria, little autonomy) was one of several that kept bubbling around our thoughts all day.

Other examples included: the change in children's cooking abilities from using raw materials versus cake-mixes/jars of sauce versus prepackaged meals; something else that sounded suspiciously like Java's implementation of OO (guess who was in that group); and more about

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The 7th HCI Educators' Workshop
Organised by the British Human–Computer Interaction Group in co-operation with LTSN-ICS

Each spring the British HCI Group hosts a two-day workshop to consider topical issues in HCI Education. This is then followed by a single day workshop at the annual British HCI Conference in September to progress specific issues and identify emerging issues. In 2003 the spring workshop was held in Edinburgh and the follow-up at HCI2003 in Bath (both events are described at www.hcie2003.org).

The 7th HCI Educators' Workshop takes place in Preston at the University of Central Lancashire (www.bcs-hci.org.uk/hcie2004) on 1st and 2nd April 2004, with a follow-up workshop at HCI2004 in Leeds (www.hci2004.org).

The Spring workshop aims to:

- disseminate, consolidate and build on the findings of the HCI2003 workshop (and other related international workshops) on reusable learning objects (RLOs) in HCI education

- determine the extent to which traditional HCI teaching remains relevant to Artists/ Designers/ Creative Technologists

Participants will:

- cross-fertilise issues and key topics of importance to HCI educators and practitioners

- share their experiences with RLOs and other elements of good HCI education and practice

- work together to produce or extend RLOs to benefit the HCI community enabling greater collaboration to occur

Participation

There are three ways to participate

- Submit a paper detailing original research

- Submit an interactive poster

- Submit a position paper

See the website *http://www.bcs-hci.org.uk/hcie2004* for further instructions.

Important dates

14th November: Call for participation issued
6th February: Deadline for submissions of papers
20th February: Notification of acceptance, and preliminary programme on web site
19th March: Early bird registration ends
1st April: Workshop

All delegates will receive a set of workshop proceedings which, as in previous years, will be published with an ISBN by LTSN-ICS. We plan to disseminate the outcomes from the workshop in external publications.

The medium of the workshop will be a mixture of papers, posters, and demonstrations, together with a workshop element for collaboration, discussion and practical activities to take place. There will be time to relax and network; a full and varied social programme is planned for the Thursday evening.

Further details are available from the LTSN-ICS site but please feel free to contact us at *bmcmanus@uclan.ac.uk* if you have any queries, questions or suggestions.

We look forward to welcoming you to Lancashire in the spring.

Background

The British HCI Group's Educators' workshop has run annually since 1998, attracting around 40 of the UK's top HCI lecturers and professors each year. Details of previous workshops can be found online:

2003 School of Computing, Napier University
www.bcs-hci.org.uk/hcie2003/advanceprog.htm

2002 Department of Information Systems, University of Portsmouth
www.tech.port.ac.uk/staffweb/rosbottj/hciWS2002/

2001 Department of Computing and Electrical Engineering, Heriot-Watt University
www.cee.hw.ac.uk/events/HCI2001/

2000 School of Computing, South Bank University
www.ics.ltsn.ac.uk/events/hci2000/

1999 School of Computing, South Bank University
www.ulst.ac.uk/cticomp/hci99.html

John Rosbottom's kitchen-making (carpenter versus Ikea) over the centuries than we had a right to know.

We then went through layers of consciousness-raising about both modern pedagogy (dipping back to last year's workshop) and the drivers for HCI knowledge required in graduates (SFIA, usability professionals, requirements engineering), before trying to identify some ways forward.

A poster was later displayed at the conference on the requirements for software tools to support the creation and use of SCORM/IMS compliant HCI learning objects[1]. Here the workshop was split roughly between HCI people (about 70%) and learning technologists (30% – most LTs were at ALT-C (Association for Learning Technology Conference) where learning objects were discussed in far greater depth).

The former largely seemed to feel that this was all some way off and that the role of HCI Educator wouldn't change much for many years. The latter thought 'you must be kidding' and cited multiple instances of learning objects already in action, not just in 'training', but in a variety of what might be termed Higher Education situations (though even this cherished differentiation is seen as a bit outmoded).

Returning to the aforementioned purveyors of existing, widely used, if underwrapped, learning objects, there were interesting insights into motivations for creators of objects (clue: financial rewards are less important than reputation/

esteem). The SCORM people present were expecting HCI people to be able to offer instant ways to overcome inertia in the supply of reusable learning content (perhaps that's more of a Knowledge Management issue) and seemed ultimately a bit disappointed by HCI naïvety.

The HCI side had a gradual understanding that while commoditisation might be a threat it was also an opportunity to, for example, focus on the quality of HCI learning instead of worrying constantly about bureaucratic box-ticking (i.e. if somebody had already defined a hierarchy of appropriate learning outcomes for HCI competency then QAA inspections, etc., becomes a doddle).

Helen Sharp's parting words on the subject were that *www.pedagogicalpatterns.org* might prove more useful than focusing overly on either HCI learning objects or HCI patterns at this stage.

John Rosbottom was collating the discussion and you will find out more on *www.hcie2003.org* soon.

For more information see:
- ALT-C (Association for Learning Technology Conference *www.shef.ac.uk/alt/*)
- SCORM (Shareable Content Object Reference Model *www.rhassociates.com/scorm.htm*)
- IMS (a consortium of e-learning vendors *www.imsglobal.org*)

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1 The concept of creating a packaged and reusable learning experience.

Left HCI 2003 SVs
Above Lindy-Hopping: the men
Above right Dan Diaper puts the Task Analysis world to rights

Above Lindy-Hopping: the women
Left Phil Gray and the BCS-HCI stand
Far left The Baths in Bath

Right Dix et al launch the nth edition of the HCI book

HCI 2003 Reports

Designing a civil society? **Andy Dearden**

Good HCI can make businesses more efficient, make games more fun and make video recorders less frustrating! But can HCI: Promote world peace? Free political prisoners? Support democratic participation? Defend workers' rights?

Well …… maybe.

Certainly humans are interacting with computers to support these (and many other) aims.

As digital communication systems become ever more pervasive they are increasingly being used to support the activities of non-governmental organisations (NGOs), formal and informal campaign groups, trade-unions, voluntary groups and charities. What we might loosely call 'social movements' such as feminism, anti-globalisation, environmental and peace campaigns are making use of technology to co-ordinate and promote their activities. What has HCI to say to these groups? Are the methods and design approaches developed for business productivity applicable for this context? Is computer supported co-operative campaigning the same as other types of co-operative work?

The participants in the workshop 'Designing for Civil Society' (HCI 2003, Bath) have all been engaged with these questions. Each of the participants reported on projects making use of technology to promote positive social change. The variety of projects was huge, but some common themes and problems are evident.

Miranda Mowbray (a co-founder of e-mint, *http://www.emint.org.uk*) described the importance of understanding the connection between online and offline communication in developing digital communities. This mix of on- and offline connection was reflected in a paper submitted by Mark Blythe (University of York) who described how Help the Aged were offering a telephone service so that older people could take advantage of web-shopping offered by supermarkets. Wendy Olphert (Loughborough University) considered the impact that interactive digital television might have in connecting many socially excluded people to online exchanges.

These projects raise issues of fairness and accountability. Andrew Ackland (Dialogue by Design) discussed his experiences of providing online tools to support community consultation processes. A key issue here is how to ensure that such processes are fair to people with different access to communication technologies, and that individuals' views put forward in online consultations are not 'twisted' in editorial summaries of the consultation. Ann Light (Sussex University & Usability News) discussed a project that supported young people in Brighton (UK) and Fiankoma (Ghana) in learning about each others' lives and school experiences. The project shows how careful design can help to challenge pre-conceptions and so make for clearer communication across cultural boundaries. Steve Walker (Leeds Metropolitan University) discussed the experiences and challenges faced by European trade unionists in developing their mutual understandings in order to collaborate effectively using the web.

Participatory design approaches were commonly used within the projects described. David Wilcox, *www.makingthenetwork.org* , showed how games could be

used to support communities or voluntary organisations in planning their activities.

All the participants were committed to free and open exchange of their experience and knowledge. I reported on CPSR's 'Pattern Language for Living Communication', *http://cpsr.org/program/sphere/patterns/* , which is an attempt to create an online pattern language to support positive applications of ICT.

Many participants discussed the potential of open-source software in this area. Tom Steinberg, *www.tomsteinberg.com* , presented a proposal for a 'civic hacking fund' to support small-scale software innovations for NGOs or voluntary groups. Some examples already exist, such as 'FaxyourMP.co.uk' which may be a more effective way of getting your voice heard than using email. Chris Bailey (Internet Rights Bulgaria) discussed some of the pressures on groups in Eastern Europe where if software copyright were rigorously enforced many community and national groups might be unable to continue working with their current arrangements.

In the final session of the day the group tackled two 'complete the following in 12 words or less' exercises.

Question 1 was to complete the sentence:

"We'd all be better off if we ………"
1) … had somewhere trustworthy to go for advice
2) … could learn effectively and cheaply from each other
3) … shaped, rather than were shaped by, the technology we use
4) … had a fund for developing socially focused, scaleable software projects
5) … had an intermediary between the techies and the NGOs
6) … had designers who served poor people
7) … had a community of practice
8) … could encourage campaigners to spend some of their time on advertising the value that is already out there

Problem 2 was to think about responses to these desires, by completing the sentence:

"In response to these, we could ………"
1) … tell people about LASA.org.uk
2) … email each other with follow-ups. Post to the blog. Hold another event.
3) … write a manifesto! Take forward this list. Produce a poster.
4) … get Tom to blow his overdraft on developing his civic hacking fund
5) … look for funding for more research in this area
6) … publicize and distribute the open-source toolkit: "Non-Profits in a Box"
7) … publicize the Non Profit Open Source Initiative
6) … add this to the manifesto (which kind of commits us to writing one)
7) … see what happens
8) … join Circuit Riders
9) … work on a project together

If you would like to find out more about the workshop, the participants have set up a Blog where we are continuing this discussion (and many more). Please come and have your say at *http://partnerships.typepad.com/civic/* !!

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HCI 2003 Reports

Introducing Systemic Task Analysis

Paul Englefield

Oscar Wilde suggested that to expect the unexpected was the sign of 'a thoroughly modern intellect'. I guess that I must be up with the times because my personal take home message from HCI 2003 was definitely unexpected; best practice in task modelling remains both controversial and elusive. However, while Thursday's panel offered a virtuoso performance of methodological iconoclasm and little consensus on the way forward, Dan Diaper's tutorial worked systematically and persuasively from principles to proposals by way of philosophy, mathematics, and ergonomics.

I found the day stimulating on several levels; as a historical review of methodology, as a refresher on fundamentals, as an introduction to Dan's proposals for Systemic Task Analysis, and as a bracing intellectual work-out.

In applying methods, those who fail to learn from the past seem doomed to re-invent it. Dan's review of the history of task analysis illustrated the diversity of research focus and the limited agreement as to how models should be derived, represented and applied in practice. A detailed discussion of the nature and purpose of models provided valuable insight for practitioners with a requirement to select, adapt, or improvise approaches to modelling. To draw an analogy from mathematics, Dan's strategy here could be considered as 'modelling from first principles' as a means of promoting informed creation of models as opposed to mechanical production of diagrams.

Finally, Dan introduced Systemic Task Analysis (STA) by means of a case study drawn from air traffic control. In a nutshell, STA proposes integrating task models closely with static system models of the domain in which work takes place. These models use simple event representations to analyse behaviour that takes place at each of the possible boundaries between work systems and the application systems within a domain.

Overall, this was a stimulating and valuable tutorial, graced by a breadth of perspective and a strongly developed rationale. Over time, I expect to put many of these ideas to work in commercial practice. As for expecting the unexpected, my personal bonus was Dan's whistle-stop tour of the philosophy and mathematics of modelling. I expected to learn more about how to model; I didn't expect to learn so much about the meaning of modelling.

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iTV meets mobile communications

Barbara McManus

As there was such a range of panel members, each speaker spoke to give information on their background and their perception of the area.

Marc Goodchild, BBCinteractive

Marc Goodchild from the BBC spoke first explaining how he came from a programme-making background. Having worked on 'Walking with Beasts', he explained how this was the first interactive programme, made 18 months earlier, and that, as a result of its success, a team has now been set up looking at factual programmes, examining how they work and how audiences respond.

His main interest is in the enhancement of TV programmes by making them interactive, explaining how mobiles are currently being used to interact with screens in Manchester allowing personalised responses to occur. He feels that iTV can be more engaging (which he phrased as 'sticky'), to allow for personalisation, and create a sense of shared events (community) as opposed to the current expectation of 'on demand' viewing.

At present iTV is being used in a limited way. Voting is perhaps the most obvious use, with messaging having been assumed to be the next great take-up. However despite the use of set top boxes, mobiles and TV associated handsets, its use is rather conservative. As a group we are habitual creatures and that makes the area difficult to crack.

Akseil Antilla, Nokia Research Centre, Finland

Akseil Antilla from Nokia, Finland was the next to speak, talking about the use of mobiles with medium sized programmes. He confirmed that texting is mass market – an area that had been accepted – but that other uses had not yet. In Finland they had tried interactive quizzes and broadcast information on their guests which could not otherwise have been broadcast on TV. This aspect appeared to be successful since the receivers felt that they were party to information unavailable to others.

Sepideh Chakaveh, IMK Fraunhofer

Sepideh Chakaveh, a systems engineer, worked at the Institute of Media Communications' interactive TV department. This was involved in three areas: virtual studios, applications for iTVs and the design of set top boxes. She spoke briefly of Marilyn, a multi-modal avatar-led Newscaster which had achieved some notoriety, as she believed that people wish to personalise aspects of their viewing. Her perception is that the technologies are becoming married since News On Demand in 1996 was such a breakthrough.

Manuela Brandao, SMARTLAB

Manuela Brandao indicated that the UK was the furthest advanced in the area and that they had undertaken some benchmarking on different markets. She stressed the necessity to consider the learning curves and not to ignore the data available to us already; for example, moves from letters to the use of telephones as a means of gathering feedback and mass information. She cited the use of 'Pick a Pair' during the broadcasting of Big Brother, together with the use of the four buttons to allow Test the Nation to be completed interactively.

This last example did highlight one of the disadvantages, namely that only one individual was able to interact with the TV, thereby causing isolation rather than forming cooperation. She talked of the distinction between mobility and personalisation. While SMS TV has the advantage of mobility, she emphasised some limitations of mobile use: it can be expensive when three stages are required: requesting, registration, and initiating, i.e. three steps @ 25p each. In addition, we must not forget that this interaction mode does not appeal to all groups.

The subsequent discussion was wide-ranging, reflecting the tensions inherent in this area currently. When questioned on what was holding us back, the technology or the artistry, most speakers agreed that it was neither one nor the other. Two-way dialogue has always been a part of programme making, from the use of letters to calling on the telephone to email. Mobiles are now being used as a mechanism as messaging with iTV is problematic. However, messaging in itself is a problem. Of the 2000 messages received in an hour, only 300 can be answered within the timeframe.

Other uses of mobiles were highlighted when Akseil mentioned shazam, where by dialling 2580 on your mobile and pointing the phone at the source, the name of the track and the artist is identified (*www.shazam.com*). The use of the mobile as a proactive reminder was mentioned: advertisements for TV programmes could then activate a reminder when that particular programme was due.

This implies a change of activity from passive to active with the BBC moving to be more of what the viewer needs. A debate then ensued on the need to reconceptualise the programme's revenue model. The programme 'Great Britons' was cited as an example where mobiles were not perceived to add any value as the programme was aimed at a different demographic group. The programme created a sense of event with enormous viewing figures being generated through the excellent coverage in the newspapers.

It is becoming the norm now for a URL to be given at the end of a programme to allow the user access to more and supporting information. The main difficulty now is how to make content available at the right time in the right media to the right group, taking into account their demographics. Currently the BBC has tackled the subject of D-Day in a different way by capturing the memories of some of the few survivors and making their stories available on the web site *http://www.bbc.co.uk/history/war/wwtwo/ dday_audio.shtml*, enabling a community to be formed.

On the question of iTV's role in interactive drama, Marc Goodchild thought that there was huge potential here with the use of branching narrative. One problem was that the writer always took the single view that s/he wanted to viewer to see. There was discussion on the possibility of giving the story to four writers in order to produce a variety of views that could then be combined to allow branching.

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This article was published in a similar form on www.UsabilityNews.com

"Five million pages of hot air"
Andrew Pinder, UK Government eEnvoy

Claire Paddison

'Five million pages of hot air' was how Andrew Pinder, UK Government eEnvoy, described our Government's websites. 'We have 5 million – and that's probably 4 million pages too many.' Speaking as a keynote at the HCI 2003 conference, he said to the HCI community: 'This is a plea for you to help us make these sites relevant, findable and usable.'

Mr Pinder's role is now to persuade citizens to use government services online, and also encourage owners of government websites to make them usable and accessible to UK citizens. His former work of providing access so that people could get online has been mostly completed.

In fact, a recent survey conducted by the Office of the e-Envoy showed that the UK has a higher level of business trading on the web than any other country, including the US. Fifty-five per cent of UK citizens regularly use the internet, with 50% accessing the internet from their home. However the bad news is that only 11–12% use government websites. So why is it that people who happily use the web to order books or set up standing orders online don't also use the web to fill out their tax return or read instructions on where to put their wheelie bin?

Many citizens may simply be unaware of the range of government services available online. Motivation may be another factor; for example, people may see little value in learning how to fill out a form online when they are happy to
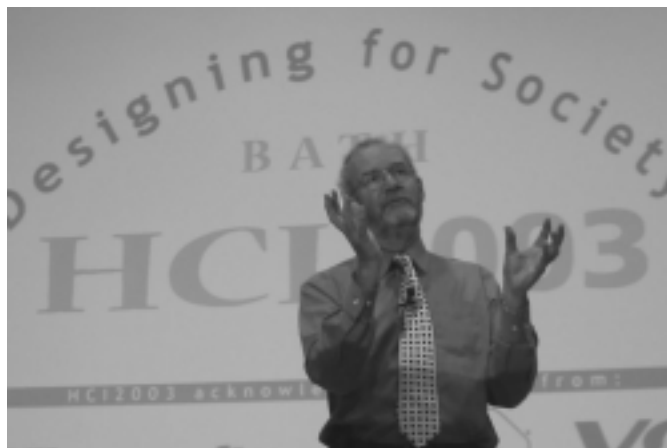
visit their post office and pick up a copy of the same form to fill out from the comfort of their armchair.

Usability also plays a significant role. Pinder spoke from his own research: sitting senior civil servants down to get some typical information such as local school performance data or disability allowances. He told how it was three pages before Google turned up anything relevant to government services and how obsolete departments and contradictory information abounded.

'Then there is no choice in what you can do and how,' he said. 'We have been thinking in terms of what we, as bureaucrats, want from them, not what visitors want. People are voting with their feet and not using the sites. It's a matter of reducing radically the number of sites we've got, improving those that remain and getting to know people a little.'

Maybe this was the reason that Mr Pinder has turned to the HCI community to help him transform the Government sites from 'boring and inaccessible' to sites that would be used by the 'disenfranchised members of our society'. He has a clear view: 'We need usable products that are built around customer needs.'

Unfortunately the job of transforming these sites into efficient, effective and, dare we say it, enjoyable experiences for citizens is, in fact, the responsibility of individual Government departments, and from experience we know that some do not possess the insight, resources or understanding to fulfil Mr Pinder's vision.

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This article was published in a similar form on www.UsabilityNews.com

Ethnography in organizations: exploring questions of validity and value   **Phil Turner**

The panel entitled *Ethnography in Organizations: Exploring questions of Validity and Value* was, for me, the high point of this conference. The panel, which was chaired by Susan Dray, comprised Anne Cohen Kiel, David A. Siegel, Christian Sturm, Nigel Thrift and Dennis Wixon. From the outset Susan Dray made it clear that their intention was to provoke debate and asked, as a starting point, who was prepared to admit to having conducted something which might be described as ethnography. More than half of us dutifully raised our hands. It is fair to say that the panel was always going to get a sympathetic hearing.

After the panel had introduced themselves – a mixture of academics, practicing anthropologists and fieldworkers and a Microsoft manager no less, the agreed starting point was that ethnography had become a synonym for fieldwork but a variety of fieldwork which had at its heart the naturalistic observation of people doing what people do. Then a series of questions were posed which formed the basis of the subsequent, all too brief, 90 minute discussion. These were:

Are the timelines of ethnography, as practiced by people like ourselves, adequate?

This received quite a lot of attention and to give a flavour of this Anne Cohen Kiel of Microsoft described some of her work on the Real People, Real Data initiative. This comprised a study of more than 40 families over a period of 12 months with 6–10 visits per family each visit lasting 4–18 hours with the aim of giving 'a voice' to these users of Microsoft's products – XP and MSN were mentioned specifically. This was contrasted with a 'quick and dirty' study in South America which discovered that a major obstacle to Internet shopping was the impassibility of roads during the rainy season (if this seems obscure, think about the job of the delivery man).

Does the design focus implicit in our use of ethnography introduce a bias?

In a word, yes. But as the MS manager pointed out, that was to his mind why the ethnography was being conducted.

Is the analysis (of the ethnographically collected data) adequate? Are the findings grossly simplified in order to communicate them (to designers, implementer)?

In many respects, these two questions are non-issues as ethnographic data are, in essence, stories. Stories are stories – highly specific, highly contextual which makes them very difficult to generalise from.

The Ethnography Panel, led by Susan Dray

Is ethnography really yielding information which we could not get otherwise?

This was, perhaps, a little unfair as ethnography was being treated as a synonym for fieldwork but did yield one nice vignette. Again this was another example from Microsoft who had found that 'the man of the house' was responsible for the purchase of computers and software. These data had been collected quantitatively. A follow-up study of home PC purchasing which involved an ethnographer going shopping with families revealed that 'the man of the house' did indeed write the cheque after the children had told him what to buy.

One final point, upon which the panel were agreed, was that there is still a significant, uphill challenge to convince management of the value of ethnography.

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Good incremental science sees improved tools for interaction

Paul Cairns

Paul Cairns reports on a session on Interactive Design that took place on Friday morning at HCI 2003.

Though this was a normal paper session of two long papers and two short, this session was somewhat unusual in that there were only two speakers. The first three papers were all work that Andy Cockburn of University of Canterbury, Christchurch, NZ, had done in collaboration with his students. Understandably, the students had not been able to attend and so it was left to Andy to give all the presentations. Marie-Luce Bourguet, Queen Mary, University of London, had the unenviable job of rounding off the Andy Cockburn experience.

The clear theme of the session was improving well-known forms of interaction, such as multi-modal interaction and scrolling. Despite only two speakers, the talks covered a good variety of topics. In his first talk, Andy looked at improving mouse acquisition of small targets. Fitts' Law featured heavily as he compared several previously proposed methods for improving acquisition speeds, such as sticky targets or expanding targets, familiar to those of you with the new Mac OS X application bar.

His second talk looked at a new way of scrolling that combined zooming and scrolling so that the faster you scrolled the more of the document you saw. This is not a new idea, indeed it was used to good effect in the game Grand Theft Auto, and it has been the subject of an earlier study in a more academic context. Andy's contribution was to make a robust implementation evaluated on ecologically valid tasks.

His final paper looked at new layout for buttons on a mobile phone to improve SMS entry. Oddly for a phone, it had no numbers for buttons but instead had 52 buttons for the letters. Each number was in a space between four buttons and entered as a chording combination of the surrounding letters.

What made these papers valuable were that the innovations were all evaluated with well formulated, multi-factor experiments and analysed with appropriate statistics (though I would have liked to have seen proper follow-up tests to the ANOVAs). Each innovation did seem to bring about significant improvements across a range of realistic tasks and in comparison to the more standard alternatives. Even so, Andy made measured conclusions and was well aware of the need for follow-up, integrating work.

In contrast, Marie-Luce was analysing more theoretically how to disambiguate multi-modal input, specifically a combination of speech and mouse gestures. The core of her system was a finite state machine (FSM) model, though, actually, it may have been better desribed as a non-deterministic automata, in order to allow for delayed assessment of initially ambiguous sequences. Based on this, Marie-Luce had built a set of tools to simplify construction of multi-modal interfaces, the FSMs and to make it quick and easy to alter the interface. I recommend the paper to you as a nice piece of analysis. The value of the toolkit is now in the hands of multi-modal developers.

This session, then, was one of good incremental science to improve known interaction techniques. The charismatic HCI 2003 keynote speaker Hiroshi Ishii acknowledged the value of such work even when there are sexier and more glamorous topics in HCI.

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This article was published in a similar form on www.UsabilityNews.com

Look at me: emotions and computers

Adrian Williamson

The *Look At Me* session at HCI 2003 provided some sharp insights into aspects of affective computing and indeed eight-year-olds! Facial expressions were a common theme this year and the presenters faced a lively, knowledgeable and appreciative audience.

Zhe Xu from Bournemouth University introduced us to the second phase of his research work on emotional systems. Last year he built a text-to-emotion engine using emotional tagging, and this year he presented his image warping and morphing solution to the problem of providing personalised facial expressions to track the tagged emotion. Taking one neutral facial picture and then applying transformations produced some very acceptable representations of Ekman's six emotion taxonomy in three degrees of severity for each.

Robert Ward from the University of Huddersfield then showed how he used commercial face tracking software to do the reverse: recognising the emotions from real-time video of participants under staged stimuli. Using a good experimental technique the conclusion that this use of face tracking software is of value to affective computing research appears well justified.

These full papers were followed by short ones from Kate Hone and Tangming Yuan. Kate, from Brunel University, described how she had corroborated previous work showing that a text-based agent could be effective as a frustration relieving intervention for users. This was followed by assessing the use of an embodied agent for the same purpose and concluding that this was superior to the text-only case. This contrasts with my own assessment of agents such as the Microsoft paperclip and so we look forward to future work with the facial recognition techniques that Robert is pioneering!

In the final paper, Tangming, of Leeds Metropolitan University, examined a refined computer debate dialogue model and corresponding tutor environment. Whilst some required refinements were identified, this looked like a great piece of technology for improving those transferable skills in the area of logic and debate which I would have been delighted to use during my sojourn in academia. It would be interesting to see how this sits alongside projects such as the Knowledge Management Institute's D3E: the combination

could provide a very rounded environment for knowledge workers such as my own development team.

One thought that I took away from the session is the generic nature of much of this work, allowing it to be applied not only to the work domain, but also to leisure and entertainment. We look forward to the return of Andrew Monk's Computers and Fun to remind us of the breadth that HCI needs to maintain and embrace to ensure a prosperous future.

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This article was published in a similar form on www.UsabilityNews.com

BCS-HCI Discussion Area

Tom McEwan

Will this be the formal, professional space that we need?

It may be having a bit of a slow launch (a trick we used ourselves with the gentle roll-out of UsabilityNews.com) but this latest addition to the website of BHCIG's parent organisation – the British Computing Society – has the potential to help build our community. All recipients of *Interfaces*, whether BCS members or not, have access to this space. It may just fill the gap between JISCmail – which, though moderated, is open to all (and also is perhaps more effective as a noticeboard) – and more *ad hoc* groupings such as SmartGroups. Or it may not!

Some of us seek richer forms of collaboration and debate space. WIKIs have another share of the collective HCI mind. I've been suspicious of them for more than two or three people – they seem to have the same vanity-publishing, squeaky wheel and power-without-responsibility issues of blogs, but I'm happy to be enlightened (and I'm sure the editor will be inundated with offers of enlightenment for the next issue!)

So, trying to consider a wider context, should we recognise the importance of a need to 'get into role' for public discussion fora such as the BCS HCI Discussion Area? Newsgroups, emails and WIKIs suffer from tired and emotional postings – much of our participation in these areas is on the edge of our social lives, on 'marginal time' as they say. Perhaps the best this offering can do is to retain a certain formality – the need to login with password and to post in a formal professional space – with adjacent links to other professional activities. We are *asking a question from the floor of a national conference*, rather than *having*
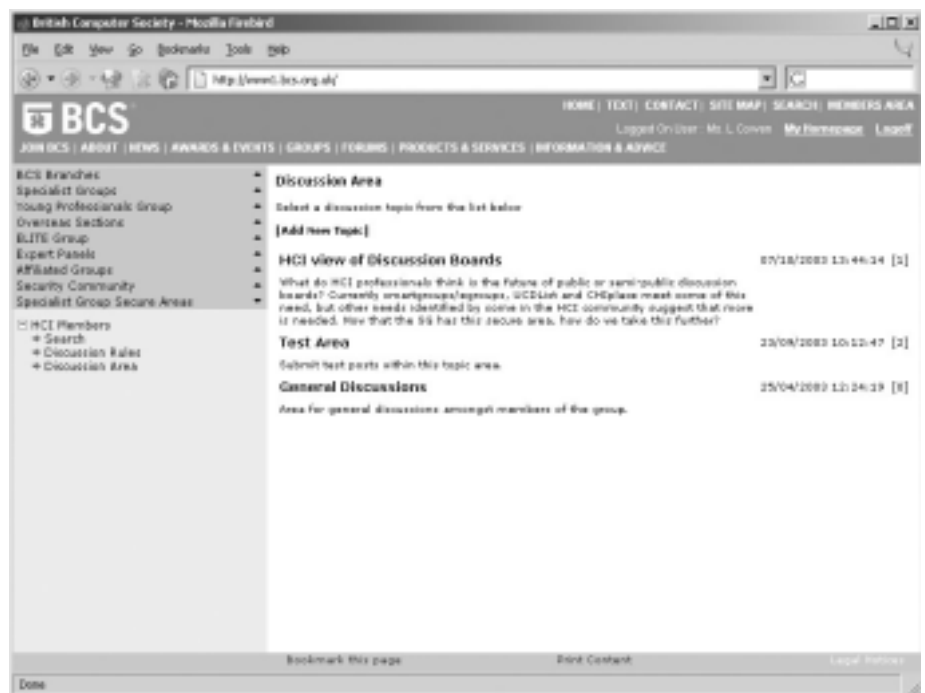
an argument in the bar that evening, so to speak.

My own electronic communication activities are spread around a variety of legacy mail accounts and tools to read them (though I finally got my Compuserve account into Outlook, albeit only on my home PC!). My university email only works off-campus through a web browser. Then there are the places I have to visit in order to contribute and/or read. There's a new Webct installation that is intended to be the backbone of my students' learning experiences, participation in William Hudson's well-moderated and enjoyable UCDList, lurking around CHIPlace and FirstTuesday, and several SmartGroups. Quite a lot really – just

to keep up with each, never mind participate. Luckily Phil Gray forgot to add me to GIST, or I'd have even more.

Perhaps I will only go to the BCS HCI Discussion Area once a week for 10–15 minutes, but when I do I will feel as though I am at some kind of online extension of a formal meeting. Or maybe it will all go the way of a myriad of chat rooms down the ages.

So get your log-in set up, and give a carefully considered response to my initial challenge. Just as I completed this piece, I got a nice letter from that Gilbert Cockton fellow giving log-on instructions. Hopefully you all did too.

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UsabilityNews and web accessibility
Part 1

Dave Clarke, Ann Light, Claire Paddison

Introduction

On Industry Day at HCI 2003 in Bath, we presented details from the UsabilityNews Accessibility Project (UNAP) [1] – the aim of which was to review and improve the current UsabilityNews web site [2] from an accessibility perspective. We briefly summarised its findings at the conference, and concluded that it was possible to revisit a web site's design 'after it had been launched' and subsequently make it more accessible, with relatively modest effort. There was little room in the paper and presentation to go into any great depth on the various stages and results, so we thought it would be useful to communicate, through *Interfaces*, some of the detail that could not be squeezed into the original text.

To recap, the structure and goals of the project were:

- To carry out a web-based survey, of both the existing and potential user population.
- To make UsabilityNews more accessible, using IBM's accessibility heuristics [3] as a means to identify, categorise and prioritise required improvements.
- Based on the findings, modify the existing design (where applicable).
- Evaluate the final design, by carrying out a number of accessibility user tests.
- Explore demand for making the service accessible over a range of platforms, such as PDAs.

The project aimed to take a practical, business-focused approach, carefully considering time, resources and money invested, versus the benefits that would be gained.

The article will be broken into two parts. In this issue we will go through the survey and its results; in the next *Interfaces* we will discuss the heuristic evaluation and accessibility user tests, whilst also drawing some conclusions from the project as a whole.

The survey

The aim of the survey was to (1) gather general feedback about the UsabilityNews readership, (2) gain an understanding about users with special accessibility requirements and the assistive technologies they use, and (3) verify whether users would like to access UsabilityNews via a mobile device. The survey resulted in 151 responses from all over the world. The majority of responses were from the UK (45%), America (26%) and Europe (18%). Other responses were received from Canada, Asia, Australia as well as Finland, Egypt and China.

This article aims to focus on the results relating to accessibility. The general and mobile device results will be published on the UsabilityNews web site at the same time as this article.

Visual impairment

Visual impairment is the consequence of a functional loss of vision [9]. Eye disorders such as cataracts, muscular problems that result in visual disturbances, diabetic retinopathy and infection, may cause this functional loss. In 2001, 1.8% of
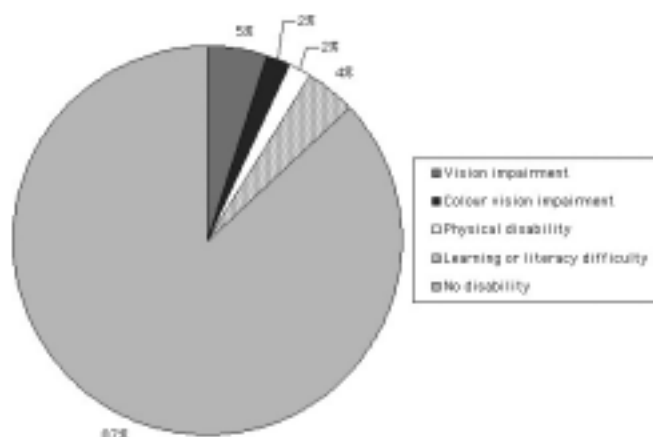

Figure 1: Pie chart showing proportion of existing and potential UsabilityNews readers with a disability

the UK population was identified as having a visual impairment, with approximately one third of this number registering their visual impairment [10]. The UsabilityNews survey responses show a higher proportion of people with a visual impairment worldwide: 5.3% of survey respondents indicated that they had either 'low vision' (4.6%) or 'no vision' (0.7%). 'Low vision' generally refers to a severe visual impairment; for example, it applies to all individuals with sight who are unable to read the newspaper at a normal viewing distance, even with the aid of glasses or contact lenses. It may also apply to people who are registered blind. 'Legally blind' indicates that a person has less than 20/200 vision in the better eye or a very limited field of vision (20 degrees at its widest point). People with low vision use a combination of vision and an appropriate assistive technology such as a screen magnifier to help them read information on a screen. People with no vision rely on screen reader or braille devices to access the web. A small proportion of survey respondents indicated that they used an assistive technology with their computer to overcome their visual challenges. Thirteen per cent of visually impaired respondents used a screen reader and 13% used a screen magnifier. Other adaptations used were standard PC setup features, such as 'StickyKeys', and spectacles!

Colour vision impairment

A colour vision impairment, otherwise known as colour blindness, is a 'condition in which certain colours cannot be distinguished, and is most commonly due to an inherited condition' [11]. Red/Green colour blindness is by far the most common form, about 99%, and causes problems in distinguishing reds and greens. Blue/Yellow colour blindness also exists, but is rare and there is no commonly available test for it. Total colour blindness (seeing in only shades of grey) is also extremely rare. Twelve per cent of males of European origin and about 0.5% of females suffer from colour blindness. 2% of survey respondents have a colour vision impairment. Everyday tasks can be very frustrating for individuals affected by colour blindness, for example,

deciphering colour dependent graphics, interpreting the colour of an LED indicator and deciding when a piece of meat is cooked!

Physical disabilities

The UsabilityNews survey was interested in physical disabilities that impair users' use of a mouse or keyboard. Upper limb disorders tend to affect the user's use of a mouse or keyboard, for example, Repetitive Strain Injury (RSI). RSI is a broad category that refers to various kinds of work-related musculoskeletal injuries. This may include carpal tunnel syndrome, tendonitis, tenosynovitis, bursitis, and epicondylitis. In Europe, 45% of workers reported working in painful or tiring positions, while 17% of workers complain of muscular pain in the arms and legs [12]. Parkinson's disease is an example of a degenerative disease that affects people using a mouse or keyboard. Parkinson's disease is a disorder of the central nervous system that affects nearly one million Americans [13]. Symptoms include tremors, stiffness in the muscles, and slowness of movement, which may prevent users from using a mouse and performing certain keystroke combinations. There are many other physical disabilities that may affect the user's use of a mouse or keyboard. Only a small proportion of survey respondents reported having a physical disability that impaired their use of a mouse or keyboard. As a result one respondent used voice recognition software and four used alternative pointing devices such as trackerballs.

Learning or literacy difficulties

The survey focused on dyslexia and dyspraxia, with a catch-all for other learning/literacy difficulties. The British Dyslexia Association describes dyslexia as 'a combination of abilities and difficulties that affect the learning process in one or more of reading, spelling, writing. Accompanying weaknesses may be identified in areas of speed of processing, short-term memory, sequencing and organisation, auditory and/or visual perception, spoken language and motor skills' [14]. The British Dyslexia Association estimates that 10% of children have some degree of dyslexia, while about 4% will be affected severely. A distinguishing characteristic of dyslexia is its persistence throughout life – people do not 'grow out of it'. The UK Dyspraxia Foundation defines developmental dyspraxia as 'an impairment or immaturity of the organisation of movement', resulting in messages not being properly or fully transmitted [15]. Dyspraxia affects the planning of what to do and how to do it and is associated with problems of perception, language and thought. Dyspraxia affects 10% of the population. Four per cent of the survey population have a learning or literacy difficulty. Four survey respondents suffered from dyslexia, one from dyspraxia and one other from an unspecified learning/literacy difficulty.

The survey highlighted the fact that some of the existing or potential readers of UsabilityNews do have special accessibility needs. This is a sound reason for making UsabilityNews accessible. Irrespective of this, are the facts that designing for accessibility is the right thing to do, and that legislation requiring compliance is due to be enforced in 2004.

Changes to the UsabilityNews web site are being implemented to coincide with this article in line with our findings. Details of the changes and how they were arrived at through heuristic evaluation and user testing will appear in the next edition of *Interfaces*.

Further reading

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[13] The Parkinson's Disease Foundation http://www.pdf.org/

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About *Reasoning and Thinking*

Alan Dix

I should start by explaining that this is not a review of Manktelow's *Reasoning and Thinking*, more using it as a point of departure to discuss the pragmatics of thought, the computational and ecological constraints on cognition.

The tourist trail

I came to read this book because I had been beginning to write about aspects of cognition, but realised that my own knowledge of the psychological facts and theory was very sketchy and partial. Working in HCI one picks up bits and pieces here and there of different disciplines, ending up with knowledge more like a foreigner's view of a country before visiting: the odd well-photographed landmark (the Eiffel Tower or Coliseum) and caricature image (the British bobby or French onion seller). Of course, when you actually visit the country there is always the joy of seeing the things that never get shown in cinema or travel brochures, but also often too the shock of how accurate some of the caricature images are.

So, one day in the library I wandered to the psychology section and, like the tourist in a strange city wondering where to visit, was outfaced by the shelves of books. But of course, when in a strange city the obvious thing to do is to follow the trodden tourist trail, so I selected Manktelow because it was clearly a student textbook – lots of copies, all with popular loan stickers – let's find out what the psychology students learn. Checking with colleagues since then, I found it is indeed a course book on the third year of the Lancaster psychology degree.

I can see why it is a chosen text: a clear and well-written text, covering a wide range of areas: simple logical inference, probabilistic inference, decision making, etc. Each topic well illustrated with key experiments and insights from the literature. So if you, like my colleagues in the Psychology Department, are looking for a good textbook, or if you, like me, want to get some insight into the discipline, this is an excellent place to start.

However, my immediate feeling on reading this was a level of shock. Just like the stranger in a foreign land … do these psychologists really think like that! Of course, the analogy breaks down here. This is a text book, as much a history as a guided tour, and I am a privileged reader, having already seen the surfacing of issues, like being shocked reading a book about Victorian child labour. However, part of me also felt I was on a journey into the psyche of a discipline, more like reading an autobiography. I'll explain.

Logical minds?

The book opens with chapters about basic logical inference, experiments including *modes ponens*:

from: if A then B
and: A
conclude: B

the classic deduction dating back to Aristotle.

All men are mortal.
Socrates is a man.
Therefore Socrates is mortal.

The experimental evidence was fascinating, the range of different effects studied. People consistently do not think like this, except in very controlled circumstances. Very often we do the 'error' of reversing modes ponens:

All train-spotters wear anoraks.
Martin is a wearing an anorak.
Therefore Martin is a train-spotter.

Of course when we come to conjunctions things get even more confused. Some of these things are known to be due to language: one way 'if' versus 'if and only if', 'or' meaning 'and/or' or 'exactly one of these'. But other confusions are more deeply seated – our logical reasoning is fundamentally 'flawed'.

These effects become more pronounced when the logic relates to real life. Strangely enough (?) we find logic easier when it accords with our prior knowledge than when it disagrees (belief bias).

All pop stars are poor.
Robbie Williams is a pop star.
From this what can you conclude:

(a) Robbie Williams is rich
(b) Robbie Williams is poor
(c) Robbie Williams sings

When we move on to probabilistic reasoning and hypothesis testing, things get even worse. Many of you will know the Wason's card test. Even knowing that it is 'not what you think' it is surprisingly hard to choose the 'right' cards to turn over.

In fact I recall many years ago skimming the PhD thesis of Robert Nozick (the Harvard extreme libertarian), where he looked at numerous types of potential rational decision strategies and found that human decision making corresponded to none of them.

Wason's selection task

You have four cards before you. Each has a letter on one side and a number on the other.

What cards would you need to turn over to verify the following statement:

"every vowel has an even number on the other side"

Only a minority of people get this 'right'. Most either fail to turn over a necessary card or turn over an unnecessary card. These 'failures' in testing are surprisingly resilient to restatements of the problem (but do change). However, Cosmides produced a version based around detecting cheating. A newspaper stand has an honesty box and the cards record on one side whether passers by took a newspaper or not and on the other whether they paid.

Which cards do you need to turn over to check that everyone who passes is honest, that is to verify the rule:

"if a newspaper is taken then money must be paid".

When faced with this task the majority of people get it right.

Whose sense?

So, what lesson should we take away from this: the perverse irrationality of the human race? In fact the thing I took away was the way in which the various psychologists doing the experiments were pictured as amazed or confused at the apparent lack of 'logic' in their subjects.

The truth is that the ways of thinking that these experiments implicitly suggest are the 'right' ways, are both computationally infeasible (you would be locked in unending reasoning to solve the simplest problems) and ecologically invalid (a real creature in the real world would die if it thought that way).

Perhaps again it is a matter of background; in HCI we are used to seeing both the more applied aspects of cognitive psychology and also the reactions against the more rationalist models of cognition: for example in the work on situated action and distributed cognition and in Winograd and Flores' critique of over-formalised cognitive models.

However, it seems that it doesn't require a background in alternative cognitive models to question these assumptions, but more everyday common sense. Recently, I was talking about these issues to someone who teaches exactly this kind of material (I'm not sure which textbook she used). She teaches the standard experiments: the various forms of 'logical' test, the standard Wason experiments, etc., just as in this book. But she told me that every time she says to her students 'and the experimenters expected people to do X' the students all say 'but why?' and of course she has no answer because she agrees with her students!

Of course I am also drawing my own caricatures here. Manktelow discusses various alternative kinds of reasoning beyond the simple syllogism, including Johnson-Laird's mental models, Rips' PSYCOP theory, and Chatter and Oaksford's probabilistic information-gain reasoning.

However, these alternatives themselves seem quite divorced from what any person would regard as normal thinking. Throughout the text there is always that sense of experimenters being constantly amazed at their subjects' 'irrational' behaviour and, as reader, my own constant sense of amazement at the experimenters' amazement.

Hangover lectures

Real reasoning has to be consonant both internally with the constraints of our brains as computational systems and externally with the development of our thinking in a physical and social environment.

Attempts in AI and automated theorem-proving very quickly hit the limits of computational power. A complete search for solutions to logical problems using syllogistic reasoning leads to a rapid combinatorial explosion. There are so many potential paths of reasoning to consider that even the fastest computers cannot explore them all. Our brains, which in principle do many things in parallel, could not have the ability to solve even relatively small problems in sensible time frames. Even a game of noughts and crosses (tic-tac-toe) has 362,880 possible game plays, and for chess a computer exhaustively examining millions of moves a second would be stopped not by the chess clock but by the expanding sun as it gave its last red gasps of nuclear fusion in 4 billion years' time.

The Manktelow book is interesting in that in the very last chapter effectively says, 'by the way, ignore all the previous chapters, they are really rubbish'. At this point he unpacks some of the computational limitations of reasoning, including Simon's notions of bounded rationality and satisficing.

Unfortunately, I'd guess this would only be reached at the last lecture of term when all the students who even manage to attend are recovering from end-of-term parties :-)

Looking at other books in the same general area, I notice that Garnham and Oakhill's *Thinking and Reasoning* does discuss some of the limits to sensible rational thinking early on, but then it is a much heavier (in both senses of the word) volume.

Surely it would be possible to succinctly say early on in any exposition of human reasoning that there has been a progression in thinking from more formal models of rationality to more natural models?

Now, to be fair, when I look again Manktelow's introductory chapter does raise some of these issues – was I doing the other classic student error of skipping the first lecture as well as the last?

Ecological validity

As well as internal computational validity, rationality must be externally valid; it must make sense in the world that we were developed for – the world of the hunter gatherer.

It was good to see in the heart of the book reference to the work of evolutionary psychologists in identifying the different ways we reason about social situations and the way in which this radically alters success in the Wason test.

It is clear that we as humans have not developed significantly neurologically or physically in the last few tens of thousands of years, so any models of cognition ought to make sense for a caveman as well as homo technis.

A lovely example of this is the use of mental models for reasoning and the 'surprise' evidenced at belief bias and various forms of leaking of world knowledge into experiments. The 'mental models' from the Johnson-Laird school are all minimal, in the sense that they include only things stated as part of the problem. This is for good reasons, economy of representation given limited working memory. However, in a simple, pre-technical and pre-cultural environment each perception is about the real world and thus adds to previous knowledge of the world. So, it is not reasonable or sensible to assume that knowledge given is treated in isolation as a set of independent propositions or as an independent model of a problem space.

Instead, the thinking of the natural world suggests that new information is added to existing knowledge. Sometimes it will conflict with existing knowledge and may be rejected ('pop stars are poor') or may overturn the existing beliefs. When we draw conclusions from new information we do not do it from the new information alone, but from everything we have experienced before. Even economy of representation leads to the same ends as we know that the units of working memory are 'chunks', which are of course derived from our previous knowledge.

The surprising thing is not that we exhibit belief bias, but that we can ever escape it and perform 'pure reasoning' at all!

One of the roots of this more classically rational thinking is in our ability to imagine past and future things, and thus the ability to exhibit at least episodically modal thinking (in that we can start to consider a possible future and then 'backtrack' to the present). However, for this review let's focus more closely on a more 'developed' and particularly human skill.

Dialogue and deceit

If nothing else it is clear that humankind are talking creatures. There is much discussion (more talking) about the inter-relationships between community, culture, language and technology that emerged in that socio-linguistic Eden 40,000 years or so ago, and we can never be certain of the exact details or dependencies, but beyond doubt language is a central aspect.

Again it was good to see in Manktelow a discussion of Grice's principle of cooperation for dialogue and the conversational maxims:

- quantity – don't say too much or too little
- quality – say what is true
- relation – say what is relevant
- manner – say what you mean clearly

In particular the maxims of quantity and relevance suggests that when we are talking with someone the things they tell us should hold a special place or have special salience, and are not simply added to our store of knowledge. This gets close to the mental model based purely on the premises given. However, these maxims also suggest that our interlocutor should take into account our shared knowledge in framing each utterance and so we must assume and bring in that knowledge. So although the explicitly stated things are rightly more salient it would be unreasonable and wrong to expect them to be the only things in our minds.

The thing that, more than the dialogue itself, perhaps forces us to specially mark or recall those things told in this dialogue as opposed to those previously held is the possibility of deceit, although in this respect the difference between deceit, planning of possibilities and simple story-telling is not so great. If the things we are told may not be, or may not yet be, or may only possibly be true, then we need to be able to mentally add then remove them from our minds. But this is a more sophisticated level of reasoning and indeed the Cosmides version of the Wason test shows that these skills are quite reasonably more finely honed in the social domain than the physical.

Turning from model building to logic, dialogue is still central. Of course the root of the word logic is precisely the Greek logos – speech. This gives the game away. Logic is about argumentation, the things we say to one another to convince or explain. It is the result of, but not the processes of thinking. This is true even of the rarefied reasoning of mathematics and no less the mundane reasoning of day-to-day life. Many of the paradoxes of human reasoning become more clear when we properly recognise this distinction.

In summary

In summary of Manktelow – I learnt a lot from reading this book: a lot about people's reasoning and perhaps even more about psychologists minds!

However, when reading this or other books in the area never forget that it is unreasonable to be reasonable and never leave your common sense behind when thinking about thinking.

More on related issues at:
www.hcibook.com/alan/essays/

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HCI International Conference, Crete, June 2003   Hina Keval
A student volunteer's perspective

I was nominated by the HCI organisation team at the University of Crete to volunteer as a student at the Human–Computer Interaction 10th International Conference. I was a support person for tutorials and parallel paper presentations. In addition, for any technical difficulties that arose , I was at hand. From poster and sign pin-ups to giving advice to delegates, I was there to help the running of the entire conference alongside 20 other post-graduate students from across the globe. Student volunteers were given a four volume HCI-I proceedings, free conference registration, and excellent food throughout the week.

The event venue was perfect as it was near the Creta Maris beach in Crete. Delegates and presenters were able to relax and enjoy the Greek atmosphere as well learn about HCI on the island. There were 30 tutorials and workshops running over the first two days, and 136 papers being presented. Typical areas covered at the conference included health and safety, evaluation and usability studies, virtual and augmented environments, access to information, people and technology, disabled and elderly, and many more exciting topics.

Personally, I loved the warm welcome and the hospitality that the organisers showed to their student volunteer teams, delegates, presenters, and other participants over the week. The conference dinner was spectacular. It was held outside on a warm evening where there was a sea-front view. Plenty of Greek food and traditional drinks were set out for guests, accompanied by fireworks and Greek music and dance. The most enjoyable part of my stay was learning about various up-to-date HCI developments and networking with many academics from all over the world. A conference on a such a beautiful island with extremely well-organised events, and packed with vast and interesting talks on Human–Computer issues is the most ultimate experience I've had this year.

I would like to contribute research to the HCI field in the coming years and would like a stronger role than the volunteering one. My experience was no doubt the most informative and invaluable, and it was a wonderful opportunity to network in such a lovely environment!

Hina Keval
Loughborough University

"A king of rags and patches..."

Cassandra Hall

MacroStuffed Security Bulletin 9999999.123c
Issued: 15th October 2003 18:18
Version Number: 1, 2, 3 FINAL
Who should read this document: Anyone who has time
Severity Rating: Darned nuisance
Recommendation: Customers should pray
Patch Replacement: None
Tested Software: None

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For example, an attacker could run programs on your computer when you are looking at a Web page and e-mailing your mum. An attacker could also remotely switch on your computer at night when you are asleep and run up huge bills. This very minor vulnerability affects all computers that have Internet Voyager® installed or have had it installed or are thinking about installing it or know someone who did. You do not have to be using Internet Voyager® as your main Web browser to be affected. Even if it's in the box on your shelf or you've ordered it for a friend over the phone that might be enough and you should be worried. You should help protect your computer a bit by installing this latest updated patch® from MacroStuffed's large ever growing family of patches, updates, revisions, versions and miscellaneous whatnots. I know it's confusing so pay attention.

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This is how you compare them.

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problem is to wipe your hard disk and install
a different system altogether. You can
download that free from this site. After all,
an apple a day keeps the bugs at bay.
```

```
Hello user
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MacroStuffed's products again, particularly
your old friends EnterpriseMail® and Internet
Voyager®. The best way to get rid of this
problem is to buy a more expensive product
from us. Have your credit card® ready. Have a
nice day.
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As you can see they are both very professional but the second one is much more professional than the first and that's because it's from us. The fact we want you to spend more money should give you a clue. If you find it difficult to spot the difference then you can buy a New!!! MacroStuffed® product called MoneyMaker® to automatically detect whether the mail is from us or not. It would be cheap at half the price so we've doubled it. Remember to download all of the latest patches and security alerts for MoneyMaker too. That should keep you busy for the rest of the day.

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Q2 Why won't my system work now I've installed the new patches?
A3 Doesn't it? How odd. You should be so lucky. We use rAincoaTS® here so ours still work. Think of all the fun you can have if your computer doesn't work. You can get things done more quickly. You won't have to use up time downloading patches and can stop worrying about bugs and viruses.

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Book Reviews

Edited by Sandra Cairncross

Usability is a theme that recurs through this issue's selection of books (more by happenstance than design). We are offered different perspectives with reviews on

- *The Social Life of Avatars: Presence and Interaction in Shared Virtual Environments*, a text aimed at researchers, who may or may not have social lives too.
- the wonderfully titled *Funology: From Usability to Enjoyment* (now there's a module which I'd like to teach).
- *Observing the User Experience*, part of the same, practical series that brought you Paper Prototyping (reviewed in the last issue).
- *E-Commerce Usability*, (which sounds like it has something for everyone - lecturers, students and practitioners),
- *Mobile Usability: How Nokia changed the face of the mobile phone* (something close to my own heart as I struggle to send text messages despite having a Nokia phone)

Please get in touch with suggestions of books to review or, even better. offers to review books. I'd also welcome suggestions on any areas which you would like us to focus on.

Sandra Cairncross
s.cairncross@napier.ac.uk

The Social Life of Avatars: Presence and Interaction in Shared Virtual Environments
Ralph Schroeder (editor)
Springer, 2002
£29.50
ISBN 1-85233-461-4

So avatars have social lives? Lucky them. One could ask, though, who are they? Are they having a good time, and are we having a good time through them? Is that person with the head of a dog making a reference to the famous New Yorker cartoon, or is the pixelated tail being wagged by a real (or figurative) canine? Are we creating meeting places containing more sexual identity confusion than this year's Big Brother house? If you smile, does the world really smile with you? Do virtual worlds really provide a safer place for social-phobics than real life? What are the effects of where we look, and of others looking at us? Are our virtual selves the best or the worst of who we are? Is cyberspace more like Glyndebourne or 'Ibiza Uncovered' when it comes to freedom of behaviour and forms of etiquette? These are some of the questions, albeit expressed differently, that this edited volume seeks to answer.

Much of the vision of what interactive virtual realities would offer was provided during the early days of the internet, just before and during the era of hype, fuelled by science fiction writing and much Californian thinking and IPOs. In Howard Rheingold's 1991 book *Virtual Reality* the acme of this vision is laid out. Like some interpretations of the cave paintings of Lascaux, and of those produced by South American Indian tribes, in mystical natural spaces, or those especially constructed according to plans inspired by revelations from the gods

and liberal doses of hallucinogenics, mankind would have its consciousness expanded and elevated, the world would be seen anew through more knowledgeable eyes and people would have dominion over many new technologies their minds were previously blind to imagining. Virtual reality, so some promised, would kick start human evolution again, we would be better, more self-knowing creatures as a result of our immersion in new magical places. As hardware starts catching up to the hype, we can start to ask whether the visionaries had it right. This book starts to question who we actually are when in shared immersive virtual spaces; to use a Ken Russell metaphor, is our virtual life going to be 'Altered States' or 'The Devils'?

This book is clearly a research-centred text; those wanting to take their first steps in understanding group psychology, techno- and ethno-methodologies, ethnography as applied to HCI, and theories of self-identity and social interaction should look elsewhere. Instead the book contains twelve papers that employ numerous research methods from quantitative analysis of event logs to autobiography to reveal how people interact within shared virtual spaces through embodied graphical agents and representatives. Reading this collection, however, one is struck by a number of notable problems that give the visionaries some breathing space before more sober voices might dominate the debate. Cost being the most serious: figures quoted in the book give a cost per participant in a shared space of as much as $40,000. Moore's law has never seemed to hold for I/O devices so we have some way to go before we all can afford the technology needed to join the virtual

party. The costs of developing the software used are not given; the reader must assume that they are also high since the same three or four programs are used in the studies and experiments reported. The building of worlds with shared spaces is also costly, one assumes: a number of papers describe spaces that support only the experimental condition tested, or speak only of lessons learned that can be applied to version 2.0 to make the technology or the virtual world more reliable. Following the MUD and MOO tradition, participants, through their avatars, are often required to build the world they will later inhabit.

So what creatures do we find in such brave new worlds? Many of the post-modern selves observed by Sherry Turkle are there. Being able to design one's own avatar allows inhabitants to find a 'truer' representation of themselves, to deflect negative emotions away from an internal personality that can be hurt to an external subset of oneself, to an other that 'isn't really me'. With embodiment in avatar form, though, familiar forms of social behaviour manifest more than MUDders and MOOers and their observers may have noticed. Pairs of people still square up to each other like a baseball umpire and team manager after they (perhaps inadvertently) virtually 'get in each other's face'; gatherings become ritualised and formalised in mirrors of real life; an audience that looks hostile or indifferent still reduces any speaker to a stammering jelly, but the socially anxious gain no comfort from a positive virtual audience; cliques are still formed on the basis of language or nationality and people can still be or feel excluded; status hierarchies can emerge and be voluntarily maintained

even while leaders are powerless to resist protest and usurpers; and we still place great emphasis on eye contact as a part of relationship forming and communication.

The papers are all interesting and readable, and do not suffer if you lack prior knowledge of the underlying frameworks and theories. They are, however, disconnected from each other in the topics they address. The tone of the book, also, is far more centred on observation, documentation and focused experiments than on contributing to knowledge that can be employed in the design of future systems. It is in this regard that the book shows how far off the grand vision we still are. The ability to construct faster, cheaper, more flexible and imaginative virtual worlds, and to support more (and more reliable) gestures and forms of communication at lower cost and with less effort is needed. On the evidence of the papers here, life in the future looks like it will be pretty much the same as it ever was, and we will all be pretty much the same people we are.

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According to Steve Pemberton, Editor of *Interactions*, we should be hearing much more on a new breed of topics like fun and emotion (July/August 2003). Even Don Norman is enthusing about it at CHI 2003! Now, any diligent student would do a thorough search of these new topics by consulting leading journals. However, there is an excellent 'cheat sheet' now available in the form of this little book which is a collection of articles on the very topic. But it comes at a hefty price tag of £75.00. Yes, you read that correctly! The advice to all you students out there is – get your tutors on your side and go lobby the library before they spend their entire budget.

So what are you getting for your pounds? It's a hardback, with glossy pages, and it's well illustrated with facts, figures, diagrams and illustrations. There's also some amusing banter at the beginning just to get you in the mood, and I think you will need

it for the first section of the book, because it's very theoretical. I'm not making it much fun am I? Well, bear with me. The book is divided into three sections: 'Theories and Concepts'; 'Methods and Techniques'; and finally 'Case Studies'. A nice touch is that each section starts with a short synopsis of each of the articles and what the reader can learn from the authors. The articles themselves have been collected from 'enjoyment' workshops held over the last four years. Each is well referenced, as one would expect.

The authors are trying to put forward the case that the traditional usability approach is too limited and must be extended to encompass enjoyment. The articles in Section 1 look at the issues surrounding the problematic definition of the words 'fun' and 'enjoyment', as well as suggesting various conceptual approaches to the subject. The implied introduction of neuro-linguistic programming into a holistic approach is an interesting idea. And did you know that fun can be viewed in a political context? Marxism – hmm!

Section 2 builds on the first by extending traditional approaches to cover enjoyment, and borrows ideas from other areas like art and literature. Proposed HCI techniques include animating faces, game playing, and deconstructing experience with the help of a Christmas cracker! However, what I find really interesting about this section is the interview with Jakob Nielsen, where he makes an important point that, although he supports these new approaches, they shouldn't compromise ease of use, which must remain a priority.

In the final section (certainly my favourite), designers and researchers take up the challenge of designing for enjoyment. So we find a clock that represents users' emotional states; a weather report for a Swedish city in the form of an abstract painting; and a funky phone that new users were eager to customise.

This book is definitely for the academic world and could prompt an excellent dissertation topic. I'm sure we'll be reading a lot more in coming months about the fascinating – if hard to measure – areas of fun and enjoyment, and this book is just the beginning. It's not the sort of book you can read cover to cover in one sitting, but it's definitely something to dip into to

get you thinking. So, is Funology a fun read? Hey, the authors are academics, not comedians.

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At first sight, this appears to be an excellent source book for the practitioner or for students undertaking project work. Briefly, topics covered include an overall approach and justification for it, followed by descriptions of how to carry out a range of techniques and a concluding section on communicating the results and defending the user research corner in less than sympathetic contexts. Appendices provide a basic set of suggested questions for gathering background data about web users, sets of instructions for those observing focus groups and usability tests and suggestions for a minimal usability lab.

Those starting off in the field will find a sensible user-focused approach described at a workable level of practical detail; while the more experienced will be able to review individual techniques where their own experience may be sketchy. I needed to consider the feasibility of user diaries while writing this review, for example, and found the material helpful, directly to the point and interesting. There are some minor niggles here – I think the shortish time suggested for analysis of usability test results is unrealistic and the treatment of probability theory would be better replaced by step-by-step instructions for one of the simpler statistical tests. Overall, however, the content benefits greatly from the author's own experience of carrying out 'user experience research' in resource-constrained circumstances and the writing style is light, readable and effective.

So far, so good, but there are also a couple of more serious limitations. Firstly, the title is misleading. The book is not mainly about observation of the user experience, except in the very broadest sense of the word. The only treatment of observing users in their real-world context comes in a brief account of Beyer and Holtzblatt's Contextual Inquiry in a chapter, which covers the approach alongside task analysis and card-sorting. More

fundamentally, with the exception of Contextual Inquiry, the techniques discussed are very much limited to working with users away from the context of use – as in the case of usability testing and focus groups – or eliciting self-report data, as in the case of surveys and diaries. Applied ethnographic techniques are commonly used by larger commercial organisations to get at real-life user experience and the book's omission of these results in rather narrow and dated-feeling coverage. Secondly, despite the claim on the cover that the content '…will provide a basis for developing better products, whether they're Web, software or mobile based' the examples provided are overwhelmingly web-centric. This does not mean that the material cannot be used in designing other applications, but a leap of the imagination is often required which may not be easy for the inexperienced practitioner.

Overall a highly practical book, but not to be treated as a comprehensive reference.

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Dave Travis asked if someone would like to review his book and as I am teaching e-commerce usability to real e-commerce students I thought it'd be a good one for me to do. In fact, getting Taylor and Francis to let me review anything for them has been an almighty battle and I'm tempted to say I gave up reviewing because I never got anywhere with them. So, I was pleased at last to be asked to do this one.

Travis starts by saying that people who use websites 'just want an easy life'. Yes they do. They also want results quickly, preferably instantaneously. They don't want to search. They want what they're looking for without any hassle. Travis recognises that e-commerce isn't working for people just yet and his book offers remedies that he is certain will work. The book isn't about websites *per se*; it's really about using the web as a means of trading and how to build sites that will do just that. What it isn't is another of those evangelist e-commerce books. It's incredibly practical and I guess

that the practitioners out there will love it for its wealth of ideas and its very practical help and advice. Students will love it too because it gives them examples and sensible guidelines. It's a nicely written book which progresses at a good pace and has no clutter. Travis sticks to the point, there are few personal reflections except when they are necessary and he doesn't waste time. Here is someone who knows what it's like to be waiting for information and he doesn't expect the reader to do that. In fact, very early on he gets you to run an analysis of your site (a diagnostic test so to speak) and then tells you what you need to read on the basis of that. I was impressed. An author who is confident enough not to force the reader to read every wretched word is a treat.

The book is divided into four parts. The first part deals with analysis and offers the diagnostic I talked about. Part 2 looks at the context of the site and shows how to build profiles for the customer, the environment and the task. This is a nice e-commerce slant on the old refrain where 'user' is now 'customer' – as I say Travis never loses sight of his e-commerce remit. Part 3 deals with the user experience and perhaps more importantly how to develop suitable metrics to measure them. Finally, the last section deals with the use of the site and its improvement as Travis recognises that a web site will need maintenance.

I'm intending to get my e-commerce students to read this, but even without their feedback this looks like a winner. It's such a relief to read something so very practical without a lot of unnecessary waffle. I really enjoyed this nicely presented book. At £15.99 it's a bargain and students will happily buy something they can really see the point of. It has a bright, jolly cover and is altogether a charming and useful book. There is a nice sprinkling of references and a small but sensible list of books and sites for further study after each chapter. As I say, Travis doesn't scare students with a list that's too long and he realises that those working in the field may not have time to chase up books and papers. My only gripe is I don't think the title does it justice. There's actually a sub title – *tools and techniques to perfect the on-line experience* – which is a much better indication as to what you will find. But I agree, although it's accurate it isn't exactly snappy.

Academics, get a handful for the library, put one in your briefcase to read on the bus. You'll enjoy it and I think you'll find some ideas there that will help. Practitioners or anyone just starting in the field, I think this will be a nice one for you too. I'm sure some material will be familiar but there will be ideas there that will help and it's such a good read.

By the way, you can look at sample chapters at *www.usability.com*

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My anticipation of this book's arrival was almost as much as the world's excitement about Nokia's forthcoming venture into the games market (watch out Gameboy…). For every five mobile phones sold worldwide, two are made by Nokia – so what's the secret behind this commercial success story? This book is a first in exploring the answers to be found in the company's product design innovations. It gives the reader a unique insight into Nokia's user interfaces and the philosophy behind them. And it really doesn't disappoint: the reader shares the experience and discovers the individual opinions of those working at the cutting edge.

First impressions: unmistakable cover; glossy, well illustrated and colourful throughout; and, as we'd expect from the ecologically aware Scandinavians, it's printed on re-cycled paper. The book is split up into four intriguing parts: 'Dominant design in mobile UIs'; 'Living with mobiles'; 'Design and research intertwined'; and finally 'Mobile contradictions'. If, like me, you usually avoid reading prefaces and prefer to get straight to the heart of a book, then I would recommend on this occasion you make an exception. Otherwise you'll miss a very interesting camera analogy! At first it seemed rather strange to be given a lesson on photography, but I realised the relevance of seeing usability and the development of the UI through the different 'lenses' of each of the book's contributing writers.

In the first part of the book the reader is introduced to the different UI

styles of Nokia mobile phones and the different market segments they are aimed for. There are some nice illustrated examples, some issues surrounding the use and evaluation of menus and soft keys, and the history behind Nokia's revolutionary 'navi-key' – by the inventor himself. At times the book is rather like reading a Buyers' Guide to Nokia Phones for HCI Specialists. I certainly learnt a few things about my own Nokia phone – and it beats listening to any dealer sales talk or wading through those awful product manuals. However, if you are one of the three out of five people who don't have a Nokia phone, you could find this perplexing and irritating.

The second part of the book is devoted to expounding Nokia's philosophy that the way to conquer the mobile phone world is through localisation, carried out by using a contextual inquiry methodology (the example given is cultural end-user research conducted in India). A further recommendation is made to use a sociological approach to overcome some of the shortcomings of traditional usability approaches and thereby achieve richer consumer studies.

What I found particularly fascinating was learning about the entire process of how design is managed at Nokia, covered in the third part of the book. I was amazed to discover that internal design teams consist of only three group members, with other personnel like usability specialists drafted in on an *ad hoc* basis. And UI guidelines are considered to be detrimental to creativity! There is a piece on the pros and cons of paper prototyping, and the length of time it takes to conduct an international usability test in another country. And one on the unique (albeit questionable) idea of finding a solution to the problem of how to text whilst driving! It's not just Nokia successes that are covered either: among the intriguing concepts never to reach the marketplace, for example, is the one row keyboard. It was a nice idea, but usability tests proved it was going nowhere.

The fourth part of the book looks at some of the problems encountered when designing for personal technology: for example, the memory overload, and the difficulty of measuring emotional response in a sector where 'look and feel' play such an important part in product choice. Finally we're given Nokia's six usability building blocks to a successful product.

It's sometimes easy to forget that the philosophy, approach, and products discussed are only those produced by one company, and in that sense the book represents more of an in-depth case study than an objective discussion of mobile phone UI technology. In the book's conclusion the editors claim that their ideas can be used as a global industry benchmark, but without any evidence from Nokia's competitors, it's hard to judge. However, the book would be an excellent complement to a standard HCI textbook of concepts and techniques because it provides a detailed, and valuable, 'real world' scenario.

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The ultimate interface: virtually there?

Russell Beale

Just after I'd been up to Lancaster to see a colleague, Alan Dix, I came across his article on how much storage we'd need to record all our experiences. Now, whilst I've no real desire for silicon-based immortality, there are aspects to electronic augmentation of our lives that are appealing. In particular, not having to travel and still go places would be ideal – a workable equivalent of the Star Trek transporter. This got me thinking: how much bandwidth would we need in order to transmit the whole gamut of sensory perceptions, so that a remote person could experience exactly the same as a person who was actually there?

Vision is the major component, obviously. Let's make some workable assumptions: we'll feed a high definition TV image into each eye. There are a lot of different data rates here, however:

    1.485 Gbps Raw HDTV
    200 Mbps Compressed HDTV
    40 Mbps MPEG2 HDTV Contribution
    19.2 Mbps HDTV Broadcast

I guess we can work on using some compression algorithms – that's not unreasonable, so we'll need 200 Mbps per eye in current technology. Working on the safe side and allowing for some small advances and synchronisation issues, we're at 440 Mbps for vision.

Hearing we can sort out using CDs: standard CDs are recorded at 44.8 kHz sampling at 16 bit, though audiophiles say they can detect a difference between these and SACDs or DVD-A formats which record at 96.8 kHz, 16 bits, so we'll use the higher value. This gives us 1.5488 Mbps, in stereo.

The main lesson we learn from working out data rates for hearing is that it is dwarfed by the visual component. This is lucky, as it means we don't really have to worry about any of the other senses either. We are so much less aware of them that even if we wanted to stimulate the whole skin surface, the information coming in through touch is an order of magnitude less than the visual data rates. Let's consider touch, smell, and taste, and physical motion, and give them 10 Mbps each – 40 Mbps overall. Now add in sound, be ultra-generous with safety margins, and that gives us a round figure of 500 Mbps.

Therefore, with a bandwidth of 500 Mbps, we have sufficient data rates to be able to fully transmit every environmental input; this means that you could be many miles away from me and yet still experience everything that I do, exactly as if you were there.

Let's see how this compares with the bandwidth we have today. A table is given below.

Type	Speed
Standard Modem	56 Kbps
ISDN – 2 channel	128 Kbps
Cable Modem (broadband)	300 Kbps to 1.5 Mbps
DSL (broadband)	128 Kbps to 1.5 Mbps
T1.5	1.5 Mbps
T3(DS3)	44.736 Mbps
OC-3	155 .52 Mbps
OC-12	622.08 Mbps

This means that, if we were directly connected to a fibre-optic backbone, we'd have plenty of capacity for full-scale virtual presence. This surely opens up a major challenge for HCI: to develop both the sensing and reproducing hardware to allow this to happen. We can get the data from point to point, we simply need the machinery to create and enact it. The teleporter is much closer than we think.

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My PhD
What can the face do for HCI?

Dennise Bell

At the recent British HCI Annual Conference in Bath, my supervisor and the editor together volunteered me to write something for *Interfaces* about my PhD. I decided to accept on two grounds, firstly because this is a good opportunity to tell the world about my research in a new and interesting area of HCI, and secondly because I need a break from the endless number crunching at this stage in my analysis.

To put all this in context I should tell you who I am and how I got here. I am an occupational psychologist working in the field of human–computer interaction. I was first offered a short research contract in the Department of Computing and Engineering at Huddersfield University in 2002 which both amazed and terrified me because my background is in psychology and not computing. Encouraged by the late Clive Johnson (then a PhD student), and following some of his work in psychophysiology, I developed an interest in the field of Affective Computing. On completing my contract the opportunity arose to start a PhD on the HCI aspects of facial expression recognition, and I had become sufficiently interested in the area to take up the challenge.

I am investigating the automatic tracking of users' facial movements as a means of detecting and evaluating users' affective reactions during human–computer interaction. The basic idea, as described by Picard [1], is that if a user's emotional reactions to software events or to content can be detected, then this can be used to evaluate aspects of usability, or to drive interaction. Intelligent Tutors might then be able to judge learners' levels of understanding and motivation and adapt their teaching strategies accordingly. Other software might be able to actively support users in recovering from negative emotions such as software-induced frustration.

The key to this is to be able to track and evaluate facial movements automatically. To begin with I am collecting and analysing facial movement tracking data. In my first experiment, 15 participants completed a multiple choice quiz based on the UK driving theory test. The task presented 35 questions drawn from the genuine test bank, and like in the real test, participants were told they had to achieve at least 30 out of 35 to pass. The task was however rigged to contain two specific stimuli: a surprise event (Figure 1) and a short sequence of questions judged to be of relatively high affective content (Figure 2).
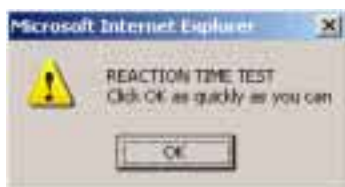

Figure 1 A surprise event

The results found that the surprise event produced both physiological and facial responses in all 15 participants, and that 12 of these 15 responses were picked up by the face tracker. There was however mixed success with affective content, which is a weaker stimulus. Some of the findings from this first experiment were presented at the Bath Conference. In a second experiment, I am investigating how well the

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Question 13:
A driver's behaviour has upset you. It may help if you
 a) Shout abusive language
 b) Gesture to them with your hand
 c) Stop and take a break
 d) Follow their car, flashing your headlights.

Figure 2 A question with high affective content

tracker can distinguish between several different facial expressions induced through interaction with software. Figures 3 and 4 are screen shots from the face tracker, showing how the software places virtual markers on the videoed face to track facial movements.

Figure 3 Neutral Expression

Figure 4 Amused Expression

I still feel on a very steep learning curve. At the end of the first year, my desk is swamped in paperwork and family commitments are knocking loudly on the door. However I do feel that what I am doing will contribute to the development of ideas about facial expression recognition in HCI, if only to help understand its potential and its limitations.

[1] Picard, R W. *Affective Computing*. The MIT Press. Cambridge, Massachusetts, 1997

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Usability & Interactive TV

The British HCI Group and ScotlandIS Usability Forum (an expert group within the trade body ScotlandIS) are hosting a one-day symposium to explore usability and accessibility issues in interactive television (iTV).

The development of effective and engaging iTV applications remains problematic, with issues such as personalisation, accessibility, and platform dependency still to be resolved. If interactivity is to extend beyond alternative camera angles and online quizzes, then a thorough understanding of the full range of usability and accessibility issues is essential.

When?
Thursday 22 January 2004

Where?
Conference Suite, Napier University, 10 Colinton Road, Edinburgh, EH10 5DT

Registration
Member (BHCIG or SUI): £50 (£58.25 inc VAT)
Non-member: £70 (£82.25 inc VAT)
Fees include lunch and light refreshments.
Contact Polly Purvis (01506 472 200 or polly.purvis@scotlandis.com)

For more information
Contact Ian Smith (0131 455 2794) or Alistair Kilgour (0845 458 2928).

Profile ## Ann Blandford talks to Alan Dix

A rumour spread that Ann Blandford couldn't read so they promoted her to Professor. To prove them wrong, she got demoted, and is now Reader in Interaction Design in the UCL Interaction Centre (UCLIC). Her research activities span user, system and interaction-oriented perspectives on work in context. With colleagues, she is investigating how work on Programmable User Modelling (PUMA) can be adapted to integrate user concerns into machine assisted proof. Taking a less formal approach, she is involved in the development and testing of Concept-based Analysis of Surface and Structural Misfits (CASSM), an approach to usability evaluation that supports reasoning about how well systems fit the user's work in context. Much of her recent work has been applying a range of techniques to study people's information seeking and use of digital libraries, particularly in the context of the health service.

She teaches applied cognitive science, organisational informatics and a random selection of other topics on the MSc in HCI with Ergonomics at UCL.

She is married to Chris, and parent to Emily and Laura. Her hobbies are swimming, climbing and providing an unpaid taxi service to teenagers.

What is your idea of happiness?
Total absorption in one activity (rock climbing, software development, etc.) is one kind of happiness.

What is your greatest fear?
Losing my family in a freak accident.

With which historical figure do you most identify?
Historians don't generally name working mothers below the rank of Queen, so she's the 'unknown working mum'.

Which living person do you most admire?
Aung San Suu Kyi.

What is the trait you most deplore in yourself?
A shyness that comes across as aloofness.

What is the trait you most deplore in others?
Insensitivity to other people. That especially applies to world leaders.

What vehicles do you own?
A bicycle for pleasure; a car for utility.

What is your greatest extravagance?
Organic fair-trade wine.

What makes you feel most depressed?
Intractable bureaucratic muddles.

What objects do you always carry with you?
The usual: wallet, keys, phone, pen-knife (except on planes of course).

What do you most dislike about your appearance?
How long have you got?

What is your most unappealing habit?
I think it's finishing other people's sentences, but Chris says it's ignoring the washing up.

What is your favourite smell?
Sandalwood.

What is your favourite word?
Hello!

What is your favourite building?
The Guggenheim on Bilbao.

What is your favourite journey?
Climbing Glyder Fawr was exhilarating, but I wouldn't want to do it every day.

What or who is the greatest love of your life?
Chris, Emily and Laura, of course.

Which living person do you most despise?
I don't do 'despise'.

On what occasions do you lie?
I have been known to exaggerate for dramatic effect...

Which words or phrases do you over-use?
'OK'. Oops! That's the word that got me answering all these questions.

What is your greatest regret?
That I don't have the time or energy to engage in all the collaborations I'd like.

When and where were you happiest?
1st May 1983, on Cloud Nine, but here and now are pretty good too.

How do you relax?
Music, feet up, glass of wine...

What single thing would improve the quality of your life?
Tidy teenagers.

Which talent would you most like to have?
Mono-tasking (or whatever the opposite of multi-tasking is).

What would your motto be?
Nothing's worth losing sleep over. But see answer to next question.

What keeps you awake at night?
Insomnia.

How would you like to die?
Knowing the people I love will flourish without me.

How would you like to be remembered?
With a smile.

British HCI Group – Application Form 2003–2004 *Please print or type*

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Please send mailings to: my work address ☐; my home address ☐.

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Do you wish your contact details and professional interests to be listed in the Membership Directory sent to all members of the group? (We will NOT use your home address, unless that is all you have given us.) Yes ☐ No ☐

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We are always looking for people interested in contributing to HCI group activities by, writing for Interfaces magazine, helping run the annual conference or joining the executive. If you are able to contribute in this way or if you have ideas for 1-day meetings or new activities please contact Adrian Williamson, adrian.williamson@gtnet.com

Membership Fee

Membership classes and fees for 2003–2004 are:

BCS Member £30 ☐   Non BCS Member £35 ☐   Student £10 ☐

Corporate £235 ☐ Corporate membership entitles the organisation to 8 copies of Interfaces and other mailings; membership rate for any 4 individuals at British HCI Group events, as well as, a free one-page entry in the membership handbook.

£ …………

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The HCI Group manages a journal, *Interacting with Computers*, published quarterly by Elsevier Science. Members may subscribe to this journal at a reduced rate (£52.50).

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