interfaces

if:79 summer 2009

# The Education Issue

**Playing the game**
Tom McEwan

**Lifelong learning**
David Travis

**Heterogeneous classes**
Sus Lundgren

**Practical Interaction Design**
Phil Turner and Susan Turner

BCS

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***Tom McEwan*** is a Senior Lecturer in Computing at Edinburgh Napier University, and is currently Treasurer of BCS Interaction SG, having previously chaired HCI2005. His previous lives include being a singer-songwriter throughout the 1980s, and a software engineer and then technical director in the 1990s. As the new decade approaches he really will need to figure out what he wants to do when he grows up.

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***Alan Dix*** is a professor at Lancaster University. He writes the odd book and the odd very odd paper. He regards the reappearance of Dr Who as the most important event in revitalising a generation's technological excitement during the 20 years he has worked in HCI. He keeps trying to get this into his research ... and may do some day soon.

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## About Interfaces

Interfaces welcomes submissions on any HCI-related topic, including articles, opinion pieces, book reviews and conference reports.

### Forthcoming themes

Interfaces 80, Autumn 2009: Now that's what I call HCI – Remixes, reflections and greatest hits of British HCI. Deadline **4 July 2009**
Interfaces 81, Winter 2009: Anywhere, anytime, anyplace – Globalised, localised and repackaged – challenges for the future

### Submission guidelines

Articles should be MS Word or plain text. Send images as separate files: these must be high resolution digital originals suitable for commercial printing, cropped if desired but not resized, and if edited, saved as tiff or highest quality jpeg. Please supply photographers' credits as appropriate.

Authors should please provide a 70–80-word biography and a high resolution head and shoulders original digital photo. Photographers' credits will be printed if provided.

Send to John Knight, John.Knight@intiuo.com; 34a Hackford Road, London, SW9 0RF.


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**We have not had a themed issue that has galvanised the group into action as much as this education focused one has. So it's clear that whatever we profess as our main interests and explore as trends, Learning and Teaching is right up there with um... usability. Now some might say this reflects our audience and academic comfort zone but they would be wrong! No, its not about demographics, but rather it's about our shared passion for what we do and our desire to share it with others. Indeed, in this issue of Interfaces Magazine we have strong representation from industry and in all cases education is squarely framed in the need to ground students properly and prepare them for the real world of Interaction Design.**

**Without taking anything away from this issue, the next one is going to be special. It's our 80th outing which represents 20 years of continuous publication and as our conference number it is also a celebration of what we do, a showcase for the group and the wider world. Titled "Now that's what I call HCI" this next issue is your opportunity to show off a bit in whatever way relates to your particular patch of HCI. So let's build for Cambridge and make this our year. So get writing, thinking and reflecting and please let me know if you need help in making the July 4th deadline.**

John Knight

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View from the chair

# HCI education – where now – and how?

Russell Beale

**In a paper I wrote for the HCI Educators' conference in Rome, I discussed whether HCI education should be all about scaffolding – strong supporting principles and theories that enabled people to construct sound software that was appropriately engineered, fit for purpose, beautiful, safe, and so on – or whether it was all about duct tape – strapping together whatever was at hand to make something work a bit better, but doing it quickly, using anything that happened to help. Whilst the largest discussion was actually over whether it should be "duct" tape or "duck" tape (and come and ask me, I'll not go into it here for lack of space!), the paper raises some general issues about where HCI education is, where it is going, and what we can and should teach at university.**

One of the tensions is that there seems to be an ever-increasing demand for more 'core' material in computer science courses, and so HCI is often squeezed into inappropriate parts of the curriculum or removed from the core – or lost altogether. There is also a growing disconnect between the people developing cool innovative applications, and those doing computer science courses, which is even more worrying – firstly, it suggests that some of these developers who get many people using their code are doing so from a base that may not be as firm as we'd like it to be – but more worryingly, that computer science is not seen as the course of choice for the bright developers, creatives, hackers and engineers out there. Which makes me wonder what the outlook for computer science is?

In these somewhat altered times, when trillion dollar deficits are commonplace, when job security is more tenuous than ever, when the labour market for computing graduates in particular is looking parlous given the lack of hiring from financial institutions, insurance industries, software companies and the knock-on effects into management consultancy and so on, computer science is not a career that guarantees a decent job and a decent wage – and this may mean that it will start to attract only those with a passion for it again. But given the disconnect above, it may be that those people see computer science and HCI as marginal subjects, not worthy of university study.

We can change this. We can argue for decent HCI in our undergraduate courses. We can take on first year courses and aim to inspire and motivate the new intake of students, opening their eyes to the delights, perils and fascination of trying to design interactive stuff so that it's right, that it works, that it meets people's needs in so many ways, functional and visceral, practical and aesthetic. One of the things that delights me about the HCI field is that many of the people in it do just that – they are passionate not just about researching it, or practising it, but about passing on knowledge, about inspiring new blood, and do develop and innovate and develop new courses, material and suchlike.

I do think that we need to support each other in this a bit more, however: academics are under increasing pressure to research more, generate more money from more sources, and do more admin than ever before, and this pressures teaching into taking a back seat. If we can share resources, share teaching materials, give guest lectures, and so on, then it will help. If consultants can give up their time to talk to a class, it brings in no money for them but does generate huge goodwill and potential links for future partnerships.

So, whether you scaffold your course, or duct tape it together, whether you invite speakers or are sometimes invited, we need to ensure we remember that HCI has to be at the heart of interactive systems, that good design can be taught, that creativity and innovation are at the heart of decent software engineering and that HCI provides these fields with appropriate tools. In the words of an engineer colleague, "if it moves and it shouldn't, use duct tape; if it doesn't move and it should, use WD40" – we may also have to consider using WD40 in academic circles to ensure we get our way as well.

For those on Facebook, there is an Interaction group, http://www.facebook.com/group.php?gid=59030267911

***Russell Beale*** leads the Advanced Interaction Group in the School of Computer Science at the University of Birmingham. His research focus is on using intelligence to support user interaction. Before returning full time to academia and research in 2003, he co-founded, ran, or worked for various internet-related companies.

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Scent Whisper from Sensory Design & Technology Ltd

1–5 September, in Cambridge, UK

# Preparations for HCI 2009

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## *Registration is now open for HCI 2009*

## Programme highlights

**The main HCI 2009 conference runs from 9:00 am on Wednesday 2 September until lunch on Friday 4 September. All meals and events during this period are included in the conference registration fee. Because Monday 31 August is a UK Bank Holiday, satellite events will not take place on Monday this year, but have been programmed for Tuesday 1 September, the afternoon of Friday, and Saturday 5 September.**

Paper streams will include the latest award-winning papers from other leading international conferences, presented at HCI 2009 for those who are not able to attend all of the dozen or so major conferences in the field.

The conference will also feature brand new research recognised with archival highlights status. These will include exciting new contributions in user interface technology, theory, engagement with users, practical tools and design research.

Ground-breaking papers to be presented offer new understanding of gaming and of inter-generational technology use, new styles of 'surface' computing technology, and valuable new design and prototyping methods.

## Festival of Interactive Technology

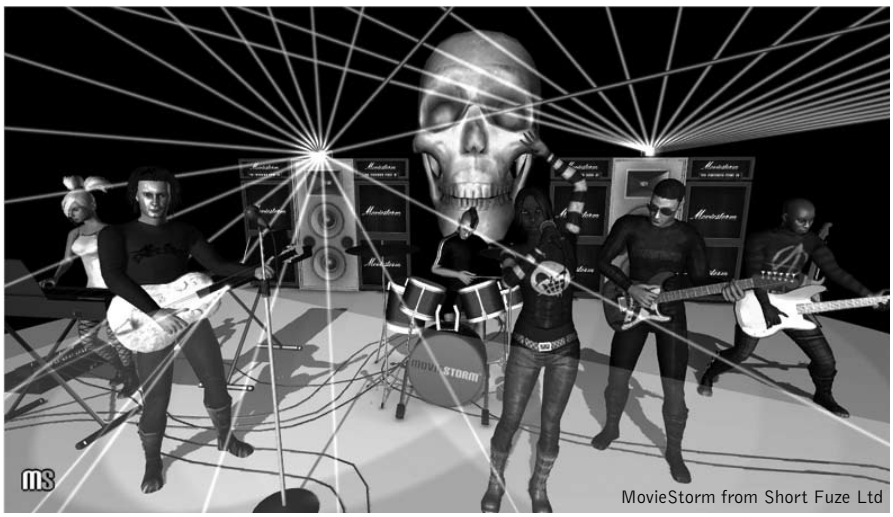
HCI 2009 will host the Festival of Interactive Technology, an open house showcasing some of the great new research and start-ups focused on novel interaction techniques drawn mainly from Cambridge and the surrounding areas. There are too many great demos to list, but here are a few to whet your appetite.

'Scent Whisper' from Sensory Design & Technology Ltd is a responsive jewellery piece, inspired by the defence mechanism of bombardier beetles. It provides a new way to send a scented message by fusing microfluidics and wireless technologies with perfumery, to create a new level of experience and well-being, and as a novel communication system.

The research project SecondLight, from Microsoft Research's Cambridge lab, uses switchable diffusers to present users with two images – one visible on the surface and one invisibly above it. SecondLight explores techniques for imaging through the display and advanced features that extend interaction beyond the surface.

From script to final cut, Moviestorm from Short Fuze Ltd takes users from character and set creation, through dialogue recording, choreography, and editing to finished movies for upload to video-sharing sites such as YouTube, or for upload to their active community website.

These projects give some idea of the breadth of interaction techniques that will be explored, as well as giving festival goers a sneak peek into some of the organisations on Cambridge University's high tech West Campus. Alongside the hands-on demos, the Festival of Interactive Technology will include food and live music to give the event a truly party atmosphere.



MovieStorm from Short Fuze Ltd

# Preparations for HCI 2009


SecondLight from Microsoft Research's Cambridge lab

## Workshop and tutorial programme

### Workshops

Many conference-goers like to take in a workshop or two as an indispensable part of their conference experience. The intimate and discursive format of workshop events permits a level of interaction that provides a valuable counterpoint to other conference activities. Interaction is not just the subject matter of HCI2009, then, but part of the process of engaging with HCI2009 as a whole.

The workshop programme at HCI2009 gives you the opportunity to engage with a diverse range of topics and to meet new people who share your enthusiasm for them. Whether you are interested in creative and intuitive processes in interaction design or cross-cultural perspectives, interactions with emotion-recognition or cloud-based systems, human physicality or robot interactions, enterprise computing and service design or societal developments in surveillance and control, information representation and recall or health-care systems; there is something for you at HCI2009.

### Tutorials

Tutorials offer an opportunity to update professional and research skills in hot areas such as mobile interaction design, field research, prototyping for physical computing, and AJAX development. Tutorials are taught by world leaders in their fields, and this year are made available at bargain prices – £40 for half days (including Friday afternoon) and £80 for full day tutorials.

## Keynotes: Negotiating between science and design

In addition to studies of technology users and presentations of next generation interactive technologies, many of the papers submitted to HCI 2009 describe new understandings of science and technology through design. Opening keynote speaker Anthony Dunne is head of the Design Interaction department at the Royal College of Art. With partner Fiona Raby, he has recently been exploring the ways in which their view of design challenges other professional understandings. In inviting him to open the conference, we expect to take a hard look at business-as-usual in HCI.

Although technologists and engineers enjoy providing solutions to problems, Dunne and Raby design in order to find problems rather than solve them. They create social fictions, not simply implementing technological science fictions, and apply art rather than resisting it. They want to make people think, not make them buy, and this results in work that is in the service of society more than the service of industry. The core of the software industry is the search for applications, but this kind of design research is concerned with implications, changing ourselves as much as changing the world.

HCI started as a human factors field, devoted to studying and improving ergonomics in technical systems. The turn to design recognises that technology is a kind of rhetoric, and invites us to be critical rather than affirmative. It can be satirical, a starting point for debate as much as for production, and a method of research rather than the end point of research. RCA graduates and researchers have had great impact on HCI in recent years, and this keynote is an opportunity to understand more of the world from which those insights have come.

## Bill Buxton

Giving the closing keynote will be luminary Bill Buxton, Principal Researcher at Microsoft Research, but erstwhile Chief Scientist of Alias/Wavefront, Director of the Ontario Telepresence Project, and co-founder of Cambridge EuroPARC. Along with being one of the most influential people in the field of HCI, Bill is passionate about design. More than this, he is one of those rare individuals who is as versed in the science of interaction design as he is in the practice of it. Testament to this is his recent best-selling book, *Sketching User Experiences*. In 2001, *The Hollywood Reporter* named him one of the ten most influential innovators in Hollywood. In 2002, *Time Magazine* named him one of the top five designers in Canada.

Along with his regular day job, Bill is a regular columnist for *Business Week* and frequently appears in the media as an advocate for good design. As well as a dynamic and inspiring speaker, Bill is also an avid climber, skier, canoeist, cyclist, and has in the past been a musician, performer, and competitive equestrian. We expect him to deliver an eclectic and thought-provoking end to the conference.

www.hci2009.org

# Play up, play up and play the game

Tom McEwan

**The rules of the game are changing – we now have rules! In many walks of life (as anyone who went through HERA benchmarking will know), competency frameworks are emerging to define and compare roles (meeting legal requirements such as gender pay equality), and individuals are to be benchmarked against roles. My paper [1] at HCI Educators 2009 in Abertay describes how a raft of standards have defined roles, career opportunities and the courses to fill relevant learning gaps. All of which may sound a bit mechanistic and reductionist to the HCI community, but these are the rules of the game now, for anyone wanting to make a living and find career fulfilment in a globalised world. HCI professionals are not exempt.**

Our community has to start playing this game a bit better, or our ideas will not gain traction, and our graduates will be marginalised. One of the more mature areas of our 'body of knowledge' (BOK) is usability but, as Jared Spool [2] repeated in his keynote at HCI2007 (citing the CUE studies by Molich et al.), we still need to 'get our act together to define usability', to ensure that we can measure it, prevent its lack, optimise methods to minimise problems. Accessibility, despite or because of WCAG 2.0 and PAS78, needs similar professionalisation.

Spool identifies that industry will demand many more user experience professionals over the next few years than exist or will graduate with relevant degrees. So just as all we preach can finally be put into practice, we could be undermined by the lack of clear definitions of competency (and the learning experiences that provide these).

In my paper you can find a detailed history of how we got to here, but the current situation is that BCS Interaction SG has been successful in getting four HCI-related skills/roles accepted into the Skills Framework for the Information Age (SFIA), while also influencing the definition of some of the other 82 roles. SFIA further defines a role at several of 7 levels – our roles have 19 such definitions out of a total pool of 290 levels. While we had a small presence in earlier versions, it was in SFIA v3 in 2005 that this became substantial. Version 4 was launched in December 2008 alongside the more detailed BCS SFIAPlus framework, and Jonathan Earthy and I both contributed to the prior consultation and then reviewed the outcome. My impression is that the review exercise, while a useful sanity check and allowing for some enhancements, occurred far too late in the process. Even the prior consultation period afforded minimal opportunities to influence and a more concerted and structured plan by Interaction SG is needed to engage with version 5 to ensure that fairly well-known HCI-related job descriptions, such as information architect, are included next time.

Additionally SFIA is only one relevant framework and a separate body, Skillset, also defines relevant roles but in a different way and to a lesser level of detail, while the less advanced CCSkills may yet emerge as the sector skills council for design. Interaction SG needs to engage with each of these bodies, contribute definitions that are based on existing job roles in progressive organisations and locate these in the appropriate areas if we are to influence less progressive organisations to adopt our body of knowledge.

Although SFIAPlus is the most detailed of the competency definitions I've encountered, the lower level skills that are aggregated (perm any 15 from several hundred) to define a role need much updating – the fine grain includes such fossilised relics as 'GUI' as a discrete skill/knowledge. So we need to collectively redefine these component skills to include all relevant parts of our field.

All of which is fine and dandy, but I stumbled somewhat at HCIEd in my reply to the obvious question 'so how should we move this forward?' Hence this article.

Ideally we would set aside a workshop at HCI2009 in Cambridge but that week is somewhat overwhelmed with other workshops. So in the first instance I will set up a discussion thread within the Interaction SG part of the Members Area in BCS. You'll need your membership number and to set up a password, if you haven't already logged in to this. Interaction SG has not made any use of the Members Area so far – but if we really want to influence the other 70k members of the BCS we ought to build a vibrant online discussion about competency in Interaction. Please meet me there and add your tuppence worth. Over the next 2–3 years we need to define what we mean by competency and professionalism in our field, build a coherent set of job definitions, and get them into the relevant standards. This will then allow us to define the underpinning degrees and short courses.

## References

1 McEwan, T. (2009). Playing the game: HCI careers in the competency era. In *Proceedings of HCI Educators 2009*, Abertay (soon to be available on BCS EWIC http://www.bcs.org/server.php?show=nav.7927).

2 Spool, J. (2007). Surviving our success: three radical recommendations. *ACM JUS*. **Vol. 2**, Issue 4, August 2007, 155–161. Retrieved January 21, 2009 from http://www.usabilityprofessionals.org/upa_publications/jus/2007august/surviving.pdf.

# Reflections

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**In the midst of talk of a steep and rapidly darkening global recession, some may think that universities are immune from the poison in the global economy. MScs in Human Computer Interaction reflect the complex picture that actually faces most institutions.**

In the 2000s, universities have seen the overseas MSc market as somewhat of a cash cow. There has been consistent pressure to recruit overseas students. However, most of the developing economies that these students have typically come from are under even more acute pressure than, say, Western Europe or North America. In contrast, Newcastle University recently publicised that it would discount its Master's courses for this year's graduates. The argument given was that a Master's degree would improve employability, and no doubt also minimise the number of BSc and BA graduates without a job.

## Another year?

As a result of this complex picture, the prospects for MSc courses are unclear: some pressures suggest more domestic students may "stay on", whilst others indicate that overseas students will decline. Whatever happens, the pressure from universities on departments to recruit more students will no doubt increase.

A postgraduate course has long been a lure to both those excited by their subject and students with an unclear plan for their future. Recession is commonly believed to make more students stay. Recent polls and surveys of final year students certainly paint a picture of despair. To take just one example, the annual High Fliers Research poll reports that only 36% of finalists expect to get a graduate job this year, and that 26% are considering post-graduate study – the highest level on record. Data for employers is also very bleak. The picture in the City of London overall is particularly black, with estimates hovering close to a 30% fall, and the IT sector as a whole is down 7% according to the Association of Graduate Recruiters.

It is therefore not surprising that lecturers are finding that students are considering a higher degree as a "safe haven" in the current economic crisis. Prospective MSc students are, however, concerned about whether a further degree will actually help their career and earnings prospects.

The long-term benefits of postgraduate study are, if anything, better proven than the advantages of a Bachelor's degree. The Consultative Committee for Professional Management Organisations published research it commissioned early this year. While little covered by the media, the results are striking: a 9% increase in employability and a potential income boost of some 37%. So, there are good arguments to be made to students that further study will boost their lifetime earnings.

There is, however, one further problem for those running HCI MSc courses. The cohorts of students from which they draw have actually been in decline for some time. This is particularly true of computing degrees. The internet boom drove recruitment into computer sciences bachelor courses up to 2001. That peak graduated in 2005, and since then there has been a huge fall. 2006 – the intake year for this year's graduates – was some 25% down in starting student numbers. Data from the National Student Survey indicates that computing's drop-out rate also accelerated during the recent past, so the change in numbers of students graduating is likely to be even worse than the original fall by a quarter. For those concerned with computing as a whole, recent data from the Council of Professors and Heads of Computing, published at the annual CHPC conference, makes grim reading.

This has naturally translated into lower overall numbers of domestic students staying on to postgraduate study, and an increasing dependency on other nations. As I noted above, the picture for China, India and other common countries of origin for postgraduate students is bleak. In these nations, the global downturn is already leading to an impact on the numbers of students applying to overseas institutions in New Zealand, the United States and of course Britain. The only benefit to the UK as an international destination this year has been sterling's rapid decline on the currency exchange market.

## Moving on

For those already studying for an MSc, the picture is different: they face graduating in an extremely difficult environment, where many traditional recruiters are cutting down on staff numbers. Universities are attempting to improve their support of 2009 graduates, but there are no magic answers.

There is little available data on MSc graduate opportunities in particular, but the picture seems to be suffering a similar depression to the graduate jobs market. Overall, the impact is often not quite as bleak, but the difference is small.

## HCI MSc courses

What, then of MSc courses in HCI in particular? I have just moved between two institutions (City and Swansea) that both

*It is really amazing the quality of work that students can progress to in only one year, and many projects and courses demonstrate the real excitement, interest and value that an MSc in HCI can deliver.*

offer popular HCI Master's courses. Wales and London are very different places.

London has a substantial IT workforce. However, most of the demand for IT staff has historically been driven by international companies, many of them banks. In the finance-led downturn, London students are therefore facing particular pressure on traditional employers. In contrast, Wales has a much smaller IT sector, and small and medium sized companies drive IT demand. Whilst less directly exposed to the whims of the financial industry, business in Wales has certainly felt the chill wind of the recession and has cut back on all forms of recruitment.

There are differences too in the student body: Wales sees relatively few overseas students, whereas London is, of course, popular with international students seeking to live and study in the United Kingdom. Part-time study at City is commonplace, whereas students at Swansea are currently all full-time. Local financial factors influence this: Swansea is one of the cheapest cities in the UK for accommodation costs, whereas London is notoriously expensive. Hence, in London more students feel forced to work in order to support their study.

The MSc courses at the two institutions are also very different creatures. I left Swansea this year, during only its third cohort of MSc students, whereas the course at City is well established. Swansea's Future Interaction Technology Laboratory emphasises programming, technology and formal specification, whereas the City course embraces more directly issues such as accessibility and qualitative research methods.

Given these differences, one would perhaps expect "a tale of two cities", but in fact this seems far from the case at present. Numbers for the next academic year are holding up well in both locations, despite very adverse circumstances. However, across London, at both older institutions such as UCL and Queen Mary, and newer ones such as Middlesex, the challenge may yet prove to be retaining students who find their financial plans derailed as part-time work becomes harder to secure.

## The near future

The pressures we see today are likely to remain for the short-term future. All predictions from the main global economic institutions (e.g. the IMF and OECD) indicate that the financial outlook for the next two years is going to remain bleak. Computing graduate numbers will also fall, and job security in the UK is unlikely to improve, with most predictions suggesting a rise to 3.5m unemployed from the current level of 2.1m.

Whatever changes impact the MSc market this year, next year's MSc graduates will face similar challenges to those finishing in 2009. Similarly, those graduating their bachelor degree in 2010 will face the same problems as graduates of today. Employers, students and universities will all have to learn their lessons quickly.

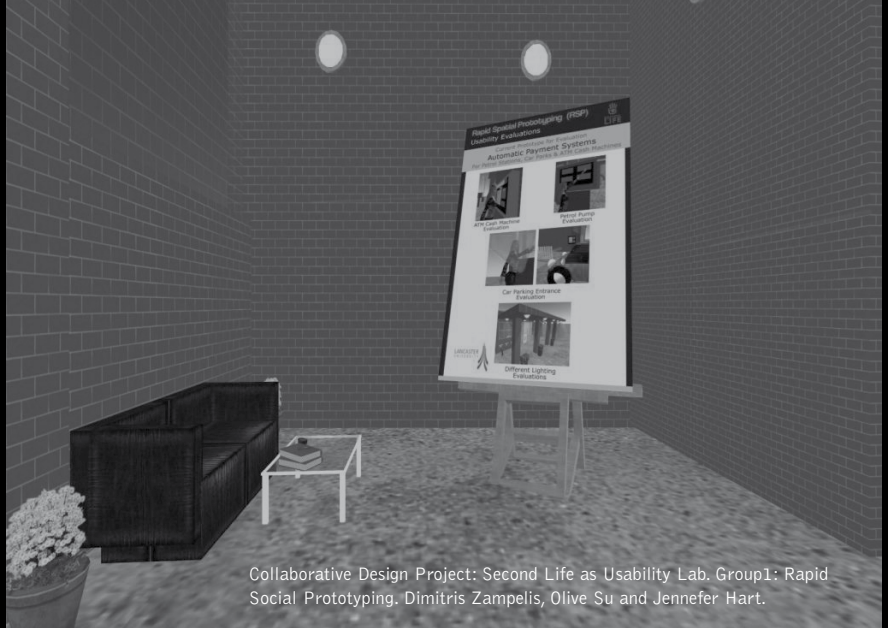
Assisting MSc graduates to find good connections with those businesses that continue to thrive will be a critical task for the leaders of any Master's course. In the case of HCI, this challenge is helped by the fact that so many students undertake their degree for career purposes. Nonetheless, ensuring that dissertation work supports a student's immediate career needs is more important than ever. Ensuring that course material also meets the needs of prospective employers may give a graduate that extra advantage. Strong connections to business will help many courses, and provide a genuine opportunity for universities to contribute to the economy when up against the wall.

## Hope

I can, however, offer some hope, and from personal experience. I graduated my first degree from the University of York's Computer Science department in 1991. For those with longer memories, that year faced the onslaught of an economic downturn, just as this year does. Getting an interview was almost impossible, with IT companies closing the door to graduates. Indeed, the situation for graduates in a computer discipline then was much worse than this year. The shortage of qualified IT personnel is now more acute, and the downturn for the industry much less pronounced.

Despite a much worse environment, many students managed to get a job. Personally, I started my own business, and through a mixture of luck and (perhaps!) ability, survived. It grew by at least 50% every year for the next decade, though I personally left after seven years. My four years at university were not wasted, and indeed I am certain gave me greater skills to face that challenge than any alternative path would have given me.

The success of previous students is ultimately the best assurance for current MSc cohorts, and those considering that extra year at university. I will be highlighting showpieces from MSc courses in future issues. It is really amazing the quality of work that students can progress to in only one year, and many projects and courses demonstrate the real excitement, interest and value that an MSc in HCI can deliver.




Collaborative Design Project: Second Life as Usability Lab. Group1: Rapid Social Prototyping. Dimitris Zampelis, Olive Su and Jennefer Hart.

Lancaster MRes in HCI

# The course formerly known as ...

Alan Dix and Corina Sas

**The Lancaster MRes in HCI is now in its 10th year and included Laura Cowen, the previous editor of Interfaces, amongst its first cohort back in 2000. For its first nine years, the course was the result of a close collaboration between the Psychology Department and the Computing Department, with Tom Ormerod and Linden Ball (Psychology) and Alan Dix and Corina Sas (Computing) forming the core team. More recently Imagination@Lancaster, the new design research centre, has become a major player in the course, adding a fresh perspective and approach.**

## By any other name

In fact the course started life as the MRes DEAIS – the Design and Evaluation of Advanced Interactive Systems. Now it doesn't take the most sophisticated knowledge of human perception and memory to realise this is quite a mouthful ... and is not what you instantly look up on Google when searching for a Masters course. We realised some years ago that this was a problem and indeed most of those taking the course had heard of it by word of mouth, not through any directories or searches. It took several more years before the course team got round to doing the paperwork to change the name. Of course we consulted current students and alumni, working our way through numerous creative and exciting names as well as the more obvious candidates: interaction design (too narrow), human-centred computing (sounded too old), until we settled on simply – HCI!

## What it is like

Like most UK Masters courses the MRes includes a number of taught modules and options during the first two terms with a dissertation starting after Easter. However, throughout the core elements of the course there is a strong focus on individual and group design exercises.

This begins in the first term. Having shared an intensive taught week of a general HCI course with other MSc students, the MRes students continue this in group exercises where they design some form of individual data gathering around a topic, including some coded or quantitative parts and some qualitative interview or observational data. They pool the quantitative data, then individually analyse and report on their own qualitative data in conjunction with the larger group data. In some years, the topic has had an industrial focus; in others it has fitted in with some research theme in the department, and sometimes it has given rise to published work.

However, the heart of the course is in the second term, where two-thirds of the time is spent on a Collaborative Design Project. In some years the briefs for this have been artificial, for instance when the topic was 'airport of the future', including a guided tour of Manchester Airport. In other years the topic is again related to some research theme, for example, application areas for VoodooIO (Pin&Play) technology.

## Industry links

It is expected that the majority of student dissertations are carried out in conjunction with external companies and organisations; these have included HP Labs, Sony-Ericsson, Bunnyfoot, the Jobcentre and Xerox (in the days of EuroPARC Cambridge). InfoLab21, which houses the Computing Department, also includes the Knowledge Business Centre, a collection of commercial hi-tech units. We have used contacts with companies there as the basis of student assignments, both for MRes students and undergraduates. Students have sometimes found themselves frustrated at the constraints of real business problems, but in the end it is a valuable lesson for them.

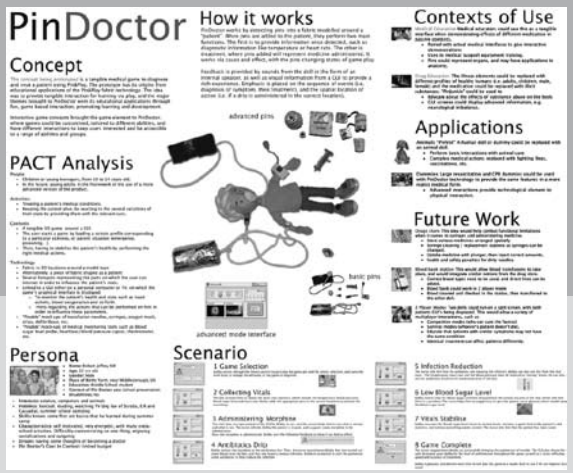
## Telling the world

The course has been very successful in producing student work of publishable quality, with several student projects each year being the basis of conference or journal papers; venues have included the British HCI conference, CHI and NordiCHI. Over the last few years, we have seen an exciting new trend with the publication of student work based on the smaller-scale projects from earlier parts of the course.

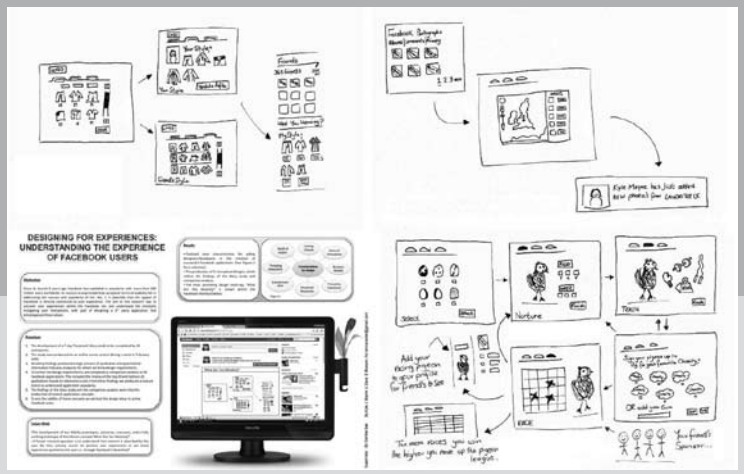
As well as the course being the source of research, it is also the subject of research, with innovative aspects of the course reported at HCI Educators and elsewhere.

## Getting about

Dissertation placements have taken the MRes-ers to different parts of the UK, from Glasgow to Cambridge to Bristol (and notably Warrington), as well as occasionally overseas (Rome and New Zealand). Presenting and student volunteering has taken others to Vienna, Crete, Boston and Sweden. This year Jennefer Hart (see her article in Interfaces 77) won the design-a-student-volunteer-T-shirt competition at CHI!




Collaborative Design Project: PinDoctor – an exploration of Pin&Play technology. Pascal Belouin, Genovefa Kefalidou and Zain Rizvi.




Collaborative Design Project: Engaging Facebook Applications. Kyle J Mayne and David Musson.

## Keeping in touch

From the very first cohort, the students organised their own Yahoo! group to keep in touch, and this became the way we as staff often communicated, in addition to (or neglect of) the official mailing lists. While the University has its own student learning support systems, the added informality of an externally hosted system may have strengths, and of course benefits from levels of development and support not possible on bespoke local systems. It is becoming common now to hear of courses using Twitter or Facebook and this does seem to lend some of the same feeling as having a seminar in a coffee bar as opposed to an office ... and you guessed it, yes, we have done that as well.

Perhaps most exciting was the way past students then decided to maintain their contact through a second 'xres' Yahoo! group. Nowadays Facebook is rendering this nearly obsolete, but in the days before ubiquitous social networking (were there such days!) this fulfilled the same function.

## When the course is over

Around half the students continue on to PhDs and the other half into various usability-related posts, such as user experience and interaction design, and consultancy. Some students have taken jobs where they did their dissertation work, for example at Sony-Ericsson in Warrington. Many of the students are themselves active members of the HCI community. Those with similar courses will know how exciting it is when we spot a paper by an ex-Mres-er, or hear one presenting at a conference; not to mention editing Interfaces!

## Those who teach together

The astute reader might have noticed that the core course team for some years, Tom, Linden, Corina and Alan, were also the core organisers for the HCI 2007 conference at Lancaster. In addition, members of the team have written papers together and co-supervised PhD students. They also form the core of a cross-departmental seminar group on creativity and problem solving, and the Lancaster team for a recent EU Marie Curie Initial Training Network. This is no mere happenstance; with increasingly packed schedules it is hard enough to collaborate with the person in the next-door office, let alone someone in a different department. Being forced together by course meetings and exam boards provides an opportunity to discuss things beyond the course.

## The future

The collaboration with imagination@Lancaster is only in its first year. It will be exciting to see how this changes the dynamic of the course and, as this filters its way into prospectuses, we expect to see more students from a design background, increasing further the diversity of the cohorts.

Lancaster is also the lead partner in DESIRE, an EU ITN focused on scientific and technological creativity. The topics of DESIRE lie very close to the focus and ethos of the MRes and we expect to see the DESIRE researchers work alongside the MRes students in projects, and feed the outputs of DESIRE into innovative methods and tools we can use on the course.

## Lessons – what we learn

As noted, there are a number of publications about the course, mainly focused on the use of different forms of design brief during group projects. We encourage students not to think simply in terms of a traditional user-centred design lifecycle, but to recognise that sometimes solutions have to be technology led (what can we do with what we have got?), or business problem led, or driven by observing and analysing emerging phenomena – not least for Web 2.0.

But perhaps the most important feature of the course is the way the students learn from one another. We attract students from psychology and computing backgrounds, but also those with first degrees in creative arts, graphic design, music technology and even fashion. Some come straight from undergraduate courses, some after many years' industrial experience, some already usability designers, and one even a professional golfer. The mix of gender, culture and background creates a stimulating environment for them, and moreover for us as the 'teachers'. Maybe the sign of a successful course is precisely when the teacher learns.

## Web links

For a list of publications relating to the course see:
http:// www.hcibook.com/alan/papers/interfaces2009-mres/

For course details see:
http://www.comp.lancs.ac.uk/study/pg/hci/

For more on the DESIRE EU ITN:
http://www.comp.lancs.ac.uk/~corina/DESIRE/

Case study

# Teaching design in large heterogeneous classes

Sus Lundgren

*The first days of the project are spent misunderstanding each other, looking for common ground and a means of communication. This is like shock treatment, preparing the students for the diverse world of the interaction designer, which is one of the aims of the project.*

**Having just returned from the annual Human–Computer Interaction Educators Conference (HCIEd) in Dundee I've once again come to realise the very different conditions under which many HCI and interaction design teachers work. In many cases, but not all, interaction design is taught to small classes in a studio-based environment. Students are carefully selected, and are taught in small classes with a lot of one-to-one teaching. This is the case at the Masters course at the Royal College of Art, for example.**

In other situations, like at my own university, a Masters in interaction design is taught in larger classes, say 40–80 students, without studios but in labs where the students can leave their work overnight. In addition, students from a wide range of educational backgrounds are accepted; their key skills can be computing, cognition science, industrial design, ergonomics, graphic design, electrical engineering and almost anything in between. Large groups of students from different backgrounds are pretty much the norm for HCI courses too, from what I found at the conference, which raises some important questions:

> How can we deal with heterogeneous classes?
>
> How can we teach and assess design in large classes?
>
> How can we provide sufficient feedback to students in large classes?

Here, I will describe five years of work with a course called *Interaction Design of Graphical Interfaces*, a 7.5 ECTS-credit course spanning eight weeks, featuring roughly 60 students from diverse backgrounds each year; most of them (approximately 40) taking the course as a mandatory part of the interaction design master programme, and roughly one third of them being international students.

The reason that I got to develop and run the course was due to my four years of experience working professionally as a GUI designer and web designer. Although my answers, solutions and suggestions may not be perfect and may not fit every teacher or every course, they can at least serve as inspiration.

I have tried out three ways of dealing with heterogeneity. Two of these are based on a questionnaire handed out at the start of the first lesson. This questionnaire is designed to gauge the students' ethnic and educational background and most importantly what they want to learn on the course. The questionnaire also asks students to assess their skills in English (typically not their native tongue), programming, graphic design and project management.

I used the information from the questionnaire in two ways. Firstly, to find out what the students felt they were confident in, as well as what they wanted and needed to learn. This information was then used to skew course content to fit students' abilities and needs.

Secondly, the information from the questionnaire was used to create groups of four to five students. When creating the groups I aimed for each one to have at least one student skilled in programming, graphic design and project management respectively. In addition, I tried to mix educational backgrounds, have at least one (but preferably two) international students in each group, forcing every group to speak English, and lastly either a 50/50 gender mix or the same

A project group working with the task: to design an online interface for a communication-intense board game. Photo by Johan Peitz.

gender in the entire group. I have found it important not to tell the students that their answers in the questionnaire will be the basis for the creation of groups! This may sound strange, but if you do, some students answer in ways that they think will affect the role they are assigned in the groups, thus exaggerating one skill and understating another, which will give you the wrong impression of the class when adapting the content. Also, it is just as important never to tell the students which role they have in a group, e.g. "you are the programmer in this group", because this will impose roles on the students. It is better if they sort that out themselves.

I then let the groups work together for two to three weeks on a joint project. The rationale for this was that nothing I ever say or do as a teacher can inculcate the effects of culture clashes as much as a joint project can, and with different cultures I do mean educational backgrounds as well as nationalities. Many of the Swedish students are cocky, claiming that they have worked in project groups many times before, and they have, but only with their peers; computer scientists with computer scientists and so on. Thus, the first days of the project are spent misunderstanding each other, looking for common ground and a means of communication. This is like shock treatment, preparing the students for the diverse world of the interaction designer, which is one of the aims of the project. The second aim is covered after this first phase of confusion, when students start learning from each other. Now, heterogeneity is not an obstacle any more, but rather an *asset*. Again, students learn more from each other than I can teach them, and they learn what they need to learn. Graphic designers learn more about programming, programmers learn more about cognitive sciences and so on; all in the name of finishing the project on time and doing as well as possible.

Note that in the first years the groups needed to program a prototype, but I found that too much time was spent sorting out boring bugs, as opposed to learning something useful about GUI design, and to make things worse, the non-programmers couldn't contribute much. In the latest versions of the course I have left out the programming and demand only a mock-up or set of screen dumps plus a written rationale on how the GUI works. Although this depends on the course and students' skills, the main idea is still that everyone must be able to contribute more or less equally in terms of time and knowledge. In questionnaires from 2007 (the last time I ran the course) some 65% of the students stated that the project was very interesting and that there was much to learn from it. A study of each student's individual comments on what they learned from the project (submitted together with the project report) reveals that the obvious learning outcomes are related to working in groups, agreeing on design, the need for rapid prototyping, and that one needs to take great care when creating even the smallest graphical detail. Regardless of the course, the first two learning outcomes would occur in any design project featuring heterogeneous groups.

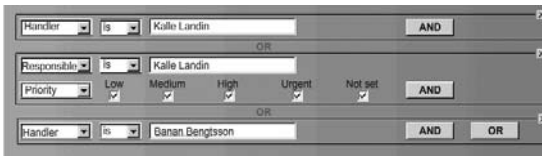
Thirdly, the course consisted of five design exercises. Again, writing design exercises for 60 students with different backgrounds can be quite hard; they are too easy for some, too hard for others. My solution for this was to provide two versions of each exercise, one easier, one harder, or one oriented towards graphic design and one oriented towards programming. Since exercises were not graded, students could

*How can we deal with heterogeneous classes?*

*How can we teach and assess design in large classes?*

*How can we provide sufficient feedback to students in large classes?*

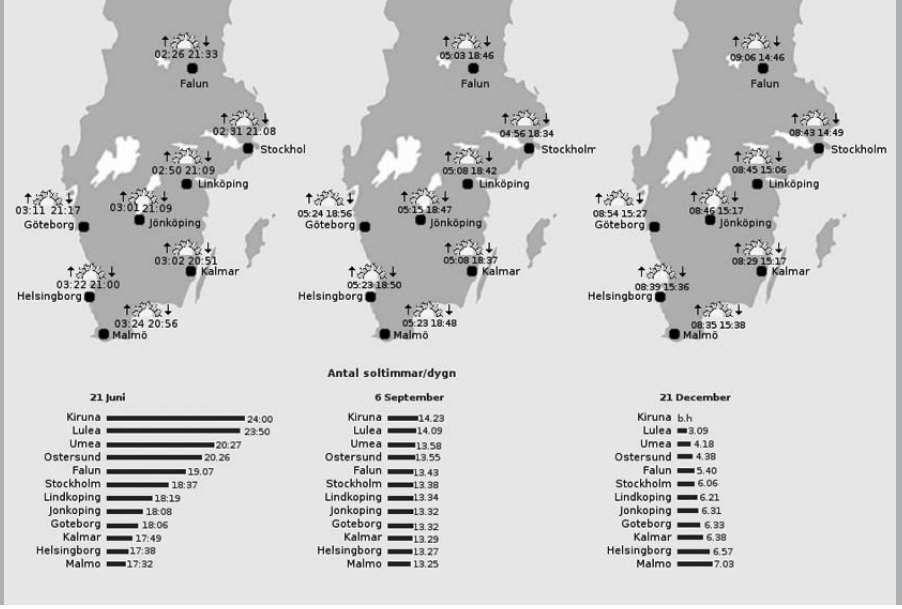

Part of a design project on information visualization (graphic design-oriented), designed by Anders Berghe.




Part of a design project on search interface design (programmer-oriented), designed by Kalle Landin.

# Case study

Sus Lundgren

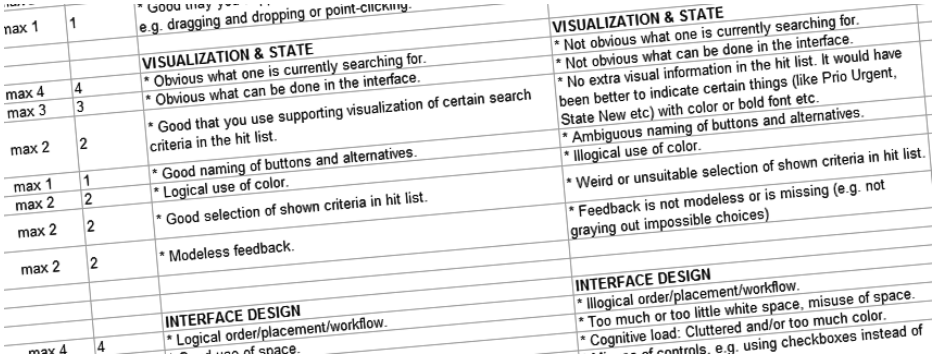



Information visualization: Times for sunrise and sunset in 13 different cities at three dates, designed by Nick Mirzai and Stefan Norberg.

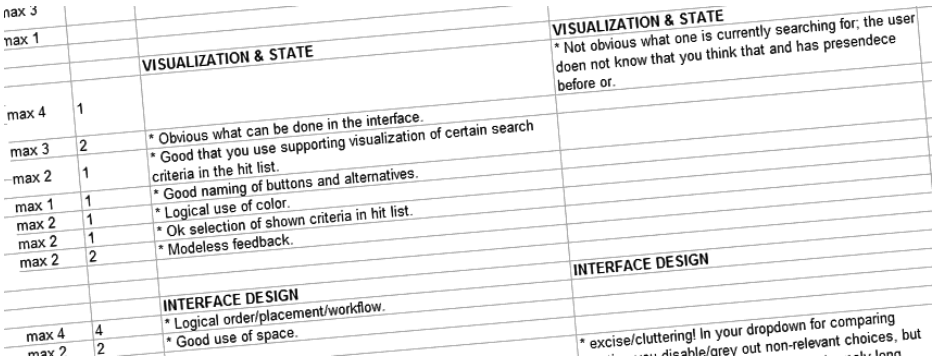
choose the exercise that fit them best, or they could challenge themselves with the harder exercise without fearing that this would affect their grade. Or – they could just choose the exercise that seemed to be the most fun; this also improves learning!

Students were working in pairs, again with the main rationale that they learn from and with each other. But even if students work in pairs, there were still some 30 pairs handing in work; how could I efficiently give feedback? I did not! That is, I supervised throughout the exercise (typically a three-hour and four cups of coffee long session!) and made sure that I talked to each group at least once, mostly twice, at different stages in their design process, but I could not give all groups feedback on their final designs. Instead, the students were asked to join another group (preferably one that had done the other task) and give each other feedback. In this way all the students received feedback and got experience in critiquing work too. Arguably, they were not very skilled in giving constructive feedback at this point, but practice makes perfect, and I also backed this up by selecting five to ten "interesting" designs which I discussed in class at the end of next lesson. This works, because typically each design problem has some two to four general solutions. By discussing them in class I could demonstrate that there are different solutions (not obvious to all students!) and we could talk about the strengths and weaknesses of each type of solution. Thus, even if students did not get explicit feedback on their own final design they at least got general feedback on the solution they applied. Accordingly, some 60% of the students in 2007 found the exercises to be one of the things they learned the most from in the course.

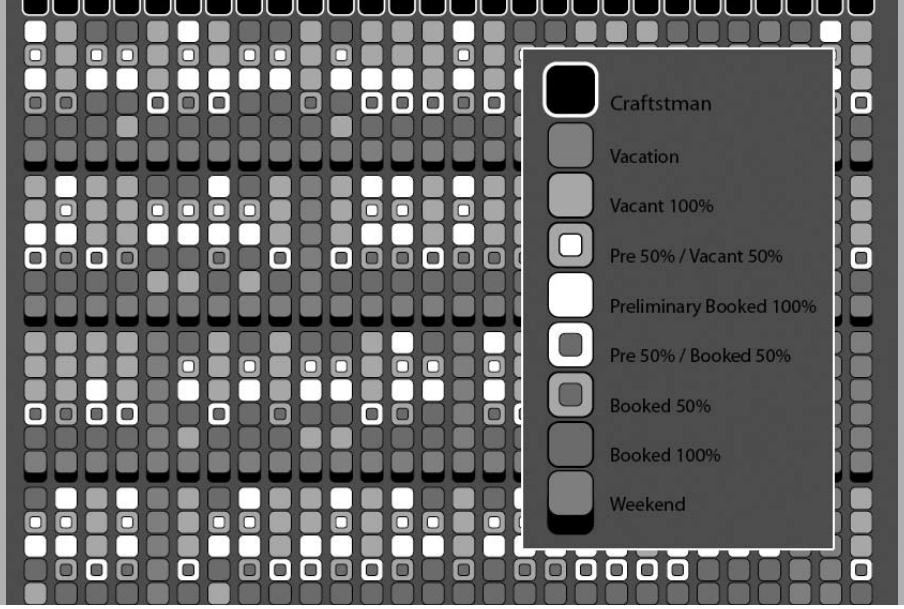
Although a large part of the course work consisted of exercises and projects – I strongly believe in a practical approach; how can students become designers if we don't let them design? – there was one written exam. Some 40 questions are handed out beforehand to indicate what the students should focus on when reading the literature; students very much appreciate this. In order to minimise marking time, their knowledge was assessed in a multiple choice test where 10 of these questions occur. However, I have added a twist to the standard multiple choice test. As usual each question has three possible answers but unlike the average multiple choice test it is not always one and only one answer that is right. Instead, there are 15 correct answers (out of 30) which are unevenly distributed among the questions, so that one question may have one, two, three or zero correct answers. Thus the task for the students is to find the correct answers regardless of where they are. Marking a wrong answer results in minus points, which is a tool to avoid guessing. Using this technique rather than the average one-correct-answer-per-question assured that students were less likely to *guess* the correct answer, i.e. it resulted in a more correct assessment of their




The grading template for a GUI design project.




The same grading template, as applied to a student's project. The non-relevant comments are cut out and the rest compiled to a list of positive and negative feedback.




Information visualisation: Manning calendar designed by John Beijar and Rasmus Palmqvist

theoretical knowledge. Arguably, some students gambled, and guessed anyway, aiming for a full score, but still I think that this version is an improvement on the normal multiple choice test, keeping the advantage of being very fast to grade. Students neither particularly liked or disliked this part of the course, but it made them learn the most important theoretical parts, which was the aim of the test.

As described above, the first project was a group project, which from a marking perspective brings down grading from 60 students to 15 groups instead. However, there had to be at least one individual project in the course, as a basis for individual grades. Again, I provided two projects to choose from, with foci on programming skills (or rather a programmer's way of thinking) and graphic design respectively.

The result was of course some 60 design projects that needed to be graded. In order to speed up the process and be able to give detailed feedback without much extra effort, I have developed grading templates. Each template consists of one column, entitled "Good" for collecting positive comments and one column entitled "Missing or could be improved" with the corresponding negative comment, e.g. *Calm, non-disturbing interface* versus *Cognitive load: cluttered and/or too many colours*. When grading, the non-relevant comments are simply cut out, and the remaining comments are compiled to a list and sent as feedback, ensuring that each student gets a page of detailed written feedback, both positive and negative/constructive. Every positive comment is also worth a certain number of points (displayed in yet another column), but these are never shown to the student; they are just an instrument to support fair grading. For me, this approach has speeded up the process of marking and giving feedback from approximately 75 minutes per student to 45–50 minutes per student.

To conclude, the answers to the questions above can be summarised as:

> Embrace diversity by letting students learn from and teach each other in group projects, and provide different types of exercises and projects to accommodate students with different backgrounds. Find out students' strengths and weaknesses at the beginning of the course in order to skew it towards what the majority wants or needs.
>
> Do not fear the practical exam, at least not if you are the kind of person who can quite easily assess a design. With a decent grading template, the average one-week practical project can be assessed in an hour.
>
> Give feedback via grading templates or discuss general design solutions in class.

Does this work? Do students like it? Well, on a 1–5 scale, 5 being the best, the sixty students of 2005 and 2006 gave it the grade 4.3. In 2007 (the version described above), and after some fine-tuning (most notably more exercise feedback in lectures), the grade was 4.4. Of course the high grade could depend on other things as well, e.g. the exercises and projects being well thought out and fitting the course *per se*, etc., but I still think that the above ideas are worth trying out. Please do, and let me know how it went!

*Embrace diversity by letting students learn from and teach each other in group projects, and provide different types of exercises and projects to accommodate students with different backgrounds. Find out students' strengths and weaknesses at the beginning of the course in order to skew it towards what the majority wants or needs.*

*Do not fear the practical exam, at least not if you are the kind of person who can quite easily assess a design. With a decent grading template, the average one-week practical project can be assessed in an hour.*

*Give feedback via grading templates or discuss general design solutions in class.*

# Can short courses really create lifelong learning?

David Travis

**When I sat down to write an article providing "the industry perspective" on usability and HCI training, I quickly realised that my view was hardly representative. In situations like this, I teach people to put down their mouse and speak to users, so taking my own medicine I contacted some organisations who had taken training from us in the past year to get their perspective on the benefits and weaknesses of short courses. I spoke with people at a range of companies, from large companies like RBS and Orange, to agencies like AbilityNet and Designate. I spoke with companies like Sage and Red Gate Software, for whom software is a business, and to organisations like RNIB who see accessible software as key to helping end the isolation caused by sight loss.**

**Here's what I discovered.**

## Benefits of short courses

### Short courses provide a shared language

Most design teams these days are multi-disciplinary, and some members of the team may have only a superficial understanding of the field. This means team members rarely have a common language for talking about users and their tasks. A short course in usability provides a kind of Esperanto, giving people a shared way of communicating and helping them follow consistent processes. "Training helps us ensure everyone works to a similar level, a similar standard," says human factors specialist Shaun Leamon at the RNIB. "It helps maintain continuity across RNIB and I think that's a key benefit that comes from these sorts of training courses."

### Short courses teach practical skills that people can use immediately

People attend a short course to learn a specific skill that they can apply on the job. Jason Till is Digital Production Director at the design agency Designate. "Immediately after we had the training, the next few briefs we worked on were a lot simpler because people from different sections of the digital team who had a different approach — maybe a developer and a designer — could work together," he says. "They could get in a room and do some rapid paper prototyping and feel empowered by understanding a few key principles. It became less of a relay race and it became more collaborative and agile immediately."

### Short courses enthuse the team

Getting the design team together fires people up and creates an enthusiasm for the topic. Kath Moonan, Senior Accessibility and Usability Consultant at AbilityNet says, "We're a really busy team with lots of demands on our time so it was really good for us all to spend the day together. We don't do that very often." In larger organisations, team sessions like this also help break down barriers that exist between (for example) those who do coding and those that design the user interface.

### Short courses help institutionalise usability

Because their company has invested in a 1-day or 2-day training session, short courses give delegates the 'permission' they sometimes need to start practising user-centred techniques. This helps generate bottom-up change. Carmel Kammeier is Principal Usability Specialist at business software company Sage. "After attending the course, one of the trainees put forward a completely new process for the team to adopt, starting with contextual inquiry," she says. "He's now done 12 site visits and is managing to reshape the process." Neil Davidson, joint CEO of Cambridge-based Red Gate Software tells a similar story: "One of our developers didn't see the point at all of usability. He thought his first application was brilliant but everyone else thought it was absolutely horrendous and it got torn to shreds in usability testing. Now he's at the opposite side of the spectrum. Now he's the person who will tear into other people if stuff isn't well designed, or if it isn't usable."

### Short courses challenge egocentrism

An important 'teachable moment' in any usability course is when people appreciate they have been designing for themselves rather than end users. Neil Davidson points out, "The people coming to us have first class degrees in computer science from Cambridge but when they join they don't know anything about developing software that people will enjoy using or even can use. So the thing that we're trying to impress on them is that they aren't the user." Jill Berryman, a Business Analyst at Orange, describes the power of personas in challenging this view: "People leave university with experience or exposure to one or two views and they feel that their own view is the right one. They probably haven't met the 55-year-old with arthritic hands so they need that picture of them on their wall to remind them that they're not designing for themselves." Alan Connor is Intranet Communications Manager at RBS. "In the past," he says, "the focus of our intranet design was very much about, 'What kind of interface does the CEO want?' Since the training, people are saying, 'Well my boss isn't my key customer, my key customer is the person who's going to be using

the Intranet: what does he or she want?' Now they have in their mind a picture of this key person we're designing for."

**Short courses keep staff up to date and encourage them to find out more**

There is a popular presentation on SlideShare titled "Shift Happens", which contains the memorable quotation: "We are currently preparing students for jobs that don't yet exist, using technologies that haven't been invented, in order to solve problems we don't even know are problems yet." The point is that technology moves so fast that concepts we learnt only a few years ago are already out of date. Short training courses provide signposts to other resources and put people on the path of lifelong learning in the area. Neil Davidson says, "I see the role of the short courses as opening people's eyes, demonstrating that there is a problem and teaching them that there is a fix — and then letting them run with that. So the point of a short course is to get people interested in usability and then encourage them to subscribe to blogs, read books, watch videos online or attend seminars."

**Short courses are...well...short**

People like the short, intensive nature of 1-day and 2-day training courses, especially when it's in-house. "The advantage of short courses for companies like ours," says Carmel Kammeier, "is that a two-day course is very cost effective. When we take people off projects for longer, say four days, a lot more teams will allocate people to the training and then, as we get near a deadline, will cancel. So 2 days is a good length." Similarly, Kath Moonan is a big fan of short courses because, "By the time you get to the end of the day or two days I think your brain's taken in about as much as it can. I think the next step is to process what you've learnt. So the kind of industry training that I'm in favour of is to do incremental steps over a period of time and then take time to put into practice what you've learnt."

## Limitations of short courses

**It's hard to consolidate skills learnt**

Nowadays, most training companies encourage people to practise the material during the course itself. But this isn't enough. "If you go into a training course and then you come out and then you don't use that stuff in your job then it's never going to happen," says Neil Davidson. Alan Connor suggests a new type of training: "I think what could be helpful for companies like RBS is to do 'contextual' training, for example 16 hours of training spread over 3 months. The trainer could spend some of his time here every week and say, 'OK we're going to try to do a card sort within the next two weeks with some of your users'. So it's like live, on-site training."

**Delegates need on-going support**

Delegates aren't always sure where they can compromise on user-centred design and tailor it to their situation. "It's just a confidence thing," says Carmel Kammeier. "People need someone they can turn to and say, 'I'm going to take a pragmatic approach to this and cut these corners, is it going to be all right?' In fact, what they're actually doing is great, they simply need someone to keep them on the right track and perhaps provide them with feedback".

**Delegates need more flexibility in the way training is delivered**

Notwithstanding the benefits of getting the team together in one room, some people need online or distance learning so they can really get into a topic in depth. This may be an opportunity for universities to work with industry. "What educational establishments should be doing," says Jason Till, "is actually looking at deploying some of the technology to help people engage with distance learning, to deliver courses that help people design."

## The first step on a journey

Organisations like the ones I've worked with over the last year increasingly see the value of usability within their organisation and see short courses as one of the more practical ways of building those skills in house. But running a training course is only the first step on a journey. Training companies need to work more closely with their clients to help delegates transfer their new skills to their day-to-day job. This means more than creating a learning contract or an action plan at the end of the course. Providing follow-up resources and running activities like refresher training may go some way to help. Ironically, the real strength of the "short" course may turn out to be keeping delegates in a continuous state of training, increasing the likelihood that new skills are fully embedded in the organisation.

## Acknowledgements

Thanks to my interviewees for sparing the time to talk to me: Jill Berryman (Orange), Alan Connor (RBS), Neil Davidson (Red Gate Software), Carmel Kammeier (Sage UK), Shaun Leamon (RNIB), Kath Moonan (AbilityNet) and Jason Till (Designate).

# Practical Interaction Design

Phil Turner and Susan Turner
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**Practical Interaction Design (PID) is a method for teaching interaction design. It incorporates elements of 'pure' interaction design and human–computer interaction (HCI) to convey some of the playful flavour of the former with the tool-rich practicality of the latter. PID is distinguished from (traditional) HCI in many ways, but it is with respect to what it does not address that the differences are most pronounced. PID is not explicitly user centred: there is no place for cognitive psychology *per se*; nor the modelling of tasks; nor accounting for (that glaring category error) context. Instead there are roles for a Heideggerian treatment of familiarity, ideation and for personae and a series of 'conversations' between designer and digital media and between designer and client.**

Since its inception HCI has been primarily concerned with designing interactive artefacts which are usable by specialist and non-specialist alike, through the application of human psychology and the adoption of user-centred design (UCD). But with the advent of the Apple iPod™, the world is changed. The defining characteristic of the iPod is not usability but desirability and design *chic*. The iPod, the Nintendo Wii and the Sony Aibo are typical of the new generation of interactive artefacts which are not the product of traditional HCI but of the emerging discipline of interaction design; artefacts which we not only use in our everyday lives but with which we co-exist. This is design for *Homo Ludens*.

All of this has profound consequences for how we think about, approach and teach our discipline. Is it appropriate to teach the iPod-generation about task analysis or user-centred design when their world is filled with 'designer' consumer electronics? PID is a practical (*sic*) approach to the teaching of interaction design starting with the design brief, the designer's familiarity with the world (cf. Heidegger), personae-based design, and really early prototyping. Thereafter, following Schön's conception of the design process (1996) a series of conversations are conducted between the designer and the design (the digital artefact) and between the designer and the client which concern the iterative improvement of the design. The method is also playful. As Coyne (2003) observes, such design moves are intrinsically repetitive, and repetition is perhaps the most fundamental element of play.

## Foundations

The three key foundations of Practical Interaction Design are:

1 *The initial design based on the twin elements of the designer's familiarity with the world and technology and the client's brief.* The brief may be as loosely defined as 'a new application for the iPhone' (the coursework in the first delivery of the PID module) or a tightly specified set of requirements. The designer's task is to understand what is wanted, using their own familiarity with the world and the technology it comprises. The world is both filled with and defined by technology: technology with which we have been familiar from our earliest moments. Our familiarity with interactive technology facilitates our ability to cope with it, and in coping with it we modify and improve our familiarity with it. Students draw on their familiarity with interactive technology to make sense of the brief and to ground that understanding in what technology can do. This phase of PID culminates in the generation of initial ideas. Familiarity with the technology and setting of a specific design project is also expected to be extended and enhanced through the use of ethnography.

2 *The profile of the people being designed for, expressed as personae.* Having established an initial understanding of *what* is to be designed it is only now that *who* is being designed for is brought into consideration. Personae are introduced as lively, realistic, embodiments of target users. Established HCI 'user' research techniques and the tools of design ethnography are taught as supporting activities for persona development. As students gather data and define personae for their emerging design they are supported in the identification of design implications and consequent modifications. The project, however, remains design-led rather than user-driven.

3 *Based on (1) and (2), the development of a very early prototype.* Turning initial ideas into something tangible is the pivotal step.

# *Is it appropriate to teach the iPod-generation about task analysis or user-centred design when their world is filled with 'designer' consumer electronics?*

The sooner the designer commits to paper or software the sooner can the process of iterative refinement begin. In PID students start with paper prototypes and move on to embody their designs as simple software applications. Crucially, design features are not defined in response to 'user needs' or 'tasks' but as affordances offered to those who will interact with the artefact. If we think about interaction as identifying and exploiting affordances, what follows is a game-like, exploratory approach which is closer to the aims of interaction design. The process is not only playful in its repetitive nature, as observed above, but also in its oscillation between the security of the familiar and the risk of the new. This is the very essence of earliest childhood games, as explored in Freud's classic account (1990), and persists through much adult play.

## Conversations

The affordances offered by the artefact are refined through a series of conversations. It is emphasised that the emerging design is already usable, accessible and pleasing to some degree: the goal now is to determine and enhance these qualities. In the initial run of the module, the subject of the first in this trio of conversations was usability evaluation. Since this is a designer-driven development, it is heuristic evaluation rather than user testing which is employed. Students evaluate each others' prototypes against an established set of usability principles and with reference to the personae documented earlier. A similar process interrogates the design against accessibility guidelines. The final conversation concerns aesthetic appeal. The theoretical basis of the aesthetics of interactive technologies is a matter of debate, and well-documented means of evaluating aesthetic quality are correspondingly rare. In this instance, the aesthetics conversation was informed by Jordan's *Pleasure with Products* instrument (2000).

At the conclusion of this set of conversations a usable, accessible and aesthetically pleasing design has been defined. This can now be documented as the basis of a renewed conversation with the client – in this case the module tutors. It is in this conversation, rather than in the exploration of early design ideas, that scenarios, detailed sketches and story-boards come to the fore as communications media, together with the personae documented earlier. For a fuller discussion of the method please see Turner and Turner (2009).

## Does it work?

The Practical Interaction Design model translates well into a module which the first author and colleagues have now successfully delivered. The design-led approach has been found sympathetic by students with an art, design or media background, while others with a more technological bent have still found the process stimulating. It has been feasible to teach in groups of around 25 rather than requiring a significant amount of studio-style teaching, save for a small-group '*Design Crit*'. Pass-rates provide another indication of success

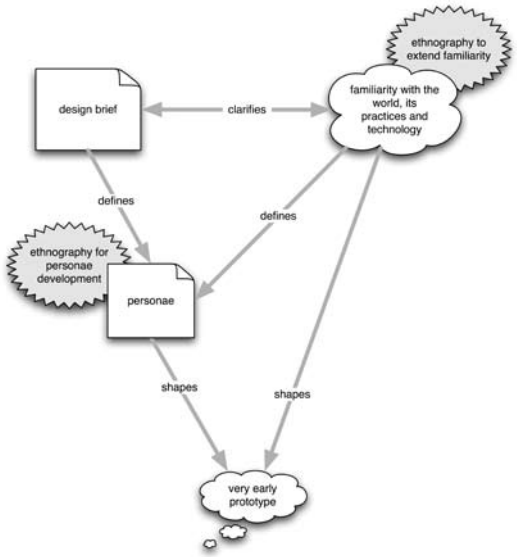


**Figure 1** The foundations of Practical Interaction Design

with around one-quarter of the students recording marks of better than 70%.

Experience of this delivery suggests that paper prototyping does not engage all students and in the next delivery, simple sketching will be more prominent at this stage. As for the conversations, usability and accessibility would be better combined, while other conversations will be added – including, for example, legality, sustainability and support for cooperation or sharing.

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My PhD

# Busy moms and their baby stories in social space

Nazean Jomhari

## Introduction

### Being a mother and a PhD student

Being a wife, a mother of three children and doing a PhD at the same time is tough for me. I spend most of my time doing research work from home so a broadband connection is a must. The Internet is part of my life: besides using it for research, I also use it for socialising. The greatest challenge for me is that my eldest son was diagnosed as autistic in August 2008, which means our life is full of appointments with speech therapists, family psychiatrists, optometrists, paediatricians or teachers. In addition, I am still breastfeeding my youngest daughter. What has kept me going in this research against all odds is the support of my husband, and other family members who are willing to come to the UK to help. Usually I do my research work while my children are at school, or in bed. I recommend that any PhD student who is breastfeeding their baby use a mobile phone with a QWERTY keyboard, which can connect to Wi-Fi networks, and has a virtually full web browser. The QWERTY keyboard helps me to type faster if an idea comes to me while breastfeeding my baby; later I transfer it to my laptop. Moreover you can still lie down on your bed and browse the Internet or check your email from your mobile phone. This small device really helps me to keep going with my PhD research. The Internet is also a suitable 'place' for mothers to socialise with friends or family members while their children are safely at home.

## My research

My research is concerned with extended families in Malaysia for whom face-to-face meetings would be prohibitively expensive and synchronous communication (telephone or video conferencing) quite difficult due to the seven to eight hour time difference between the UK and Malaysia. My research title is: *Facilitating communication between Malaysian young mothers living in the UK and their family through computer-mediated communication (CMC)*. An article by Nardi (2004) shows that people use blogging web sites to document their lives and those of their children to maintain and strengthen social ties with people living away.

I still remember my mindset at the beginning of my PhD when I wanted to develop a system. However, I realised that I was totally wrong when I participated in the doctorial consortium (DC) at BSC-HCI in Lancaster in 2007. The panels gave the valuable advice that 'developing a system is not research'; I needed to come up with the research element of the project, not just the development of a new interface. Two major questions were asked. First, 'What is the relationship with your content analysis and the interface design?' and second, 'Is the social space a very good example for that purpose?'. The next two subsections will discuss the answers.

### Content analysis and interface design

At that DC, my research topic was *Facilitating communication between grandparents and grandchildren using computer-mediated-communication (CMC)*. After interviewing the participants, however, I found that the majority of Malaysian grandparents are novice computer users and use computers with the help of other family members, who act as gatekeepers for CMC. Although the title has changed, the scope is still long-distance family relationships and CMC.

Our research is based in Greater Manchester, UK, where 16 Malaysian young mothers aged 25 to 34 years old, from the Malaysian Community of Cheetham Hill (MCCH), volunteered to participate in the study. The majority are studying in Manchester. We found that among the 16 participants, nine posted digital content on media-sharing web sites regularly. Five participants used Fotopages, two used Blogspot (linked with Picasa for image storage) and two used Flickr. Two also uploaded their baby videos on YouTube. Generally the entire group of participants updated their social space at least twice a month. The total number of baby stories analysed was 150, which made up 94% of the stories.

Consequently I would develop a framework for interface design to facilitate communication between the young mothers and their families back in Malaysia. The communication is focused on their baby stories regardless of the media used (text, photo or video). Bengtson's framework (2001) has been used to understand family relationships. This model emphasises that nuclear families need other family members, such as grandparents, uncles, aunts or cousins, for emotional and physical support.

### Why social space?

The content analysis shows us that young mothers like to share stories about their child online. They also shared stories, especially photos, on social networking sites such as Friendster and Facebook, but we decided not to analyse their social networking sites as our focus is on tools that are comparable (Blogger, Flickr, YouTube). Besides, from the interviews we realised that most of them use the social networking sites mainly to keep in touch with old school friends, instead of family.

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Narratives of everyday experiences are said to be relevant in keeping families living apart emotionally connected. For instance, Frohlich et al.'s study (2002) of photo-sharing practices reveals how photos enhance conversations among distant relatives, providing the means to keep them aware of children's development. Although not extensively tested, a number of systems have been proposed to support narrative and storytelling creation with the purpose of connecting distant families with no co-located audiences (2006). It is clear that people can and like to create narratives as a form of expression. So a clear understanding of the role played by different media and tools in the creation of those narratives, as well as the nature of storytelling of children's lives, is needed. Two narrative analysis frameworks by Labov and Waletzky (2003) and Ochs (2002) have been used to understand narrative.

### Media Richness Theory

Each of the tools (Blogger, Flickr and YouTube) has a unique communication task in reporting a baby's story. Media Richness Theory proposes that the use of media is dependent on the task. For example, to show that a baby can walk, video could be a suitable medium. The high or low richness of a medium depends on four criteria: feedback, multiple cues, language variety, and personal focus as proposed by Daft and Lengel (1984). There are three main theories that could be used to help to create the Interface Design Framework for this research (see Figure 1).

The primary purpose of computer interface design is to assist users in their activities. To accomplish this, users need to be able to work through the interface to complete tasks that achieve the goals associated with an activity. Although this is the conceptual province of psychology, very little use has been made of psychology in practical interface design. My attempt is to understand the nature of long distance family relationship and the activity they usually did with family using CMC.

## Future work

Two activities were carried out to understand the use of the media (text, picture and video): first, to study its use in existing social space; secondly, to instruct participants to work on baby narrative exercises using specific tools: Blogger (text story),Flickr (picture story) and YouTube (video story). For each exercise, a family member in Malaysia who acted as the receiver of the baby story was asked to check the narratives and answer an online questionnaire to explore their feelings after reading the stories. All the data have been collected and I am in the stage of analysing, reporting the results and developing the framework.

### Acknowledgement

I would like to thank my supervisor, Dr Victor M. Gonzalez, who is also the father of a baby and is very supportive and understanding about my situation. Not forgetting my former supervisor Dr. Sri Hastuti Kurniawan, who supports me from a distance.

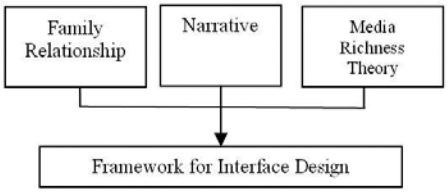


**Figure 1** The three main theories that will lead to the Interface Design Framework

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### My PhD

If you are a PhD student just itching to tell the world about your research or if you've enjoyed reading about some of the emerging areas of research that the My Phd column has recently discussed then we would like to hear from you. We are currently accepting one to two page summaries from PhD students in the UK and across Europe with a focus on being open and accessible to everyone in the HCI community.

If you would like to submit or would just like more information please contact either Stephen Hassard or Eduardo Calvillo using the contact information contained below.

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Profile

# Anthony Dunne

talks to Jennefer Hart

Anthony Dunne is Professor and Head of the Design Interactions Department at the Royal College of Art in London. He studied Industrial Design at the RCA before working at Sony Design in Tokyo. On returning to London he completed a PhD in Computer Related Design at the RCA. He was a founding member of the CRD Research Studio where he worked as a Senior Research Fellow leading EU and industry funded research projects. Anthony was awarded the Sir Misha Black Award for Innovation in Design Education in 2009.
www.design-interactions.rca.ac.uk

**Do you consider there is a difference between '*Design Interaction*' and '*Interaction Design*'?**

I think originally the interesting thing about interaction design was the emphasis on designing interactions rather than things. We changed the name of the department around to emphasise this. But by changing the name we also hoped to decouple interaction design, as a design approach, from purely digital and electronic technologies, and to allow it to continue to mutate and evolve in relation to design challenges created by a whole range of other technologies like bio- and nanotech as well as new social and cultural developments.

Our intention is to broaden the technological focus of the department so that new design contexts, methods and roles can begin to emerge, and possibly even provide new perspectives on how we design for digital technologies.

Within the Interaction Design education spectrum we are definitely at the more experimental end of the scale; we place less emphasis on technical skills and more on skills for exploring technology and its relationship to people in very broad social, cultural and even political contexts.

We're more interested in technological implications than applications, in looking ahead and imagining, through concrete design proposals, what the impact of particular technologies might be on our daily lives.

**Your work has focused on electronic products; is that because you believe that nanotechnology and biotechnology are going to have the most impact on our everyday lives in the future?**

We work across a number of areas for different reasons. Furniture allows us to explore subtle psychological themes through relatively low cost prototypes, electronics means we can prototype and test ideas about aesthetics and poetics in relation to electronic products, and areas like bio- and nanotechnology allow us to speculate on future possibilities through video scenarios and work with experts in other fields like ethics and futurology. Each of these areas requires different design roles, contexts and methods, which makes for a very interesting mix.

I think it would be a great shame if designers stayed on the margins while these technologies begin to shape the world around us. The time it takes for science to turn into technology and then products is speeding up. There is no comparison with the trajectory electronics took so we need to start getting involved now and exploring what impact these new technologies will have on our lives.

**Some of your work acts as highly emotive cultural probes. For example the Evidence Dolls (*plastic dolls were used to provoke discussion among single women about the impact of genetic technology on their lifestyle*). These became highly successful art exhibits in their own right. Do you think that they are a useful research method used to inform design?**

Yes, definitely. In a new project we've just begun, we're developing a number of products/probes to faciliate discussions with experts (rather than members of the public), about interactions between technology, politics and everyday life. They are provocative tools directed at political scientists, ethicists, lawyers, and scientists. We want to explore existing and possible social, legal and political mechanisms for allowing and preventing technologies to enter everyday.

**Do you think that functionality, aesthetics and ease of use are important aspects within design?**

Absolutely. But it depends on what you are designing. There's a world of difference between the interface for a machine or piece of medical equipment and something designed to encourage reflection. I think aesthetics is undervalued and neglected. I don't mean prettiness, or style, that's not too hard to achieve, but creating something that resonates with people in a deeply meaningful way.

**How do you inspire and encourage creativity within your students? If possible give some examples?**

We are very lucky that most of our students are already very creative. The big challenge for us is encouraging them to use their creativity to be original and imaginative. It takes guts to be original. Truly original work is often dismissed as weird, too difficult to get, or pointless, which are not easy things to deal with. I think this is even more so today with the sort of group mind that web 2.0 encourages.

So our first job is to help them become curious and to discover obsessions, that's the vehicle that allows people to carry on regardless of what obstacles they encounter. Then we need to find where the fruit of these obsessions can make a contribution. Underpinning all of this is a need to be



comfortable with risk-taking and having a positive attitude to the possibility of failure.

We hope they leave the RCA with a sort of internal compass that will guide them through all the distractions professional life is sure to throw at them.

**What is your idea of creativity? How best can this be enhanced through design practice?**

Creativity is different from playing around, it's hard work and needs to be nurtured, refined and applied; it has its own internal logic. There is a lot to be learnt from the fine arts where subjectivity, instinct and intuition are highly valued. They are obviously difficult things to justify but if industry wants genuine creativity then it needs to learn to accept what can seem like non rational and non objective ways of finding and developing ideas.

**What do you consider to be the most important skills needed to become a designer?**

I think qualities are more important than skills – rigour, imagination, tangibility and relevance. Within each of these there are skills that need to be developed but they vary from person to person and situation to situation. To make things tangible for instance, which I believe is one of the most important skills for a designer, might require excellent making skills in a number of different areas (a craft approach), or it could come down to project management and art direction skills – an ability to harness the making skills of others (the architect/film director approach). Most important of all is fostering an entrepreneurial spirit and an ability to get people on board and things done – to have an impact.

## Now some questions about you

**What really motivates or inspires you?**

The buzz from finding something new motivates and ideas inspire me

**Which living or historical person/s do you most admire?**

J G Ballard, for lots of reasons

**What is your idea of happiness?**

Being worry free

**What (if any) objects do you always carry around with you?**

A compass – I have no sense of direction whatsoever and I'm always getting lost

**What was your favourite childhood toy?**

My dad was a carpenter and made me toys each Christmas when I was a child, then one year he gave me a band saw so I could make my own; many favourites came from that particular gift.

**What is your most treasured possession?**

I treasure moments over things and there are too many to list

**What is your greatest extravagance?**

My bicycle, it's far nicer than it needs to be

**What or who is the greatest love of your life?**

Fiona

**When and where were you happiest?**

Happiness comes and goes each day

**What is your greatest regret?**

No big regrets yet

**What is your favourite journey?**

Any journey though landscapes that make you feel tiny and insignificant. The harsher and bleaker the better.

**What is your favourite word?**

The Japanese word Shashinki. Shashin means picture and Ki means machine. It's been replaced by Camera now.

**Who or what has influenced you the most in your life so far?**

Growing up in the Irish countryside, studying and working at the RCA, and living in Tokyo have all had a huge influence, but probably the biggest impact has been from people we met during the three years we lived in Japan.

**What has been the most innovative book you have read lately?**

*Sum* by David Eagleman. He imagines the afterlife in 40 different ways. He's also a neuroscientist so there are some very interesting insights and ideas in there.

**What is your favourite building?**

Where I live, in East London, we built it from scratch. It's compact but perfect. Just enough room for two people to live, work, think and dream.

**How do you relax?**

I wish I could. Cycling, music, reading, dinner with close friends and family all help though.

**Where in the world is your idea of paradise?**

Where I am is pretty good, I just wish I could un-invent email.

**What is your favourite piece of music?**

It depends on mood and situation. But I really enjoy electronic music, of all kinds, from the very first 20c experiments to the latest pop trend.

**What makes you feel most sad?**

Intolerance – religious, ideological, cultural…

**Which trait do you most deplore in yourself and others?**

In me – worrying too much… In others – greed.

# Interfaces reviews

Shailey Minocha

We have two book reviews for you in this edition of Interfaces. For this special issue of Interfaces on HCI and Education, we have reviewed a book which could be a useful resource for teaching and learning HCI through case studies or stories: *User-centered Design Stories: Real-world UCD Case Studies*, edited by Carol Righi and Janice James. The second book has an excellent set of essays on various aspects of game experience: *Game Usability: Advice from the experts for advancing the player experience*, by Katherine Isbister and Noah Schaffer. With an increasing interest and adoption of games and 3D virtual worlds (e.g. Second Life) in teaching and learning, this book would be of interest to both educators and practitioners.

**I hope you enjoy the reviews and find them useful. Please contact me if you want to review a book, or have come across a book that you think should be reviewed, or if you have published a book yourself recently. I very much look forward to your comments, ideas and contributions. If you would like Interfaces to include reviews on a particular theme or domain, then please also let me know. Many thanks.**

**Shailey Minocha, The Open University, UK**
**S.Minocha@open.ac.uk**

## User-centered Design Stories: Real-world UCD Case Studies

In recent years there has been an increased interest in the role of narratives and stories as methods for encoding and disseminating information. It is not the stories *per se* but the discussion and debate that they stimulate that is important in developing real understanding of the aspects related to a particular context. When we engage with a story, we sometimes enter into the minds of the characters or put ourselves in their shoes, and in the process, we create as well as discover meaning. In organisations, stories are very effective for knowledge transfer and management, and for capturing intellectual capital. Indeed, most knowledge management books describe a study conducted at Xerox: the study revealed that repairmen learnt most about fixing copiers not from company manuals but from hanging around swapping stories. The HCI book by Righi and James is a collection of user-centred design (UCD) stories: there are 22 case studies or stories by experienced and well-known HCI researchers and practitioners, and all of them are authentic; based on real events, real people, real organisations, and real challenges.

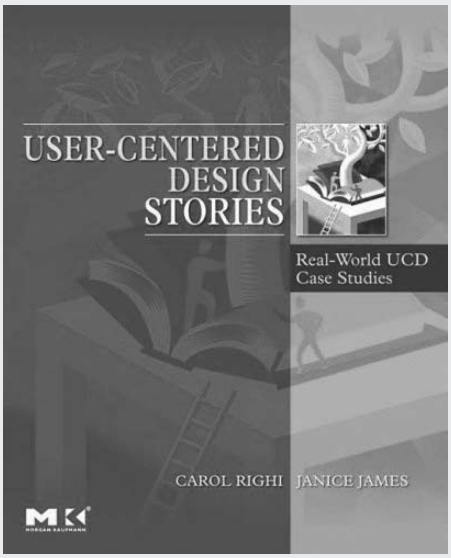
The book captures various facets of user-centred research, design and evaluation. It is divided into two parts: promoting, establishing and administering a UCD process and secondly, research, evaluation and design. The first part has six case studies about introducing UCD into an organisation, how to manage the politics, raising awareness of the UCD process, and acceptance of user centricity through successful projects. Part two of the book also has case studies and these focus on various techniques including card sorting, personas, heuristic evaluations, walkthroughs, conducting remote evaluations, designing for accessibility, and for mobile devices. In the foreword, Carolyn Synder explains how this book can be used by UCD practitioners: to be like an apprentice and the book can be read from cover to cover as a collection of stories; another way is to read a story on a particular technique to learn more about it and how it has been applied in a particular situation; and yet another way is to place yourself in the situation of each of the stories and consider how you would have dealt with the challenges and how similar or different would your decisions have been in contrast to the story or case study.

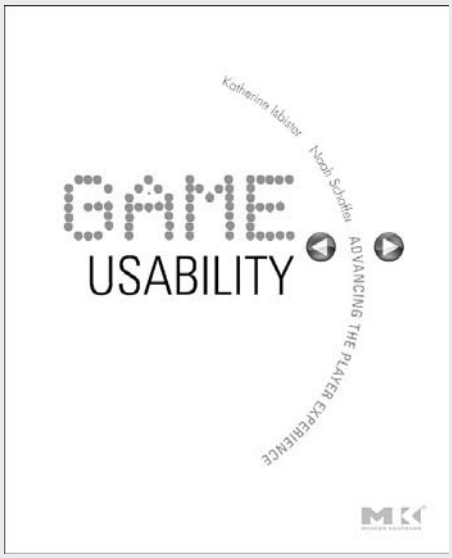
The use of stories is pervasive in education. Case studies, critical incidents, role-playing, and simulations are among the story-based techniques mentioned frequently in the literature. Stories are effective as educational tools because they are believable and memorable. And HCI educators could consider using one or two case studies from each of the parts of the book as tools for discussion with students.

I found each of the stories to be very rich in terms of the description of the context, the characters, and the UCD challenges. In almost every story, the social, technological, financial and organisational factors are so well captured that it seems that you are watching a film of that situation or context. To challenge the reader, the authors of individual stories raise questions after every key section of the story – asking the reader to think about alternatives, justification for the choices being made by the characters of the story, and to 'unpack' the context more. The companion site of the book, http://tinyurl.com/ch8ary, has the answers for the questions raised in the text.

If an educator or practitioner is interested in a particular technique – say, card-sorting or heuristic evaluations, it might be easy to look through the table of contents and go directly to the chapter or case study on a particular technique. However, some of the titles of the chapters are not indicative enough to guide the reader about the technique(s) that are being discussed in those chapters. There is no flow chart of situations or scenarios or a table of techniques in the book to guide a reader who would like to pick this book when he is faced with a particular situation or has the need of learning a new technique, such as using personas. Further, each of the stories takes up a situation, explains the situation, and then discusses how the chosen technique was applied. There is hardly any discussion in the story about the challenges UCD practitioners face in choosing a technique for a particular scenario or client requirement, and how the differences in opinions within a UCD team, and between the client and the UCD team, are resolved to decide on a technique or set of techniques for a particular project.

Nevertheless, the book captures real-world experiences which students, educators and practitioners will benefit from. Each of the stories is accompanied by a set of references for further reading. I was disappointed to note that neither the companion site nor the book




*User-centered Design Stories: Real-world UCD Case Studies*
edited by Carol Righi and Janice James
Morgan Kaufmann Publishers
ISBN-10: 0-12-370608-4
ISBN-13: 978-0-12-270608-9
2007
**Reviewed by Shailey Minocha**
Deaprtment of Computing, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK

*Game Usability: Advice from the experts for advancing the player experience*
edited by Katherine Isbister and Noah Schaffer
Morgan Kaufmann Publishers
ISBN: 978-0-12-374447-0
2008
**Reviewed by Shailey Minocha**
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itself had links to web-based resources related to the book.

In the era of social software, tools such as blogs and wikis are proving to be very effective for sharing stories and experiences, but instead of tracking down distributed experiences on the Web, this book is unique and a very useful 'consolidated' resource as it brings together real-life stories by distinguished HCI practitioners.

## Game Usability: Advice from the experts for advancing the player experience

This book is a collection of 23 chapters on various aspects of the game experience by experts in the area of game design and usability. The book is divided into five parts and each of the parts has chapters that discuss the techniques for game design and evaluations based on real-world experiences of the authors. In addition, each section has interviews with distinguished HCI researchers and practitioners, which capture their experiences and perceptions on the processes and techniques for game design and usability.

In their foreword to the book, Pagulayan and Wixon summarise the significance of games research:

> Games can become complete worlds for our users, so now more than ever we need to understand the interactions between the player and the environment, understand the player's behaviour within a virtual world, and understand the player's ability to detect the infinite possibilities created for them. To borrow from James Gibson, a shift in emphasis from 'inside the head' to 'what the head is in' lends itself quite well for research that is actionable and accessible to both the researcher and the game designer.

The first part of the book sets the context for game usability and how the evaluation of games involves evaluating for engagement, flow and fun, and looking at aspects of user experience that are beyond the traditional notions of usability. The first chapter is extremely useful for the reader and explains terminology such as game usability, user experience in the context of games, play-testing and quality assurance. Further, this chapter clearly outlines the role of each of the parts of the book: the editors have identified their key reader-groups as students, designers, evaluators, managers and developers. For each of these groups, the editors have provided guidance for using the book.

The second part of the book discusses various usability techniques: interviewing users, think-aloud, use of metrics, and heuristic evaluations. The third part focuses on special contexts and types of players (e.g. casual gamers). Advanced evaluation techniques such as biometric measurements for developing emotionally compelling games, physiological measurements as well as evaluating for 'game feel' are some of the topics covered in part four of the book. Each of the chapters in the book emphasises user-centred design (UCD), gathering users' requirements and involving them throughout the design and evaluation process. The authors of the individual chapters have several years of experience in UCD and game usability – so it is not surprising to note that the book has several anecdotes, stories and real-life case studies.

The fifth part of the book consolidates the various parts of the book and presents two excellent interviews (including one with Don Norman). Unlike the UCD stories book by Righi and James, the first chapter in the concluding part of the book brings together two different approaches of navigating through the book: via the development phases of the project (along with the techniques) or through a matrix that compares the various techniques presented in this book. The matrix is a guide for applying the different techniques with pointers to chapters in the book. So, for example, if I am considering applying heuristic evaluations with experts, this matrix informs me of the resources I need, the expertise I require, in what way heuristic evaluations would help in evaluating the usability, and which chapters in the book will guide me further.

Even if you are not a game developer or educator involved in teaching about design and usability of games, you would find this book useful to learn about how to incorporate fun, flow, surprise and exploration in the design of devices for use in the real world and for 3D virtual worlds. I came across this book when I was looking for resources or guidelines for designing and evaluating spaces in Second Life (www.secondlife.com) and even though the book is not focused on 3D virtual worlds, I have found it useful to learn about design principles related to fun, emotional experience and engagement for designing and evaluating learning spaces such as Second Life.

Intercom

# Interacting with Computers

Dianne Murray

**The latest volume of Interacting with Computers is now available, in print and online, dedicated to the memory of the late Brian Shackel. This appreciation of his work contains reprints of the original articles below with associated critical commentaries by IwC Editorial Board members and Brian's colleagues.**

**Brian Shackel**
Designing for People in the Age of Information

**Jan Noyes**
Telescreens, keypens, and the expert: a 60 year snapshot

**Russell Beale**
Back to the future: a retrospective on early predictions

**Brian Shackel**
Usability – Context, Framework, Definition, Design and Evaluation

**Judy Kay**
A test-first view of usability

**Gitte Lindgaard**
Early traces of usability as a science and as a profession

**Brian Shackel**
Human–Computer Interaction – Whence and Whither?

**Andrew Dillon**
The background that fit and a personality to match

**Jonathan Grudin**
Brian Shackel's Contribution to the Written History of Human–Computer Interaction

Visit Elsevier Science Direct (http://www.sciencedirect.com/science/journal/09535438) for journal contents and to download articles, including those in the pipeline ('in press'). Currently in preparation is the Festschrift for John Long, edited by Alistair Sutcliffe and Ann Blandford, to be published in early 2010. We also have a large number of papers near to acceptance and others undergoing review and – by the time this is in print – will have finalised the running order of our latest Special Issues.

Some significant changes to the journal's Special Editorial Boards (SEB) have taken place. A number of board members have retired after, in the majority of cases, more than 12 years' work with the journal. My sincere thanks and heartfelt appreciation goes to these individuals.

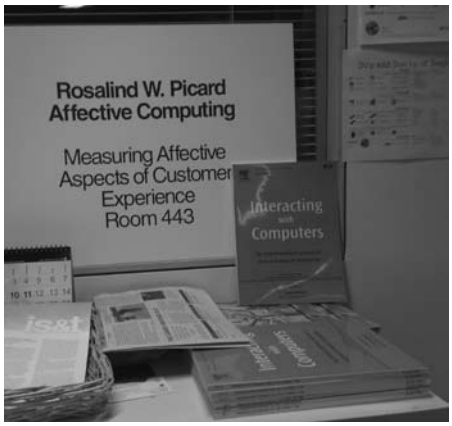
Most of the original SEB members have been 'promoted' to the status of Founding Editor to allow us to recruit many more up-and-coming researchers and HCI practitioners from newer sub-disciplines and more countries. This will allow us to expand our scope and maintain IwC's interdisciplinary, international and innovative focus. I am still actively recruiting new SEB members so please do contact me by email with expressions of interest.

For a full list of changes, an updated Editorial Board list will soon be published but I would like to welcome all the newly confirmed IwC SEB members.

A new policy on Special Issues is now in place. We intend to focus on interesting topical areas at the forefront of HCI and all its associated fields of research, rather than on Special Issues based strongly upon workshop or small conference papers. Elsevier is now rolling out a new initiative, that of 'Procedia', for collections of associated work-in-progress and specialist conference papers which will cover that aspect of publishing and will allow IwC to expand its boundaries and to kick-start promising research topics. For details see http://ees.elsevier.com/locate/procedia-cs.

As ever, I would encourage all members of Interaction to become involved with IwC and to support us by volunteering as a reviewer (which activity is formally acknowledged in print each year and gives you guest access to Elsevier's online services), or by submitting a manuscript. We actively support novel, exciting – even contentious – work, and strongly encourage and support interesting and thoughtful work by younger researchers and doctoral candidates. Please do contact me to discuss any aspects of the journal.

To finish with, a sighting of IwC's latest issue on a visit to MIT's Media Lab.

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## NEWS FLASH

*From the IwC board meeting at CHI'09*

It was announced that IwC has the lowest average submission to final disposition times, together with a higher rejection rate, of all 17 journals in Elsevier's Computing and Multimedia portfolio. Our current impact factor is 0.969 (5-year IF is 1.288). In a survey, 100% of IwC authors who responded agreed that they were very satisfied overall with the journal, and 92% of reviewers were very satisfied with the experience of reviewing and stated that they would be happy to review articles again.

# Calls and communications



**International Journal of Mobile Human Computer Interaction (IJMHCI)**

**Special Issue on**

## Mobile Interaction Design and Children (M-IDC)

This special issue is intended to gather in one place significant research findings that show the depth and importance of what is being done in the area of mobile technology for children. It is expected that contributions will focus on the interactivity of the technologies and the design and evaluation concerns that are associated with children's mobile use. The involvement of children in the design and evaluation of mobile technologies is especially interesting, as is the challenge of evaluating mobile technologies when the users are children.

Guest Editors
Janet C Read
Panos Markopoulos
Allison Druin

Submission deadline **30 June 2009**

**www.igi-global.com/IJMHCI**

## ACM CHIMIT '09

**Computer–Human Interaction for Management of Information Technology**

November 7–8, 2009, Baltimore, MD

Submission Dates:

Papers and Short Papers **3 July 2009**
Panels and Courses **7 Aug 2009**
Posters **11 Sep 2009**

**www.chimit09.org**

**8th IEEE International Workshop and Special Issue on**

## Haptic Audio Visual Environments and Games (IEEE HAVE)

Politecnico di Milano, Lecco, Italy
7–8 November 2009

Paper submission deadline **1 July 2009**

**http://have.ieee-ims.org**

## Designing Inclusive Interactions

Inclusive interactions between people and products in their contexts of use

**The 5th Cambridge Workshop on Universal Access (UA) and Assistive Technology (AT): CWUAAT 2010**

Fitzwilliam College, University of Cambridge
22–25 March 2010

Deadline for submission of long and short papers and poster abstracts **17 August, 2009**

**www-edc.eng.cam.ac.uk/cwuaat/index.html**

The Interaction Group is served by Sub-groups comprising representatives from a broad range of academic and industrial centres of HCI interest. The Sub-groups are committed to promoting the education and practice of HCI and to supporting HCI people in industry and academia. For contact details of the persons in each Sub-group, please select from the following:

# Officers and Sub-groups

### Committee

Chair ***Russell Beale***
Treasurer ***Tom McEwan***
Secretary ***Adrian Williamson***
Communications Sub-group Officer ***John Knight***
Education & Practice Sub-group Officer ***William Wong***
Events Sub-group Officer ***Colin Venters***
Membership Sub-group Officer ***Janet Read***
Research Officer ***Matt Jones***
Student Representative vacant

### Communications Sub-group

Officer ***John Knight***

Interfaces Magazine editor ***John Knight***

PR & Marketing ***Nick Bryan-Kinns***
***Amir Naghsh*** (webmaster)

UsabilityNews
Chair of Advisors ***Nick Bryan-Kinns***
Editor ***Joanna Bawa***
Advisors ***Gerred Blyth, Jarinee Chattratichart***
***Rod McCall***

Website, listserv and online services
***Eduardo Calvillo Gámez, Alex James, Steve Taylor***
***Ingi Helgason***

### Education & Practice Sub-group

Officer ***William Wong***

HCI Accreditation Scheme ***Jonathan Earthy***
***Alan Dix, Barbara McManus, Corina Sas***
***Emilia Sobolewska***

### Research Sub-group

Officer ***Matt Jones***
***Alan Dix, Dale Richards***

### Membership Sub-group

Officer and Secretary ***Janet Read***
India/China Liaison ***Andy Smith***
Organisational Liaison ***Dave England***
SIGCHI Liaison ***Peter Wild***
IFIP Liaison ***Phil Gray***
BCS Liaison ***Barbara McManus***
Regional Liaison ***Daniel Cunliffe***

### Events Sub-group

Officer ***Colin Venters***
Conference Planning vacant
European Conference Liaison & Planning vacant
HCI2009 Chair ***Alan Blackwell***
HCI2010 Chair ***Lachlan MacKinnon***
HCI2008 Chair ***Dave England***
Meetings Officers vacant

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Profile Editor ***Jennefer Hart***
Reviews Editor ***Shailey Minocha***
Production Editor ***Fiona Dix***

### Relevant URLs

British HCI Group: ***www.bcs-hci.org.uk***
UsabilityNews: ***www.usabilitynews.com***
IWC: ***search for Interacting with Computers***
HCI2009: ***www.hci2009.org***

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