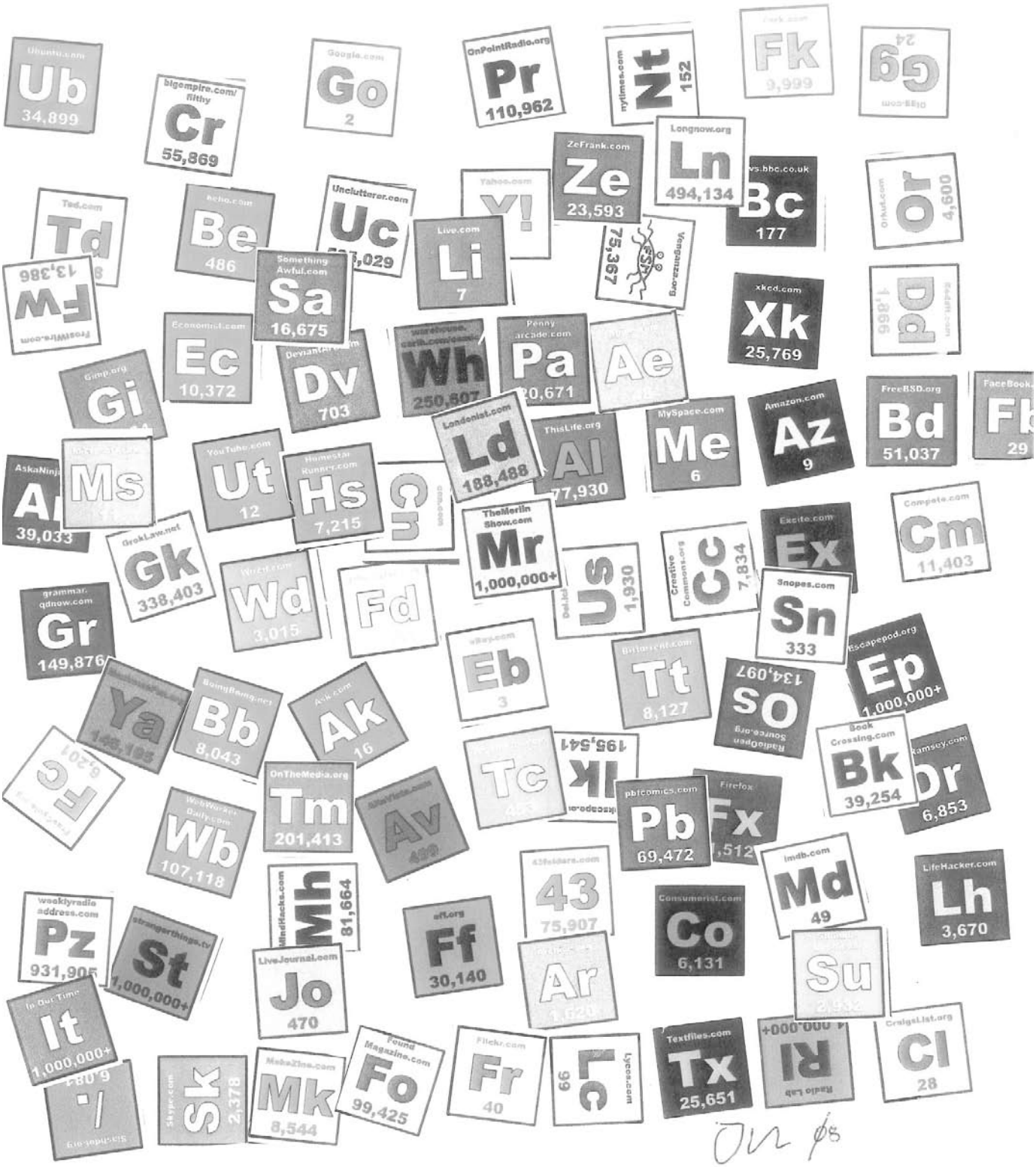
Interfaces

77 · Winter 2008

interaction



Published by the British HCI Group • ISSN 1351-119X
Human–Computer Interaction

Editorial

John Knight

It always amazes me how things change and that old stalwart along the lines of the only constant is change. Or as in one of my most hated adverts "because change happenz! " – an amazingly apposite comment from a player in the current economic turbulence.

Well, this issue certainly has some changes and presages ones in the future. Thankfully, these are positive evolutions from what we do now to really capitalising on our ingenuity, grit and all the other things we seem to embody but rarely notice or celebrate. We have a great opportunity before us and I really notice this when I go to conferences and talk to people; we do shine and we need to make more of it, whatever it is.

We have a rough theme around social networking and HCI and this surely turned out very differently from what I had envisaged. Much more critical and questioning! Even of the topic itself as a reasonable one to look at in *Interfaces*. Then we have some thoughts on our communication strategy and this should be part of a new 'Communications' column. There is also a bit of a theme around location too.

'Deflections', that much valued and critical column from the great Gilbert, has morphed into 'Reflections' – an open(ish!) platform for anyone who wants to critique a relevant area of our work. I have taken the liberty to do this first but I hope we get some lively and diverse commentary here. In order to encourage diversity there is now a 'case study' column that aims to give students and practitioners a platform to discuss what they are doing with their peers.

John Knight is a User Experience Manager at Vodafone and works on mobile phone and applications UI. He was formerly Director of User-Lab at Birmingham Institute of Art and Design and has worked as a freelance designer and researcher. John is also chair of IDEC4, which will be at NordiCHI 2008.

Contents

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Interfaces 80, Autumn 2009: **Now that's what I call HCI** – Remixes, reflections and greatest hits of British HCI

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Send to John Knight, John.Knight@intiuo.com; 16 Combermere Road, Brixton SW9 9QG

This issue's guest columnists

Since 2006, Yvonne Rogers has been a professor of Human–Computer Interaction in the Computing Department at the Open University, where she directs the Pervasive Interaction Lab. From 2003–2006 she had a joint appointment in the schools of Informatics and Information Science at Indiana University (where she continues to be a visiting professor). Her research focuses on augmenting and extending everyday, learning and work activities with a diversity of interactive and novel technologies.

Jennefer Hart recently completed an MRes in HCI at Lancaster University. She also has an MSc in Information Technology (UWE) and a BSc in Textile Design (Huddersfield University). Previously she worked for over 15 years as a Design Manger within the Textile and Garment industry where she became interested in how technology can be used effectively within design. She is continuing her research within the HCI arena and is about to start a PhD at Lancaster.

Airi Lampinen is a Researcher in the Ubiquitous Interaction research group at the Helsinki Institute for Information Technology. She has an M.Soc. Sci. from the University of Helsinki and has studied at the University of Geneva and worked as an intern in the UNECE Population Activities Unit. She is continuing her engineering studies in the Information networks degree programme at Helsinki University of Technology. She is about to start a PhD on the signification of group memberships and social identities in social media.

Dr. Shailey Minocha is Senior Lecturer in Human–Computer Interaction in the Centre for Research in Computing of the Open University. Her research focuses on the interaction design of electronic environments, including user behaviour with computer systems and users' requirements from technologies. Shailey has a PhD in Digital Signal Processing, Post-Doctorate in Adaptive User Interfaces and an MBA.

Sebastian Meier has been working for about six years as a New Media Designer & Developer for companies and agencies in Germany and the UK. In the last few years he has worked on new media projects from mobile applications over interactive flash websites to complex massive user websites, creating interfaces, visualisations and information architecture. Right now he is working on his diploma thesis at the University for Applied Science in Düsseldorf.

Tom Stewart is the Joint Managing Director of System Concepts. He is a Chartered Psychologist, an Associate Fellow of the British Psychological Society and a Fellow of the Ergonomics Society. He was a founder member of the Human Sciences and Advanced Technology Research group at Loughborough University, and has served as an adviser to national and international bodies. He is President of the Ergonomics Society and active in international ergonomics standards.

Jennifer G. Sheridan is Director of the (re)Actor conference series. She is a maker and researcher who has published widely in the fields of HCI, mobile technologies and tangible interaction. Her work has been exhibited internationally at galleries, conferences, music festivals and unanticipated performance spaces. She co-founded BigDog Interactive and is currently a Research Officer at the London Knowledge Lab. Jennifer has a PhD in Computer Science from Lancaster University.

Tony Rose is director of UXLabs Ltd, a user experience consultancy specialising in technology innovation and applied R&D. Prior to founding UXLabs, he was R&D group manager at Canon Research Centre Europe and technical lead at Reuters, specialising in advanced user interfaces for information access and search. He holds a PhD in HCI and a first degree in engineering, majoring in human factors. Tony is also Honorary Visiting Fellow at the Centre for Interactive Systems Research, City University.

With thanks to comissioning editors: My PhD: Eduardo Calvillo and Stephen Hassard; Book reviews: Shailey Minocha

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Reflections

John Knight

I must start by stating that this new column is in no way a response to Gilbert's *Deflections* column. Neither is it a response to the ideas put forward in that column. The similarity with Gilbert's regular contribution is that *Reflections* is just that, an open platform for discussing relevant issues with our peers. So, please feel free to contribute to this column and make it a vital and progressive place to reflect on what we do.

Maybe it's the season or maybe it was that conference I attended in the Autumn or then again perhaps it was having some time to think when I used up some holiday at home and occasionally looking after the cat in the process. Or it could have been trying to make ends meet by methodically going through the Finglish finances.

Of course, it might just be I am getting old but I started noticing things that I had not before and, whatever the cause, something has changed in how I think about what I do and about HCI in general. The change I am talking about concerns magnitude and includes the scope of what we do, the size of the stage we work on and our focus and goals too. Indeed, to be grandiose it made me think about what area of knowledge do we work in and how do we relate this to non-HCI people.

It happened gradually and was triggered by disparate events but they all pointed toward reduction and I started to think small. Yes, I started to reassess things in terms of the value of being small, the moreness of less, the power of the diminutive, negation, minimalism, and every little thing became magic. Like a clarion call, smallness became something I could rally my ideas around and this gave me insights into my values and how I work.

Perhaps some examples of the events that led me to value smallness will help you understand my conversion and flesh it out somehow. And these are in no particular order. Foremost was the conference, then a documentary on Phil Spector and then there was a strange autumnal reflective mood that made me question what I do and in particular where I think I can make a difference. And generally I think I have spent too much attention on big things.

I attended a conference and it really made me think about where we are in HCI. I will start off by saying that there was nothing wrong with the conference and indeed, it completely reenergised me. But it was a bit too much for me. In particular, the themes seemed vast and covered so many issues that each one probably warranted a conference in its own right.

Perhaps this explained why many of the presentations seemed slight even though they covered big subjects like privacy. Many neither covered a small distinct area in all its nuances and depth nor provided a robust link into a larger area of knowledge or research. I think I picked up on a dissatisfaction with grand schemes and theories in the audience too. For example, someone questioned whether some of the themes really belonged in an HCI-related conference at all. Lastly, I wondered about how conferences, professions and groups of people organise effectively and in particular offer leadership. It seems that the bigger the personality, the theory and the wider its application, the better.

I am not sure that leadership is a popular or even acceptable term to use these days but it surely exists either explicitly or hidden in the structure of organisations and in the delivery of knowledge. And I started thinking whether it should be visionary and big or rather small and focused on the detail. Of course it can be both.

I really began to challenge the value of a hierarchy of knowledge, top-down approaches and multidisciplinarity – I am not sure I know what these terms mean but why do we favour pontificating over giving voice to everyone? Why does doing something small that may build to something bigger seem less attractive than a big theory that promises a lot? Anyway, I am slightly digressing because I wanted to give you some context rather than symptoms or ideas but the size of canvas we work on is one area that size seemed to be important.

You might wonder how Phil Spector fits into this line of thinking. But incredibly, he does, and a very candid interview with him made perfect sense through the prism of the small. In case he is unknown, Spector has produced some of the most sublime and innovative pop music we have, pioneered using the studio as an instrument and making sounds into a tapestry.

Spector took great care with the details. He spent time on the quality of the sounds and their interaction with each other. In the music he produced the subtle qualities of individual elements combined into a fantastic wall of sound that would be hard to comprehend until it finally came together in a single live take. While his music embodied such attention to detail and sold in its millions his ideas and theories on the place of popular culture have quantitatively had less impact in the world and qualitatively his ideas are less valuable and novel than his music. He probably sees it differently and maybe he does big and small.

Lastly, I thought a lot about what I do. I thought about what drives me and what gives me satisfaction at work and outside work. And I suddenly felt an odd mixture of stupidity, dented ego and also hope and passion for a new paradigm. Perhaps, like some fantastic piece of music, I should just focus on making sure that there is harmony, that everyone knows the score, that I make sure I am in tune with things and that the specific note is right rather than worrying about where it's going.

For example, I have been interested in ethical design for a couple of years. It is possible to define a thread through socio-technical and participatory design, inclusivity and design for all to HCI. But do we need any more than that? There are experts who devote their lives to understanding the societal impact of computers and the fine detail of ethics in relation to it. We certainly have links to people working in different areas such as ethics, but do we do ourselves a good service by trying to include everything? Does this actually weaken our conceptual product? And is it really just about who owns ideas?

So, maybe, you have read this far and wonder what the hell I am on about so I will spell it out, as much as I can. Rather

View from the Chair
Measurement

Russell Beale

The RAE results are nearly out, and I can hardly contain my impatience. I'm sure you're all the same. But this December marks the end of an era: no more people slaving away in darkened rooms poring over runic manuscripts, finally making announcements with white or black smoke, or whatever it is that they now use to signify the results. For those of you not with me, us academics are assessed every few years – well, actually our groups are assessed – well, it's the school or department, but sort of the individuals, but you can't tell, though since you know who is where, then… Never mind, the point is that we are measured to see if we are improving, or value for money, or something. And my point is that the metrics are changing, probably to bibilometrics. That is, the publish or perish maxim is becoming even more critical. But is this the right approach? Is the number of people who download our papers, or cite them, the best measure? Writing something sufficiently competent to be published, but with some lovely mistake in it, is to guarantee lots of citations, as everyone proves you wrong. Does this make it a good paper? But the issues are much deeper, especially for the interdisciplinary research that is HCI. Is publishing the main role of an HCI academic? I'm not so sure – I do this research partly to understand fundamental things about people and interaction, and publishing this is appropriate. But I also do this to make a difference – to improve interactive systems for people, to make some systems more fun, or to make learning more effective, or to help people make correct decisions in a crisis, or to improve the health of a group of individuals, or to encourage them to take part in a political process – you name it, there are many, many useful outputs of an active HCI role that are not measured by papers. At the HCI conference, I spent a slightly drunken evening playing with an interactive piece of art, and none of that experience could have been generated from a paper. One of the things we really need to do as a community is to ensure that the approach to measurement is appropriate for the diversity of the discipline, that the metrics that get used are able to be effectively disambiguating.

One of the problems with measurement is that people chase the numbers. When bankers received bonuses based on the size of deals that they booked in a year, they came up with the ruse of collecting long-term debts that dribbled in income into a neat package and selling it all in one go, to make one very tidy bookable deal, and look where that got us. Now, whilst it's amusing to wonder if we as academics could do something so dramatic ("oh my goodness, the citations are overloading the network, the internet is going to blow!") it is certainly the case that many people will stop focusing on decent outputs and aim for the best bibliometric impact. This can lead to silly situations – and we're almost in that now. In preparing for HCI2009, Alan Blackwell pointed out to me that the conference was competing with at least 60 other HCI-related conferences. 60! In an age where publishing is everything, there are more and more venues springing up for publishing – and trust me, not all of them are as good as HCI!

Someone once told me not to measure the quantity of manure, but to taste the quality of the strawberries. I think they were referring to the coarse metric of assessing a researcher's worth by the quantity of grant income that they have brought in, rather than the impact of the research. Of course, they could have been giving me gardening advice. But the point is well made. Focus on the important things: they didn't say, count the strawberries, or measure their size. For it's the taste that is important. We need to find the same measures for HCI research – and as soon as possible, so that all the manure doesn't land on us.

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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than worrying whether everything in the world can or should fit into HCI, I will instead focus on what the little bit of HCI I can deal with can achieve. Rather than trying to build theories I will concentrate on understanding components and details and this may or may not build into something else later. Lastly, and perhaps most importantly, I am going to leave novelty and invention and leadership to others and instead really try to understand other people's ideas and difference and then see if we can do something small together.

Being small is very different. Being small is in some cases beautiful. And I may not yet have grasped what small means for communication but I am going to look. And for those who argue that this is in some way a retreat I cite Phil and maybe Fitts, Sutherland and many anonymous engineers, definitely Vermeer and Eileen Gray too. So, let's raise a perfectly formed glass and salute anyone who has singlemindedly sought the god of small things – Small it's the new big!

Challenging HCI practice

Yvonne Rogers, Abi Sellen
Tom Rodden, Richard Harper

A two-day international workshop was held in Spain in 2007 to discuss, debate and help formulate an agenda for human–computer interaction (HCI) for the next decade and beyond. A number of invited researchers took part, from academia and industry, and from a variety of backgrounds, including computing, philosophy, economics and design. The event – facilitated by Microsoft and convened by Richard Harper and Abigail Sellen of Microsoft Research Cambridge, Tom Rodden of Nottingham University, and Yvonne Rogers of the Open University – resulted in a detailed report, released earlier this year, called *Being Human: Human-Computer Interaction in the Year 2020*. The report focuses primarily on how the HCI research agenda needs to evolve and change in relation to current and future trends in computing and society. Here, we discuss some of the implications of the ideas, concerns and recommendations raised in the report for practitioners.

The field of HCI is experiencing a renaissance. No longer only about being user-centred, it has set its sights on pastures new, embracing a much broader and far-reaching set of interests. From emotional, eco-friendly, embodied experiences to context, constructivism and culture, HCI research is changing apace: from what it looks at, the lenses it uses and what it has to offer. At the same time, new technologies are proliferating and transforming how we live our lives. For example, we are now more dependent on technology than ever before, live in a hyper-connected world, and keep a growing digital record of our personal activities. What does this mean for practitioners in the field? Will they be able to continue using and evolving their armoury of tried and tested methods, such as contextual design, user testing and analytics, or should they also be changing direction to address the many changes that are increasingly defining HCI?

Changing lives

In the next ten years more people than ever will be using computing devices of one form or other, be they a retiree in Australia, a schoolchild in India or a farmer in Peru. Babies will be born into a world suffused with technologies and then grow up literally to be always online and in touch; the mobile phone having already become a natural cyborg extension. The way they learn will significantly change as more and more technologies are assimilated into their lives. For example, how it happens (e.g. taking part in a discussion with people from all over the world on Second Life) and when it happens (e.g. listening to a podcast about pollution while cycling home) is diversifying. There will also be far more elderly people as a proportion of the total population. Those growing old will have become accustomed to using computers and mobile phones in their work and leisure. Hence, the need to design computer applications for old people who have not used email or the web will no longer be a major concern but designing social network sites, online communities, etc., for healthy, active sixty-year-olds will.

Technological developments, therefore, are not only altering the way we grow up, learn, work and play but also how we grow old. Computing now underpins almost every aspect of our lives, from shopping to medicine, increasing our reliance on computers. We are spending more time, and devoting more effort, to being in touch with each other than ever before. Our unbridled desire to keep in touch is equalled by our desire to capture more information about our lives and our doings than ever before. What it means to record, why we record and what we do with the collected materials is also changing. This is happening not just at a personal level, but also at the level of government, institutions and agencies. But what does all this mean for HCI practitioners? Will they need to change what they do to keep abreast with what it means to be human in 2020? Or can they keep doing what they have always been good at – helping to make the computer-embedded world we live in more usable?

Opening more doors

Practitioners already have a penchant for reinventing themselves, creating new methods and appropriating new measuring instruments (e.g. eye tracking) in keeping with new computing developments – whether it be a new mobile social network service, a bluetooth enabled GPS system or the latest web advertising. They have successfully rebranded themselves as UX, having a different focus and set of concerns that look at changing users' needs and wants. While surveys, user testing and expert reviews persist as staples alongside the classic user-centred design methods, such as storyboarding, scenarios, and low-tech prototyping methods, new technical innovations are turning heads. For example, the current wave of interest in multivariate tools (e.g. AB testing) that enable closer coupling between design and testing of live website components is one such development.

A number of practitioners have also braved new waters, explicating the nature of the user experience and how it unfolds over time. This has largely involved defining its subjective qualities, such as what interacting with a device feels like to use, such as a MP3 player or a pet robot. Concepts such as pleasure, aesthetics, fun and flow, on the one hand, and boredom, annoyance and intrusiveness, on the other, have been used to describe the multifaceted nature of such experiences. The whole life cycle of people's response to technology is also being detailed, from when it first grabs their attention and entices them, through their ongoing relationship with that technology.

So it appears that practitioners already have been opening new doors. Why are we suggesting they try prising open even more? The reason is that the interconnected technological and lifestyle transformations in our midst require a quite different mindset to design, usability and UX; one that can weigh up and manage the widening range of issues that are becoming implicated in pervasive technology design.

Consider the following hypothetical scenario.

The number of children diagnosed with Type 2 diabetes is on the rise, worldwide – a disease that requires constant

management and can be very stressful for all concerned. A medical company has developed a new 'well-being' monitoring device that periodically sends the latest recording of the child's blood sugar level to subscribing remote cell phones. A goal is to provide reassurance for parents that their child's condition is stable during school time when they are not around to assist. A UX consultancy company has been hired to assess the usability of this service. How might they accomplish this?

An obvious starting point would be to test the legibility and appropriateness of the recordings sent from the monitoring device to the cell phones. Is the form of representation used to convey the readings reassuring to the parents at a glance or do they have problems understanding what they mean, especially when the sugar levels vary from what they expect at that time of day? Are the danger warnings set at the right level?

And then there are behavioural measures that need to be considered to determine whether the service is reassuring: How often do the parents use the service on their mobile phones? Do they get more anxious when calling it? What do they think each time they read it? Do they feel the urge to call their child? Should the device also communicate what activities the child is engaged in? And so on.

In conjunction, the UX of the wearer of the monitoring device – in this case the child – would need to be assessed. This raises a whole set of additional questions: Would the child have any control over what recordings were relayed and when, or would it be automated? Should the device signal to the child whenever a parent has called in to get a reading? What happens if the parents don't call in for some time? Will the child worry? Will the child become more dependent on them? How often does the child look at the readings? Do they get more or less anxious knowing their parents are looking out for them? Will they think their parents are checking up on them and they would rather they didn't? And so on.

Focus groups, wizard of Oz experiments, diaries and interviews could be used to collect and analyse data to answer these much wider sets of issues. The more one probes and thinks about the ways the new monitoring device might be used for real, however, the clearer it becomes how pressing the social, personal and ethical concerns are for all parties concerned.

This scenario is representative of many others on the brink. The monitoring of others, the capture of, access to and management of people's personal information, however benign in its intentions, is likely to pervade all aspects of our personal lives, from our behaviour in public places right down to our habits within the inner sanctum of our homes. We argue that these and many other technological advances increasingly need to be understood within a social and moral context. It is no longer enough that we think about how best to design and evaluate applications or services for users, we need now to think about how the technologies will be used by and affect networks of users, such as families, communities and different social groups.

Human values at the core

Central to this broadening out will be an evaluation of relevant human values. Examples include privacy, health, ownership, fair play and security. Each of us has their own views on which values they desire and treasure. Often these values are not made explicit, but nonetheless they drive our behaviour both as individuals and as a society. Finding out what these are and how they conflict with one another is an important step. For example, computers can help us be connected to others, but, by the same token, it may be important that they allow us sometimes to be isolated. Likewise, computers can support our industriousness, but at other times, we may want to 'switch off' and be restful. Technologies can be designed specifically to support one set of values, such as pleasure and safety, but which may inadvertently violate others, such as privacy and a sense of fairness.

The values that we discover and decide to design for will vary from context to context, be it the home, school, shopping

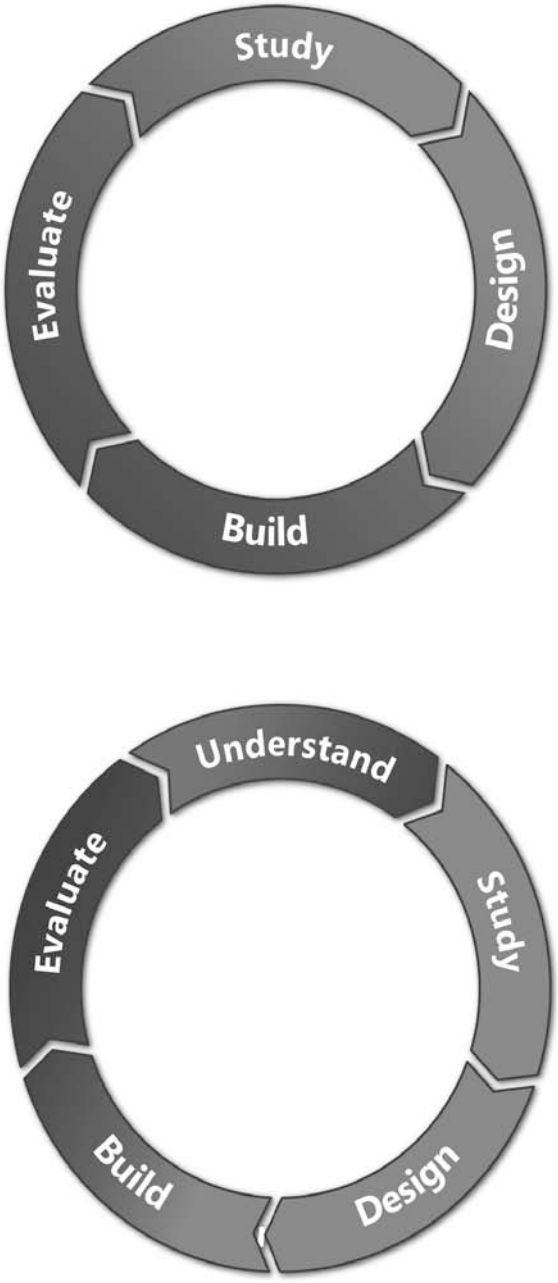


Figure 1 Top: The conventional user-centred research and design model. Bottom: The extended five-stage research and design model encompassing a new stage of conceptual analysis or 'understanding' of human values

mall or workplace. For example, the notion of privacy is very different in a family than it is in an open-plan wireless office. Knowing where one's children are, and that they are safe and secure, is part of the 'job' of being a parent. In a sense, it is part and parcel of home life. However, having access to the location and awareness of activities of your employees at work is quite different and may be viewed much more negatively. What is right and what is wrong is defined differently in different contexts.

The challenge

The challenge facing practitioners, therefore, is to consider how the more elusive ethical, personal and wider societal concerns can be folded into the UX mix such that they can be sensibly addressed when designing new technologies and services. But while it is easy for us to pontificate, how realistic and feasible is it? Many of the concerns may not be amenable to their repertoire of methods, usability metrics and design solutions. Moreover, the thorny ones are unlikely to be fixed in the way in which products (sic) have been improved through suggested changes. There are also likely to be several conflicting issues and complex webs of issues.

Taking into account human values, therefore, will be a very different undertaking compared with seeking to attain the design goals of efficiency, effectiveness and utility. Design trade-offs need to be considered not in terms of time and errors, but in terms of the weighing up of the various moral, personal and social impacts on the various parties who will be affected by the proposed technology.

In the *Being Human* report we argue for the inclusion of a new stage in the user-design process, coined 'understand'. While understanding a problem has traditionally been part of the initial study phase, we are proposing that it be elevated to a more explicit process, where the various human values at play are thought through, and the trade-offs examined in a more systematic way.

A new set of thinking tools is also needed to fill the 'understand' phase, ones that can be used to articulate and resolve the differing sets of values and questions arising from them. Philosophical debate, thought experiments and scenarios are promising candidates for starters. However, practitioners can go one step further: developing accessible frameworks and models that will enable them to explore through a new form of argumentation, and map out the interplay of moral, social and personal issues with their clients.

Acknowledgments

We thank all the participants who contributed to the HCI 2020 report. We also thank Tammy Toscos and Harry Brignull for their suggestions.

Copies of the HCI 2020 report

Free hard copies can be requested, and pdf files of the report downloaded, from: http://research.microsoft.com/hci2020/

Exploring the Facebook experience

A new approach to usability

Recent developments enabled by the Web 2.0 revolution have provided users with more freedom to create their own unique user experiences. Social networking sites have been one of the main internet success stories in recent years, with Facebook receiving most of the attention as it continues to become a growing success alongside MySpace, Twitter and a host of others. Social interaction has moved from face-to-face to text based media exchanges, and social networking sites such as Facebook provide a vital means of interacting, communicating and sharing, which enhances human connectivity and assists sociability (Nie, 2001).

Facebook is ranked the second most popular website in the UK after Google[1] and its success is undeniable, but the reasons behind its popularity remain unclear. The conflict between traditional usability methods and user experience was examined during a four-month research study that explored Facebook in order to understand its recent popularity and success. This study was undertaken collaboratively by seven students studying for the Masters by Research in Human–Computer Interaction at Lancaster University in the UK, under the direction of Professor Alan Dix and Dr Corina Sas.

The research study began by carrying out an expert evaluation based on Neilsen's ten heuristic guidelines[2]. The results found that only two out of the ten heuristics were adhered to, suggesting Facebook performed poorly in terms of usability. Based on this, Facebook should not be the success it currently is, so what makes it so popular?

To explore this further a user study was conducted using 26 participants aged between 18–44 years of age. Participants were interviewed and observed while interacting with Facebook. Initial findings identified that from those interviewed 77% visited Facebook several times a day for less than 15 minutes, suggesting that users were 'hanging around', browsing Facebook. This contrasts with previous ideas of patterns of web surfing described by Jakob Nielsen, where users 'just want to get in, get it and get out'[3].

To investigate the users' experience further, all participants were asked to complete a 'self reporting experience-scale questionnaire', that was based on two theoretical frameworks: McCarthy and Wright's *Felt Experience* (2004), and Jordan's *Four Pleasures* (2002). Participants were asked a variety of different questions as to 'how they feel' while doing various activities within Facebook, and were presented with ten different user experiences to select from (five positive and five negative), as shown in the diagram (Figure 1).

From the user study, Facebook was perceived to be 'easy to use', which contradicted with the findings from the heuristic evaluation. Could this be due to the positive user experiences gained from using Facebook, or something else? The most prevalent Facebook activities were rated highly for positive user experience, as shown in the graph opposite.

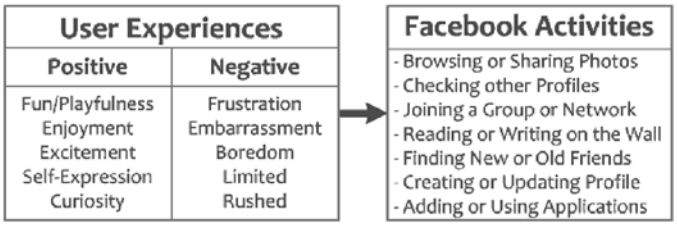
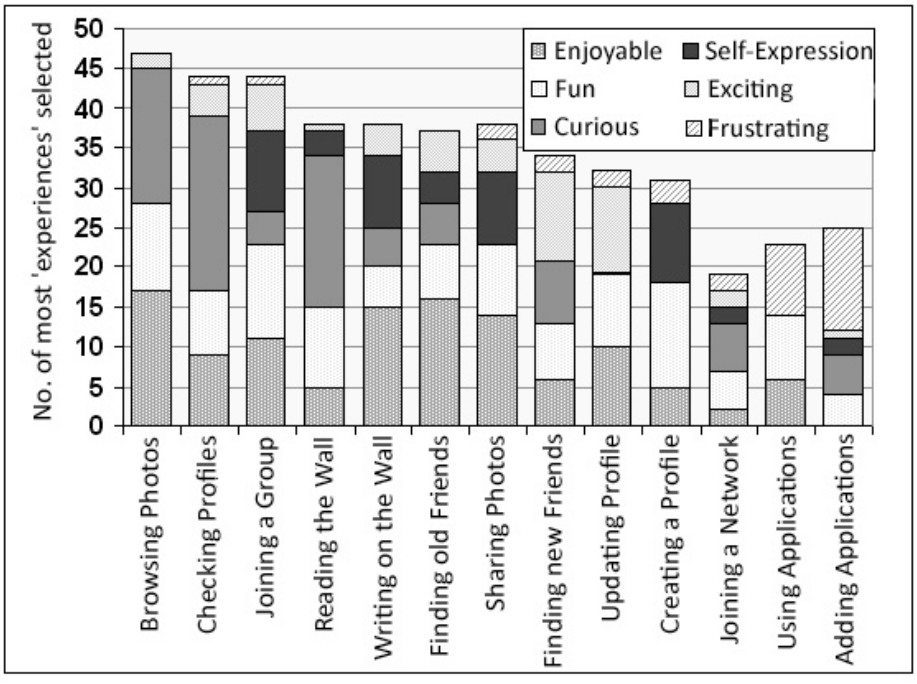


Figure 1 The ten user experiences presented against the most common Facebook activities

The only negative experience felt by users was frustration, mainly gained from the abundance of applications, which was outweighed by the positive user experiences that Facebook facilitates, which were identified as follows:

- Facebook facilitates 'Social Pleasure', a strong user experience identified by Jordan (2002), through creating social interaction by offering many ways to interact with friends and providing a stimulating experience and user fulfilment.
- Facebook provokes 'Curiosity', a strong motivator, providing users with new and fun ways to find out more about their friends through many of the communication tools, novel applications and the ability to share photos.
- Facebook supports 'Self-Expression & Identification' by enabling users to represent themselves within a social situation, by creating unique profiles, joining various interest groups and expressing themselves through photos, videos and images (Hassenzahl, 2003).
- Facebook creates opportunities of 'Surprise and Serendipity', the most outstanding user experience disclosed, enabling users to reconnect with distant friends and past memories and providing a facility to preserve and share them (Leong et al. 2005).



Counts for user experiences within each Facebook activity

Facebook failed in traditional usability terms yet excelled in providing many positive experiences of social pleasure, provoking curiosity, providing a base for self-expression and evoking memories of the past.

Traditional usability methods used to evaluate websites do not consider how users 'feel' when interacting with these new technologies. They do not capture the user's desire for fun and pleasure while 'hanging around' on the world wide web. The findings of this study call for a more holistic method of evaluation to encompass the user experience.

1 Alexa Web Information Services (traffic ratings), www.alexa.com

2 Ten Usability Heuristics, www.useit.com/papers/heuristic/heuristic_list.html

3 Web 2.0 'Neglecting Good Design', BBC News, 2007 http://news.bbc.co.uk/1/hi/technology/6653119.stm

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Acknowledgements

Special thanks to Charlene Ridley and Faisal Taher who were two of the seven MRes students in the 2007–2008 cohort who contributed to this study.

‘All my people right here right now’

Management of multiple group memberships on a social network site

Airi Lampinen

I belong to a work community. I am an alumna of my university and a handful of other schools. I am a member of varied organisations and my social network consists of diverse groups of friends. Based on such everyday experiences it seems obvious that individuals are members of multiple groups. But what does all this have to do with online social networking and more specifically social network sites (SNS)?

Let me explain. These groups used to function each in their own slot in my life. Occasionally, I would throw, for example, a birthday party where different groups of friends and acquaintances would come together in one space and time. In such situations, I might need to account for some of my affiliations and balance between my group identifications, but even then, I could relatively easily manage the situation. When SNS became part of everyday life, the situation changed. Putting it dramatically, it was like in the Oasis song: ‘All my people right here, right now’. Everyone was suddenly present in one context, all the time. As the study presented in this article indicates, I was not alone with the observation of group co-presence.

The lists of contacts maintained on SNS typically consist of people related to different aspects of an individual’s life. On social network sites many of an individual’s groups are simultaneously present, usually by visually mediated means. This is what I call group co-presence: many groups important to an individual are simultaneously present in one context and their presence is salient for the individual. In my Masters thesis, I studied the phenomenon qualitatively, interviewing and making online observations of active Facebook users.

Group co-presence becomes salient in an unprecedented way on SNS, such as Facebook, where it is no longer an exception but the norm. On Facebook, group co-presence means, for example, that the news feed contains items about many groups or their members and that the user’s updates are visible to his/her multifaceted social network. I was interested in understanding individual users’ perspectives on groups and multiple group identifications, so I addressed the processes by which users perceive, categorise, identify themselves with, and finally manage their identification with, the multiple groups present.

What I found out can be summarised in three points. First, group co-presence does indeed occur on Facebook. While it was not strikingly evident to the interviewees, they were aware of it. Second, they found group co-presence relatively unproblematic. Third, according to the analysis this seeming easiness of the situation was partially due to successful management strategies that were used to prevent anticipated problems and tensions. The management of group co-presence stands as evidence of the importance of group identities on the site. Had the groups and identification with them not been relevant to the individuals, the users presumably would not have bothered to take preventive actions to protect them.

Users deal with the co-presence of multiple groups by managing the situation actively to prevent identity threatening situations. As well as creating more inclusive in-group identities, group co-presence can be managed by dividing the platform into separate spaces, choosing the most suitable communication channel, practicing self-censorship, trusting and being responsible. This list of strategies adopted by the participants of our study is, obviously, not exhaustive, and more research is needed to find out how strategies differ between diverse services and user groups.

On a more theoretical level, studies on SNS can potentially bring into view the everyday side of membership of multiple groups. The results of my study give reason to critique the conceptualisations of groups as separate and opposite entities, common in the experimental testing of the Social Identity Approach. Co-presence of multiple groups on Facebook shows that such a strict distinction is insufficient when investigating groups and their significance to their members. Taking multiple group identifications more widely into account seems necessary, even beyond the domain of SNS. In social psychological research, there is growing interest in studying multiple group realities, which has already led to an increase in recent empirical research. There could be a fruitful dialogue between the technologically and socio-psychologically driven research.

Returning to empirical realities, it is important to note that my interviewees were active and fairly new Facebook users. They were successful users of the site who had found ways to deal with group co-presence or had been lucky enough not to encounter problematic situations so far. Studying their practices and perspectives was certainly a useful starting point for research. To truly understand the phenomenon, however, it would be necessary to study passive and drop out users, too. They may see things differently and know something that others don’t. Does group co-presence have a role to play in their withdrawal from the site? Do co-presence management strategies sometimes fail and if so, when, how and why? To avoid being blinkered, we need to investigate the ‘silent evidence’, too.

Sure enough, at least some individuals (and given the quickly expanding user populations of SNS, probably many) find ways to manage group co-presence in order to maintain their social identities. They find the necessary means even on a platform that does not technically encourage such behaviour. This, however, requires continuous management from their side. Designers and developers are in a position to help users with this task. Doing so is not just about being nice – Web 2.0 services might find remarkable added value from supporting the management of group co-presence and paying attention to the overall relevance of groups.

Furthermore, it seems likely that as SNS mature, group co-presence will become a more pressing issue. Taking both explicated group memberships and individuals’ implicit notions of groups into account in designing and understanding social media seems worthwhile. Group co-presence is a phenomenon that is growing in significance and, hence, claims the attention of researchers, developers and designers interested in social network sites.

For further details and a list of references, see
http://urn.fi/URN:NBN:fi-fe200807221717

Social software in education
A user-centred approach

Shailey Minocha

There are many schools of thought on learning, including behaviourism, cognitive psychology and constructivism. Over the last two decades, social theories of learning have assumed prominence in debate amongst researchers (e.g. Lave and Wenger, 1991; Mayes, 2001). Although the views of various social theorists differ (Nicol et al., 2003), there is a general consensus that interaction, dialogue and collaboration are essential for productive learning.

To integrate the social dimension into the pedagogy of online learning environments, Felix (2005) has proposed the synthesis of the cognitive and social constructivist approaches: the learner making intellectual sense of the materials on their own; and also when knowledge is constructed in shared endeavours (Duffy and Cunningham, 1996). Interactions in the online environment, for example, through collaborations or discussions over forums, or in wikis, or on blogs, enable knowledge to be constructed individually but mediated socially.

The term 'social software' covers a range of software tools that allow users to interact and share data with other users, primarily via the web. Educational institutions are increasingly making use of:

- tools that facilitate collaborative authoring, such as blogs and wikis;
- websites that enable sharing of bookmarks, photographs, and videos, such as del.icio.us, Flickr and YouTube;
- social networking platforms such as Elgg;
- 3D virtual worlds, such as Second Life, that facilitate synchronous group discussions and meetings.

However, there are few guidelines for good pedagogical practice and effectiveness of the different social software tools. Studies are needed of:

1 how activities can be designed to include social software tools;
2 what are the benefits and problems associated with their use; and
3 the role of these tools in enhancing the learning and teaching experience.

In a study funded by the Joint Information Systems Committee (JISC) (July 2008 – January 2009), we are developing case studies that have used social software to support and engage learners, or have embedded the social software within the pedagogy of a course or a programme. The study involves identifying suitable case studies in the UK Higher and Further Education (HE and FE) sectors and collecting evidence of the effective use of social software in supporting and enhancing student learning and engagement, and the disadvantages, if any, of using such software.

We are following a user-centred case study methodology, interacting directly with the key stakeholders such as educators, learners and policy makers in the chosen institutions. We are applying a variety of techniques for data collection: interviews, workshops, observations, and reflective diaries. We are particularly focusing on:

1 benefits that learners and educators perceive with the pedagogical usage of these tools – particularly for socialisation, which is antecedent to collaborative learning, collaboration, community building and student retention;
2 design of activities and the challenges involved to situate the tool(s) in the context and learning outcomes of the course and/or programme;
3 learning experiences of the educators: what worked and what didn't work so well; whether or not the social software tool or the associated pedagogical activity is transferable to another context;
4 obstacles faced by students and educators – whether they are technological, usability-related, skills or training issues, or social issues (e.g. related to lack of engagement or privacy concerns);
5 accessibility issues and how they are being (or have been) addressed.

The findings from these case studies will be consolidated in a report, together with recommendations by the project team. The report will be of particular significance to policy makers in institutions, for highlighting the different pedagogical roles of social software: communication; nurturing creativity and innovation; and collaborative learning. The study will be completed in January 2009 and the report and case studies will be available on the JISC website, **www.jisc.ac.uk**, by March 2009.

The core project team members include Ms Heather Williamson (JISC – programme manager), Karen Kear, Shailey Minocha, Dave Roberts, and a group of consultants at the Open University, UK.

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Location based applications

I am a student at the University of Applied Science in Düsseldorf where I study Interaction Design. The course emphasises broadly based design studies including theoretical basics such as art history as well as project based work. Our university is one of the biggest 'interaction design' departments in the country and one of its unique qualities is the variety of classes offered, including everything from Game Design to Interface Design through to Interactive Storytelling. The University also actively co-operates with commercial partners and our course was involved in a collaborative project with Markus Lüdemann who heads User Experience at LG Mobile.

Working with other students, we looked at a wide range of mobile devices and research. This was not limited to 'pure' HCI issues and we covered everything from market research to materials and emerging technologies. We were looking for design opportunities where we could scope a student project that would both give LG novel design concepts and a topic that we could investigate in depth and deliver something that would impress future employees, and naturally our peers and Course Director Tom Hirt.

Industry trends

After kicking off the project, we all got stuck into research and even though each student was investigating a different area there were some clear and general trends emerging.

Firstly, mobile devices are getting smaller, more powerful and arguably more usable. We all noticed how the iPhone was a paradigm shift in the industry and in particular sold itself on the quality of its user experience. The iPhone presaged another change in the industry toward embracing the internet rather than offering just communication services.

Mobile devices that are optimised for the web are a different kind of proposition than just a portable phone. And in the context of exponential growth in internet services, User Generated Content and contextual technologies such as GPRS, we are suddenly in a very different world from the one Graham Bell envisaged. The coming together of these technological and social trends had one other important aspect that shifted development away from traditional software companies and towards a much more open hacker oriented workforce.

Third party applications

Since the iPhone arrived on stage, and definitely since its second incarnation, interest in developing third party applications for it has rocketed and Apple's Software Developer Kit has only accelerated this pace. These are not simple web applications. These are full applications which make use of preinstalled hardware like the camera or GPS system. And they integrate themselves into the phone's architecture, for instance connecting your address book to a mobile application. And these applications are increasingly being developed not by phone manufacturers on proprietary software but instead on open operating systems by emerging developer communities.

Opening OS to external developers is not new of course. But now it is more than a fringe activity and most phone manufacturers and internet service providers are getting in on the act. The iPhone is just the beginning and now we have Google Android, and even Nokia's N-Series supports many third party applications and there is much more coming.

Location based services

Having looked at industry trends, and noting the emergence of open platforms and the growth of mobile Internet applications, I became especially interested in location based technologies and software including GPS based games and social networks. And while there is clearly interest in this growing field a couple of fundamental questions emerged.

Firstly, how can companies use these 'locating' technologies to create commercial applications and how can they be really useful to customers? How can companies compete effectively in the market of mobile applications? How does branding work in this open situation and how do you retain customers and develop allegiance?

These questions may seem far away from the typical research questions in an HCI project, but without an answer it would be difficult to sustain any concept beyond the drawing board and so I saw the commercial constraints of this project as a critical input and success factor in evaluation.

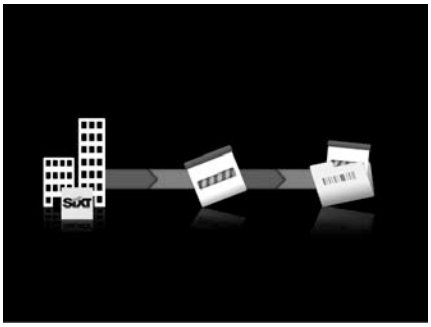
Business models

Having narrowed down the area for design opportunities I looked further into service business models and discovered that there are two main approaches. The first type includes utilities that are usually used for one specific and episodic task such as photo editing. These applications help you complete tasks without trying to sell an additional service or even necessarily linking to related ones. The other category of applications are service driven. These provide an additional service to the user and additional income for the application provider. Of course many applications fall between these extremes including many Google services such as online calendars, mail and the creation of documents on the web. These services are free, but presumably Google is using the data in some way or another to generate income now or in the future.

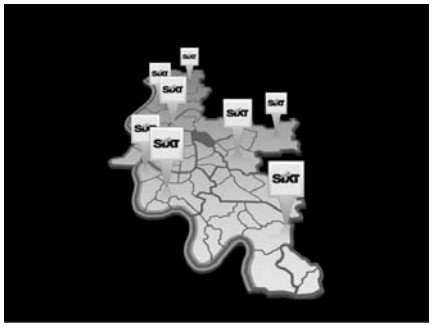
Design concept

The idea I came up with is simple but different from the normal UI, product or application. It's more about creating an environment that supports other developers and service providers. The backbone is based on a cross-device-platform

More and more mobile Applications will merge onto our phones.



Easy Application delivery throughout wifi-networks.



Easy delivery throughout the country

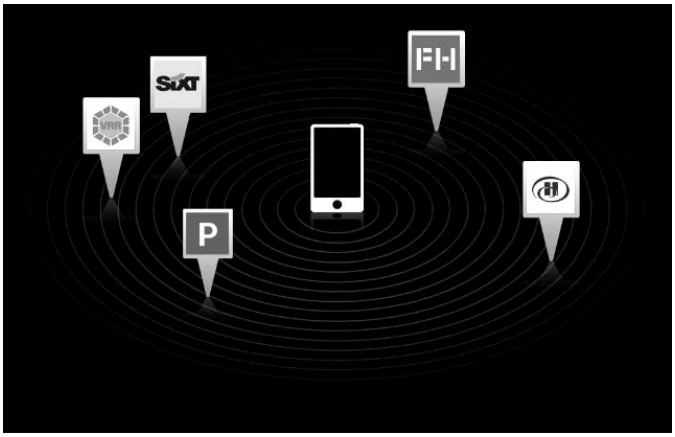
The Mobile Applications Installer is implemented directly into the phone

Three different views to browse the Applications around you, a spiral based grid view…

… and a Map view.

Installed Applications are displayed like normal applications

Applications get downloaded from the web and installed with a simple click.



The Mobile Phone recognizes ApplicationIDs in wifi networks.

Mobile Applications should work on all Mobile Platforms

upon which developers create Location Based Service applications, say for finding restaurants. The applications can either be generic (e.g. restaurant finder) or specific (e.g. find Bill's Burger Bars) and in each case sponsorship and licensing may play a role.

Applications like the restaurant finder are then stored in an online database for which a small fee is charged to the developers or providers. In addition, the hosting organisation in some way assures the quality of the applications and naturally allows users to access them. Ensuring a secure environment is really important in order to encourage people to discover and install applications on their own devices.

Not all services will work well with this centralised model and in many cases more localised and contextually relevant applications are needed. And this is where the open platform and database come into their own. Say, for example, you visit a new city. There are a lot of possible use-cases that could be supported by downloading locally relevant services, from public transport companies that can provide easy to use ticketing systems, maps, timetables and route-planners to the user, to complex guiding systems and informational networks that use the device as a navigator, aerial and informational.

Let me just give a short use-case to illustrate this. Let's say you are in an unknown city and you would like to meet a friend at the cinema. But you have no idea how to get there. The moment you step outside the main train station you take a look on your phone and you see that there are a couple of mobile applications around you. A category based list-view provides you with two transportation companies offering mobile applications. One of them is a taxi company, the other one a public transportation service. You choose the cheap solution, the public transportation. After installing the application, the app uses your GPS-Device to find the closest bus stop, and after looking up your destination a map shows you the way to the bus stop. Before getting on the bus you can use the same app to buy your ticket.

Arriving at the cinema and meeting your friend, you realise that the queue is really long. So you pick up your phone and see in the map-view that the cinema has its own application. A simple click downloads it to your phone and now you can easily browse through the movies and purchase a ticket. And we could even think a step further. What if users could create their own locations and connect these with applications. So you would have a different set of applications depending on your location. You have your business tools when you are at the office and you have your set of entertainment tools when you are at home.

Conclusion

By making applications location aware we might see new patterns of behaviour emerge. The distribution of applications might become more intuitive, by delivering solutions based on the possibilities that your current location provides for you. All of this offers the potential for new commercial offerings and for the UI Designer this might lead to new tasks and possibilities. What makes an application location aware? Is there more to this technology than just the usual geo-tagging? How can applications communicate with each other on a location basis? At the same time we, the marketeers, designers and developers, need to take care that this possibility doesn't end up as a new way of distributing commercials, like the bluetooth business ended up, and of course this raises a number of ethical issues too.

After finishing this project, I got involved in even more mobile projects. While working on the 'Location Based Applications' project I still thought that the whole idea of mobile applications is very 'techy', but working with different people I have found that the mobile world is becoming more public and these new technologies more accessible. When WAP technology was introduced in the late 1990s, it was rejected because it was not usable enough. Now the iPhone has shown us that a good UI can sell a technology, even if it is expensive. Now it is up to the UI Designers to spread good applications across all mobile platforms and establish this new part of the business.

Evaluating location aware games

A workshop at HCI 2008, Liverpool

Rod McCall

In recent years the explosion of location based technologies has spread from the lab into the palm of our hand, with many phones available on reasonably priced contracts now supporting GPS. Furthermore technologies such as see-through visors (such as those used in augmented reality games), while still not quite widely available, are dropping in price dramatically, which coupled with the increasing availability of handheld devices such as UMPCs means that location based software, in particular games, represents a growing and perhaps soon commercially viable area of interest.

However, location based games, whether they exist in visor or phone format, present a number of challenges for those seeking to evaluate user experience, which may include aspects ranging from user interface design issues, through to social elements, context and presence. However, unlike traditional laboratory based studies, location based games by their nature take place in a rich context – often with unforeseen consequences. As a result, the range of issues, and the complexities involved in evaluating them, raise a number of thematic, methodological and theoretical questions. Workshop participants Tony Renshaw and Andrew Wilson (Leeds Metropolitan University/Blink Interactive) provided the closing presentation which summed up succinctly the need to develop methods suitable not only for academia but for industry, with all the time and budget constraints that brings. With this and the various themes in mind developers and researchers came together for a one-day workshop during British HCI 2008 entitled 'Evaluating Player Experiences in Location Aware Games' (McCall, Grueter et al., 2008).

Evaluating mobile games provides us not only with the opportunity to test the game itself but also a method for testing hybrid technologies. For example Ann Morrison and Peter Peltonen (HIIT, Finland) discussed a game that provided a platform to test the usability and robustness of a digital–physical map technology known as Map Lens (Figure 1). This approach allowed for an exploration of wider aspects such as where such technologies may be useful, presence and co-operation, and was designed to allow for meaningful tasks, goals, feedback and social interaction – rather than overly restrictive tasks that take place in isolated laboratory conditions or which are ill suited to location based studies.

Figure 1 Two users illustrating the collaborative nature of the Map Lens system (image courtesy of Helsinki Institute for Information Technology)

Pervasive games also provide a method to change and alter the environment, and James McVicar and Lynne Baillie provided an overview of a game known as Zombies Vs Humans (Figure 2) which took place on the campus of Glasgow Caledonian University. The game was designed to appeal to game players and movie goers, with one important change from more traditional pervasive games in that there was little difference between gaming and non-gaming time. This approach forces evaluators and designers to consider one of the bigger questions, namely how to evaluate or design games where the boundaries between play/non-play become blurred, and the contexts in which they take place. Holger Muegge (Bonn University) further extended the discussion on the relevancy of context but in a slightly different direction; this time by exploring how situation specific interaction modes can arise depending on the context of the user.

As noted earlier, studying mobile gaming experiences is a complex problem, not least because of the unconstrained nature of the environment but also due to the phenomenon being examined. Work by Grueter et al. captures the complexity by

Figure 2 Zombies Vs Humans in use. (image courtesy of Glasgow Caledonian University)

specifically taking into account the dynamic nature of such experiences through an exploration of a range of facets including player movement, spatial distribution, collaboration and many others. These aspects were explored both from a representational and from an interactional viewpoint. Another methodological approach was discussed which used a variety of methods to capture aspects of place and presence, including questionnaires, interviews and videos drawn from work within the EU funded IPCity project (www.ipcity.eu).

As can be seen from the preceding discussion, a workshop devoted to the theme of evaluating location aware games quickly becomes an exploration of not only usability aspects, but also context, methodologies and how these can be useful to researchers and developers alike. Following on from the workshop a call for a special issue of *The Journal of Personal and Ubquitous Computing* has been issued. More information can be found at: http://www.pelag09.hs-bremen.de/.

Acknowledgements

The author acknowledges the assistance of the other workshop organisers Anne-Kathrin Braun (Fraunhofer FIT), Barbara Grueter (Hochschule Bremen, University of Applied Sciences) as well as the workshop participants. Images are from the respective papers and copyright for the images remains with the authors. For a list of participants and abstracts please visit www.peachbase.org/ocs.

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Rod McCall is a research scientist within the Collaborative Virtual and Augmented Environments Department at Fraunhofer FIT. His main areas of work include the design and evaluation of such systems from the perspective of place and presence.
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Whose job is it, anyway?
An industry day panel at HCI 2008

Tom Stewart

Slightly anarchic, not clear who is really in charge, could be a shambles but creativity usually makes it work in the end. No, not just the eponymous panel game 'Whose line is it anyway' but the state of human–computer interaction (HCI) in many organisations. Well, apart from the last bit about creativity making it work in the end – we were lying about that.

This was the introduction to a very lively panel at HCI 2008 where we had experts from different viewpoints and organisations argue about who 'owns' HCI and user-centred design. Acting a little like Clive Anderson, but with hair, Tom Stewart of System Concepts attempted to control a panel that reflected a range of skills from project managers, designers, software vendors to business and usability specialists.

Jarnail Chudge from Microsoft argued that software vendors were the key as he explained how much effort Microsoft put into designing the user experience. Stephen Corbett of the NHS argued the case for the user organisation being at the heart, whereas Guy Faithfull of BT described their approach to creating a usability centre of excellence within the organisation.

Finally, Leslie Fountain of System Concepts, calling on her experience as a usability specialist and an MBA, argued that whilst a usability champion is desirable the whole organisation must embrace human-centred design, if systems are to be usable and deliver real business benefits.

HCI 2009 Call for Participation

1–5 September 2009, Cambridge UK

www.hci2009.org

Deadline for all submissions: Thursday 5 March 2009

The 23rd BCS conference on Human–Computer Interaction celebrates the people who use technology, the people who create new technologies, and the relationship between them. A centrepiece of the conference will be an Open House Festival involving the many Cambridge laboratories and start-up companies now creating new displays, devices, games, communications and ubiquitous computing technologies. New developments in HCI depend on technology, and interchange between the communities will offer influence in both directions.

The scientific programme of the HCI 2009 conference will have a special focus on the priorities of UK and European research. In addition to scientific quality, we emphasise creativity, originality and relevance to real problems. By aligning recognition of the best HCI research with peer reviewed criteria for career development and research funding, HCI 2009 is dedicated to enhancing and supporting the HCI research community. All submissions will be peer-reviewed, with accepted papers published internationally via the ACM Digital Library.

HCI 2009 will be hosted by Cambridge University and Microsoft Research Cambridge. General Chairs are Alan Blackwell (CU) and Ken Wood (MSRC). Keynote speakers will include Bill Buxton, author of *Sketching User Experiences*, and Anthony Dunne, Head of Design Interaction at the Royal College of Art and author of *Design Noir: The Secret Life of Electronic Objects*.

Paper submission

Deadline for all submissions: Thursday 5 March 2009

We invite submissions of long papers (7–10 pages in ACM 2-column format) or short papers (6 pages or less in the same format) that make contributions in any of the following areas. Instructions for submission and review of manuscripts will be available from the HCI 2009 website: www.hci2009.org

Contribution areas:

- Economic and social potential: research describing designs with potential for economic or social benefit
- Technology: research demonstrating new kinds of interactive technology.
- Theory: research offering new ways of thinking through theories or models.
- Tools and Methods: research providing tools for understanding and evaluation of interaction design.
- Engagement with technology users or beneficiaries through ethnographic or experimental research.

We are also happy to consider new kinds of HCI research that offer alternative benefits or critiques. Short talks, posters and demonstrations will be reviewed together. Authors of accepted papers will have a choice of presentation format. We also encourage submissions of undergraduate or masters student work. These should be identified as such in the abstract. A prize will be awarded to the best student paper.

Other submission types

Deadline for all submissions: Thursday 5 March 2009

Doctoral Consortium

The Doctoral Consortium offers a friendly forum for a small group of students to discuss their work and receive constructive feedback from experts. Submission format is a short paper (2 or 3 pages) describing your work, which should explain the HCI issue addressed, methods used, results so far, and expected contribution. Please include your current CV and a covering note describing how you expect to benefit from the DC. The selection process will focus on the opportunities to benefit from participation, rather than finished research. Please contact hci2009-doctoral-consortium@cl.cam.ac.uk with enquiries (Chairs Andrew Monk and Kristina Höök).

Panels and debate

We are looking for juicy controversies to fuel debate at the conference. These may or may not use panel format, but will be engaging and involve a range of perspectives. Talk to us with an idea, a question or a shape for a session. Please contact hci2009-panel-debate@cl.cam.ac.uk to discuss ideas (Chairs Alan Dix and Ann Light).

Awards for International Excellence

These awards promote publications by UK researchers recognised for international excellence at recent HCI-related conferences. To nominate a British (or UK resident) author, please describe the basis for selection (e.g. prize-winner, top-ranked UK submission), and details of the nominated publication. Award recipients will be invited to present their work to HCI 2009 delegates. Please contact hci2009-international-excellence@cl.cam.ac.uk with nominations (Chairs Rose Luckin and Ann Blandford).

Tutorials

Tutorials can provide an introduction to new research techniques for HCI researchers, resources for educators, techniques for practitioners, or introductions to HCI for researchers from other fields. Proposals should describe the topic and format, intended audience, background of the presenter, and an indication of ideal audience size and expected fee. Please contact hci2009-tutorials@cl.cam.ac.uk to propose tutorials (Chairs Sally Fincher and Allan MacLean).

Workshops

The HCI conference series welcomes specialist satellite events on related research themes and applications, as a starting point for new publications and communities. Proposals should describe goals, structure and likely participants. Workshop papers may be published in a third conference proceedings volume. Please contact hci2009-workshops@cl.cam.ac.uk to propose workshops (Chairs Peter Wild and Leon Watts).

(re)Actor3: the Third International Conference on Digital Live Art
Liverpool, UK, 3 September 2008

The (re)Actor International Conference series explores cutting edge research and practice at the intersection of Human–Computer Interaction, Computing, and Live Art. As with previous years, this year's conference consisted of academic papers reflecting on practice and research, live performances, installation art, and demonstrations of novel pieces of technology. The theme of this year's conference, 'This is LIVErpool', focused on the nature of liveness in Digital Live Art – exploring how computing can be used to create new forms of live art in the physical world, and what issues this raises in terms of understanding the relationships between performance and interaction.

Each year the conference invites its chairs to bring their spin to the conference. This year, Nick Bryan-Kinns from the Centre for Digital Music, Queen Mary University of London, and Tom Lloyd of Dreamtime Film injected their interest in mutual engagement through collaborative music making, live performance in unanticipated performance spaces, and film making to the mix. The outcome was, as Russell Beale, (Chair, BCS Group – Interaction) put it, 'a triumph'.

(re)Actor3 was located in Liverpool, Europe's 2008 Capital City of Culture. This year we were co-located with the BCS Interaction's conference on Human–Computer Interaction, with a heady mix of paper presentations taking place at the Holiday Inn, Liverpool, and evening performances and installations taking place at the Contemporary Urban Centre North West – an arts, cultural and social enterprise centre that aims to reflect the themes of contemporary life in the urban environment.

As in previous years, the (re)Actor conference attracted a diverse range of participants from the arts, humanities, and sciences. This third year was no exception with practitioners, artists, researchers, academics, and scientists gathering together for a truly interdisciplinary meeting of minds. Building on the conference's international reputation, this year's submissions were from 12 countries across the globe ranging from Scandinavia to the US, Europe, and Australia. Each contribution to the conference was peer reviewed by the (re)Actor3 committee, and every year the decisions on which papers to accept gets harder and harder as the competition for acceptance grows. We thank the committee for all their hard work in reviewing the contributions. Participant feedback from the previous conferences suggested that we present a single track this year and that performers and installation artists have the opportunity to present their work during the daytime presentations. As a result, we accepted 12 paper presentations, eight performances and 12 installations.

The daytime conference began with a stimulating keynote from Martyn Ware from the Illustrious Company. Martyn, the founder member of both The Human League and Heaven 17, is one of the leading figures in electronic music. As record producer and artist he has featured on recordings totalling over 50 million sales worldwide during a 27-year career to date. Martyn's dedication and passion for pushing the boundaries in music and technology was clearly evident in the astounding number and quality of projects with which he's involved. Martyn's company, the Illustrious Company, was formed in 2001 to create new forms of spatialised sound composition using their unique three-dimensional 3D AudioScape surround-sound system, in particular for collaborative works with digital and fine artists, museums, exhibitions, live events, dance, theatre, and education. Over sixty unique new projects using 3D sound composition have been created and exhibited or performed worldwide during the last seven years. Martyn's 2008/2009 tour, both with his reformed band and with the Future of Sound, is not to be missed.

Sharewear by Di Susan Mainstone. Photo Credits: Jacqui Bellamy, PixelWitch Pictures © 2008 BigDog Interactive.

Presentations this year ran the gamut – everything from wearable technology, exertion interfaces and generative music to open, accessible and easy tools and technologies for live performance. Di Susan Mainstone presented *Sharewear*, a quirky yet beautifully designed wearable outfit that conjoins two wearers – who at the evening event were identical twins. Ernest Edmonds presented his online painterly work *Shaping Forms on the Web,* now continuously running between Berlin and Sydney, and Letizia Jaccheri presented the *OpenWall,* which allowed remote access to giant open-source displays. Joe Marshall, last year's Best Paper Award winner, described his physical exertion interface called *I seek the nerves under your skin: a movement poem* which provided many laughs and lots of sweating at the evening event. Lodewijk Loos continued the physical exertion theme with a presentation on collaborative filtering of live TV, taking the Olympics as a pertinent example, and Sam Waller presented research on impairment simulators whilst wearing them. Sam's talk was particularly telling as he required help to connect his laptop to the projector whilst encased in the impairment simulators. Making technology more accessible was also a theme for Ilias Bergström's *Mother,* which aimed to allow users to create and dynamically control real-time visuals without requiring extensive programming expertise. Finally, controversy

Jennifer G. Sheridan, Nick Bryan-Kinns, Tom Lloyd

top left: TILLY AUTOMATIC (aka Sarah Nicolls). The first (re)Actor3 Artist in Residence Grant sponsored by the Centre for Digital Music, Queen Mary, University of London

top right: I seek the nerves under your skin: a movement poem, Joe Marshall

above left: Neurofeedback Illusionist Luciana Haill and Ms Rosie Meres-Battenberg-brain

above right: DpSdC (Degradazione per Sovrapposizione di Corpi), Salvatore Iaconesi and Oriana Persico

left: (re)Actor3 Chairs Tom Lloyd, Dreamtime Film (left) and Nick Bryan-Kinns, Centre for Digital Music (right)

Photo Credits: Jacqui Bellamy, PixelWitch Pictures

was stirred up by Thomas Tichai's *Manifesto of Digital Folk Music* in which he proposed that there is a twenty-first century form of folk music where the computer has replaced the acoustic guitar.

Public and collaborative participation and performative play was clearly evident in many of the interactive installations presented during the day and at the evening event. Tom Flint's *Sound of the Crowd* appeared as a public installation on the BBC BigScreen Liverpool during the conference. In Celine Latulipe and Annabel Manning's *Interactive Surveillance*, participants used a two-handed Wii Remote control to explore images of Mexico–USA border crossings. Salvatore Iaconesi and Oriana Persico asked participants to consider copyright law and ownership as they remixed fragments of copyright images in real time with their interactive tabletop projection *DpSdC* (*Degradazione per Sovrapposizione di Corpi*). The tabletop provided quite the 'digital centrepiece' during dinner conversations. Proving that public spaces are filled with uncertainties that can create unanticipated outcomes – *The Giant Instrument* from the Centre for Digital Music transformed into the *Shadow Instrument* for the evening event, relying on the shadows of participants rather than their physical bodies to create collaborative music. Cellular automata and generative music also rippled across many performances and installations, including Robert Davis's *Murmur* and Robin Fencott's installation *Interactive Music using Multi-Touch Cellular Automata*.

The frankly spectacularly jam-packed evening extravaganza was kick-started by MC Martyn Ware who presented the Future of Sound, and who gave each artist an opportunity to speak to the crowd about their performance at the end of their set. Performances blasted out of the Illustrious Company's 3D sound system throughout the evening, which ended with a DJ set from Liverpool-based DJ Jazzbo. Keeping all of the participants chatty during the evening were the gender hacking (re)Actor3 hostesses Detroit, Deb, Cathy and Tiff. Opening up the evening to the global community, Sean Sanderson streamed live video in real time using his iPhone as events unfolded.

Kingsley Ash began the evening with *GoLImp IV,* a generative music performance with retro-feeling graphics based on the Game of Life. Next up was Nick Rothwell [aka CASSIEL], who played a live set of pulse-based electronica utilising a combination of vintage and custom-built cutting edge technology – a real hit with the electronica and 'beep click' fans in the crowd. Neurofeedback artist Luciana Haill and the lovely Ms Rosie Meres-Battenberg-brain then selected a member of the audience to strap on an EEG headband to undergo her 'Lucy Tuning' techniques in which she uses medical biofeedback technology to make music and visuals in real time.

'*Machines within machine*', the augmented piano performance by TILLY AUTOMATIC (aka Sarah Nicolls) was an erotic blend of classical virtuosity and enchanting technology. Imagine John Cage armed with a powerbook. Sarah's performance was the result of the first (re)Actor Artist in Residence Grant commissioned by the Centre for Digital Music, Queen Mary, University of London. The commission allowed Sarah to collaborate with computing students from the Centre to create an exciting and innovative performance mixing contemporary pianism and performance with cutting edge digital signal processing. Positioning her piano in the middle of the surrounding crowd, Sarah swayed across the keyboard, bouncing objects off the piano strings and tipping an electronically augmented top hat to throw sounds around the room. The audience was charmed by her magical performance – truly spectacular.

The award-winning Sancho Plan rounded off the evening performances. Their combination of animation, sound, music and interactive technology created fantastical worlds in which animated musical characters were triggered live and in real time by a variety of electronic musical instruments and interfaces. As with other Digital Live Art, the key to their success is in understanding performance, interaction, and computing, and synthesizing these three into a truly mesmerising spectacle.

Whilst this year clearly brought out an array of sound ingenuity and creative uses of technologies, there was less of an emphasis on the visual aesthetics. Perhaps we need to reconsider performances like *Once I Was Dead,* seen at the first (re)Actor conference, which embodied the principles of Digital Live Art. We strive to keep a balance between technical wizardry and that which challenges art. *Art is the science of asking questions. Science is the art of giving answers.*

More noticeable than ever this year was the way in which the audience collectively interacted and engaged with the artworks. Performances moved off the stage and into the crowd, asking spectators to step in, join in and collectively react to the unanticipated events as they organically grew throughout the space. Participants were not *users* of the technologies but responded as *performers* – engaging through a desire to be physically close to the artists and to become part of the performance themselves. This growing desire to create live performances in which bystanders transition to witting participants brings with it a need for better access to open source tools and technologies without open sores. This is not just a technical issue but also a need for better access to experts who are open and willing to share their opportunities and knowledge – we seek open communities that encourage mentoring and support. The (re)Actor conference series will continue to promote inclusive and innovative Digital Live Art that responds to these desires and pushes the boundaries of what is possible in our digitally mediated age.

We are indebted to BigDog Interactive Ltd and Routledge publishers for their generous support this year, and to the BCS Interaction group, especially David England, for their support and assistance. We also thank the Centre for Digital Music at Queen Mary, University of London for supporting the (re)Actor Artist in Residence Grant; Martyn Ware, Lewis Sykes, and the Future of Sound; Jacqui Bellamy of PixelWitch Pictures; and, Bren O'Callaghan, BBC BigScreen Liverpool.

Most importantly, we would like to thank the participants, for your contributions to the conference and to the field of Digital Live Art itself. Without you we would not be able to push this exciting and innovative field onward and upward. Keep the ideas coming – we are sure that your enthusiasm will spark future work and new collaborations. For updated information see www.digitalliveart.com. Videos, proceedings and images can be downloaded on our website.

All the best, we look forward to seeing you at (re)Actor4 and remember, keep it LIVE!

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Create 2008
London, 24–25 June 2008

Tony Rose

There's been a lot said about creativity lately: creativity within the design process, creativity as innovation, and creativity within the wider discipline of HCI. Time then, for a conference to focus specifically on this issue: Create 2008.

Create is a two-day conference focused on creating innovative interactions, whether digital consumer products, interactive services or interaction paradigms. The idea for the event came about following the experiences of Dave Golightly (of the Ergonomics Society) and William Wong (of the British Computer Society) in running a joint event in 2006, as part of the Ergonomics Society's annual conference. Although well attended, it was apparent that co-locating with an existing event was not the best way to serve the collective purpose – and thus Create 2007 was born. In this article, we review Create 2008 (held at the BCS London offices on June 24–25) and reflect on the extent to which we, as organisers, achieved our objectives.

Evidently, the idea behind Create is not unique – there are of course other conferences within the global HCI community that are concerned with issues such as creativity, innovation and user-centred design. But within the UK, at least, Create itself is a relative newcomer.

Likewise, the format of the conference itself entailed some new ideas. As organisers, we realised that for Create to have more than a purely academic scope it should include practical examples of creative design work, and in that respect it needed to go beyond the regular conference format of presentations and posters. We therefore took the decision to extend the programme with a session called the 'Create Design Showcase', in which attendees would present their design ideas in the form of interactive exhibits. This session would run on the evening of the first day, with exhibits being selected via a competitive call and expert review panel.

Evidently, staging such an event presents some novel challenges: how do you co-locate a dozen or more interactive exhibits (ranging from a new media art installation to a music synthesiser based on genetic algorithms) with differing audio/visual, space and logistical requirements, in a venue designed for traditional conferences and meetings? In addition, few of us had ever promoted such an event before: where should we submit such a 'call for exhibits' and what kind of response should we expect? Would the traditional HCI and design mailing lists reach the right kind of people? And if we succeeded in attracting sufficient entries to make the review process competitive, how many delegates should we expect to actually register for the event?

Thankfully, many of these concerns proved unfounded. In the end we received more than enough submissions for both the main conference and the Showcase, and Create 2008 ran with a capacity audience (with many late applicants being turned away).

Indeed, it was encouraging to see such a strong attendance from members of both the Ergonomics Society and the BCS (and, additionally, a significant number of attendees who were members of neither – a recruitment opportunity that will not be missed next year!). The contrasting backgrounds of the two organisations may yield different perspectives but they share a common interest in using knowledge of human abilities and limitations to design and build for comfort, efficiency, productivity and safety. (Or, to adopt the BCS Interaction Group perspective, a focus on the 'analysis, design, implementation and evaluation of technologies for human use'.)

The first day was characterised by the keynote speakers: Benedict Davies of Google, who presented some of the challenges involved in designing user experiences for mobile phones and MP3 players, and Britta Burlin, who gave us an insight into the means by which Whirlpool Corporation balances usefulness, usability and desirability in product development. Highlights of the second day included a group exercise run by Sarah Sharples of Nottingham University, in which participants expressed their practical design skills using play-dough, and a keynote by Lucy Stockbridge of Serco, who presented some of the opportunities and challenges involved in integrating UCD with the wider processes of product innovation.

But perhaps the most memorable aspect of Create 2008 was the Showcase itself – this was by far the most ambitious aspect of the programme, and clearly the element with the highest exposure to Murphy's Law (i.e. if anything can go wrong, it probably will). But judging from the number of delegates who stayed late into the evening to tour the labyrinth of darkened rooms, projected images and ambient soundscapes, it was clearly a success. As organisers we all breathed a collective sigh of relief, none more so than the Showcase chair, Stephen Boyd Davis.

For full details of the programme for Create 2008 and what you missed at the Showcase, see http://www.cs.mdx.ac.uk/research/idc/create2008/ and http://www.cs.mdx.ac.uk/research/idc/create2008/docs/showcase_programme.pdf. We now look forward to Create 2009, scheduled for 1–2 July at the BCS offices in London. If you'd like to get involved in the organisation, just drop us a line at any of the addresses below.

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Pastiche Scenarios

Mark Blythe

Last May a British climber made the first mobile phone call from Mount Everest thanks to a mast on the north ridge of the mountain. Ninety-five years earlier Captain Robert Falcon Scott and four companions died in the Antarctic just eleven miles from a food depot that would have saved them. They were beaten to their goal of being the first to the South Pole by the Norwegian Roald Amundsen. Despite this, 'Scott of the Antarctic' became a legend of the British Empire, symbolising bravery and fortitude in the face of disaster. The letters he left to his wife and the public ensured that he would live on in the national imagination. Had he had access to today's technology he would probably have lived on in Surrey, which he may have preferred.

Scott of the Antarctic's Last Txt Msg

14th Jan 1912: 15.17

Dling. Darling I mean. Do u C my dear? 4give spelling. Saves time. Fingers cold. Didn't think thered b a signal out here but there is. Wot an age we liv in! Oates says international call rates r 30 shillings a minit. Shant and wont be paying that! Txt msgs r cheapr apprntly. Apparently I mean. R u getting the hang of it old girl? Luv R

15th Jan 1912: 08.20

Dling. 1 or 2 set backs but nothing 2 worry about. Sledges failed & we have eaten the ponies. Still, expected as much. Sent dogs bk 2 base camp. They were no use. Five of us r pressing on. Will pull sledges ourselves. Seems fairer somehow, more noble, more British. Cheating using dogs, kind of thing Nrwgians wd do. R

15th Jan 1912: 10.17

Just saw most marvellous group of penguins! Made many scientific observations. 1stly, they r V sweet. 2ndly they r V comical! The boy wd luv them. Rx

15th Jan 1912: 12.25

Dling. V. close now. V. tired but end in sight! Keeping spirits high. Upper lip still stiff (with cold) LOL! Re ur message. Of course don't mind if u have lunch with Nansen. He gave me a v good rate on boat. Nice chap, for a Nwgian. Luv R

15th Jan 1912: 16.00

Almost there! Just 1 mo push. Ha! And they sed it cdnt b done without dogs! Ha! I say again. Shud b there 2morow.

17th Jan 1912: 08.00

Fk! Fk! Fk and Sht! Bstrd! Cnt! Bstrd! Bstrd! Fking bstrd! Arrived at pole and found Amndsen's camp. Fk! Fk! Fking Fker! Cnting Nwgian! Also found out where phone signal is coming from! His team sponsored by Nokia! They have put up phone mast with Nwgian flag on it. Bstrds! Fk, fk sht! Luv 2 the boy. R : - (

17th Jan 1912: 14.15

Morale v. low among chaps. Wd luv 2 hear ur voice. Tried ringing T mobile 2 increase credit. Got put in endless q. Then disconnected. Credit left 4 texting only. Blizzards v. bad. Interfere with signal. Coverage intermittent despite Amndsn mast! Glad u r keeping busy. Re ur message. Have never paid attention 2 what neighbours say in life, won't start now. How r they 2 no Nansen is narcoleptic, poor chap must sleep where he falls. Luv R

17th Jan 1912: 18.00

Oates is on monthly pay plan. He said – damn the charges, I will call 4 help. He left the tent in a blizzard. Said – I am just going outside 2 find a signal, I wont be long. But he has been ages. R

15th Feb 1912: 06.15

Sorry nt 2 txt in so long. Not sure if this will get thru. Bit lost. Don't worry tho. Will b fine. Luv R

20th Feb 1912: 16.42

Not looking 2 good now. We took risks, knew we took em. Things have come out against us & there4 we have no cause 4 complaint, but bow 2 will of providence. Determined still 2 do best till last. Luv R

28th March 1912:18.03

Hd we livd I shd hav had tale 2 tell of hardihood, endurance and courage of companions – wd have stirred heart of every Englishmn. These txts & r dead bodies must tell tale…We shall stick it out 2 end, but we r getting weaker – end cannot be far.

29th March 1912: 19.43

I had looked forward 2 helping u bring boy up but its satisfaction 2 know he will be safe with u. Make boy intrstd in natural history if u can its better than games, they encourage it in some skools. I know u will keep him in open air, try 2 make him believe in a god it is comforting.

29th March 1912: 19.44

And guard him against indolence, make him a strenuous man, had 2 force self into being strenuous. As you know – had always inclination 2 be idle.

29th March 1912: 20.27

Hands 2 cold 2 txt. Am using pen 2 press keys. Not even sure if txts are getting thru. Beginning 2 think wd hv bin better off with pen & paper. Search party wd find it. Prolly better testament. Seems pity but do not think I can write more.

29th March 1912: 21.51

4 Gods sake, lk after r people.

1st April 1912

Well I'll be blowed! Rescued! And by Amndsn! Picked up our signals when testing his phone mast! Turns out he's thoroughly bloody nice chap! He skis and uses dogs which 2 my mind – cheating as u know but still – credit where due! I have v bad frostbite but shd pull thru. Home soon. Re your msg. When have I ever takn notice of servants gossip? Still, hope Nansen is feeling less tired, must be v. annoying having him fall asleep in your wardrobe. Luv R

Mark Blythe is a Research Fellow in the Department of Computer Science at the University of York, UK. He is an ethnographer with a background in literary and cultural studies. He has a tendency to write about himself in the third person, like Julius Caesar.

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My PhD
Design research to assist conversation in dementia

Lorisa Dubuc is a research student in the Computer Laboratory at the University of Cambridge, studying under the supervision of Dr. Alan Blackwell. Her background is in Computer Science and Psychology with a BCSc from the University of Manitoba. Her research is focused on how design methods can be used to identify an appropriate set of design parameters for conversation support in the presence of dementia.

Motivation for my research

Often technology-related research is far removed from any human element: machines, button presses, and long hours sat staring at a screen seem to be the norm, if not mandatory, in the field of computer science. I discovered early on in my academic career that while I was very capable of conforming to this role, it wasn't my passion. Taking as many psychology electives as allowed during my undergraduate degree, I hoped to one day discover how I might use my computer science expertise in a human-centric way. Then I discovered HCI.

Dementia: an emergent issue

When trying to narrow down which area of HCI to focus my PhD on, in parallel I was learning about dementia and its effects from my mother, who was training to work with older people. Dementia is a condition that is becoming increasingly prevalent as our society ages; according to the most recent Dementia UK report [1], over 700,000 people in the UK are currently affected by dementia, with numbers on the rise. Looking worldwide, there are currently almost 18 million people living with dementia, and it is predicted that by 2025 this number will nearly double. While people of any age can be affected by dementia, it is most commonly experienced by older individuals: the predominant form of dementia is Alzheimer's, although there are many other lesser-experienced variants. Dementia is probably known best for the dramatic memory loss that accompanies it, but the difficulties associated with dementia – such as behavioural changes, reduced skills, fear, frustration, and confusion, to name but a few – are much more far-reaching and complex than many people realise.

In dementia care, so often the focus is on dealing with physical needs, as they are generally obvious and immediate: however, it is important to remember that individuals with dementia are still whole people, and have mental and emotional needs as well. Partaking in communication, particularly conversation, is a valuable way to help an individual with dementia maintain a sense of control over their life, feel competent, express themselves, and keep their place in the world around them. Furthermore, for others, being able to continue having meaningful conversations with a friend or relative who has dementia will bring individuals closer together and potentially ease some of the pain associated with cognitive decline for both parties as dementia progresses. As normal conversation can be a difficult thing to achieve in dementia, there is an opportunity for technology to assist individuals in maintaining more satisfying relationships through the augmentation of conversation.

Designing for dementia

Although communication often presents a problem in dementia, it is one that has been given little attention from a technological perspective. I began my research by focusing on understanding the design space, looking at the different causes of conversation breakdown for both the person with dementia and the people they are conversing with (most notably their caregiver), to identify possible opportunities for technological intervention. While memory loss presents obvious problems in maintaining a conversation, such as forgetting what was currently being spoken about or repeating oneself, fragmented and difficult conversation is not always a result of the condition itself, but of factors associated with the condition through social and age correlations. Prior research has not identified a clear way to assemble these causes into logical groupings. In the first stage of my research, I have advanced the field through the construction of a taxonomy comprised of four categories – cognitive, physical, social, and identity – which can be used to understand the obstacles that hinder conversation in dementia. To know more about this piece of research and the taxonomy, see [2].

Moving from the design space to examining existing designs, a handful of technologies have been developed to encourage conversation in dementia (or for older people in general), all focusing on the conversation brought about by reminiscence activities. While they have been shown to successfully stimulate conversations between those with dementia and others interacting with them during the time they are using the tool, these technologies cannot help support the everyday conversations individuals could use assistance with in their day-to-day lives. Particularly in earlier stages of dementia, when people can be very aware of difficulties they are experiencing, conversation support could be important in helping to maintain interaction skills for longer. The old axiom applies here: 'If you don't use it, you lose it'.

Thus, I originally started my PhD with the intention of building technology that might be able to do this. However, it became apparent that before the creation of effective aids – technological or otherwise – can be considered, it is necessary to ensure that the design process fully takes into account the strengths and limitations an individual with dementia possesses. Thus, my focus shifted onto design methodologies used for special populations, with my research aims evolving to focus on how one might successfully include those with dementia in the design process in order to identify an appropriate set of design parameters for conversation support in the presence of cognitive impairment.

Involving stakeholders in design

Often people who are expected to be the end-users of a particular device are consulted during the design process, in order to ensure that the end product meets the needs it is intended to, and does so in an appropriate way. However, in the case of dementia, more often than not people with dementia are excluded from participating in this practice, due to the difficulties of working with an impaired user group that is very heterogenous (given how differently the condition can manifest from person to person). I have used a variety of augmented user-centred design methods to collect data regarding the experience of communication in dementia: informal interviews with professionals in the field, observing and interacting with those with dementia at a weekly art group, conducting focus groups with carers, semi-structured interviews with those experiencing progressive dementia, as well as running a design workshop.

The design workshop (Figure 1) aimed to explore the possibilities of doing rapid prototyping with people experiencing various stages of dementia. Participants in this workshop were led step-by-step through an art exercise aiming to observe the design strategies employed by those with dementia when creating a tangible prototype. It also allowed for the examination of the differences individuals may demonstrate in describing their experience with the 'picture carrier' they created, which had a tangible physical form (i.e. an object displaying a picture that can be passed from one person to another) versus a more abstract electronic version, which used a Nokia 770 internet tablet to display the picture. Participants who were capable of doing so were encouraged to express their design motivations when discussing which they liked better (the tangible representation they created or the N770), and why they preferred one over the other, to give some insight into the usability of each. While this was a challenging experience, in no small part due to the variety of skill levels present in the group, everyone was able to participate in creating a prototype, with some successfully providing insight into the designs they preferred.

Going forward: 'grounded design'

Early on in the research I realised that creativity would be needed not only in collecting data, but also in analysing data, given the nature of the user group and the inherent difficulties in eliciting usable and accurate data from cognitively impaired individuals using standard ethnographic methods. In doing this, a novel methodological approach for close analysis of interview material and other data is being developed, called 'grounded design'. This methodology builds on the widely used method of qualitative analysis called grounded theory, but instead of generating theory grounded in data, its intent is to draw out design parameters that may be used in the design of new technologies for a particular user group. Grounded design is not meant to replace current design processes, but rather add another tool into the designer's repertoire, assisting in the design of technology for special user groups who may have a hard time communicating their needs explicitly, or when looking to identify opportunities for new interface designs. Developing this new methodology, along with testing it by deriving design parameters from interview transcripts, has become a major focus of my PhD research; results to be published when they are complete.

Figure 1 Working together to make tangible prototypes

References

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[2] Dubuc, L. & Blackwell, A. (2005). Opportunities for augmenting conversation through technology for persons with dementia. In *Proceedings of Accessible Design in the Digital World (ADDW) Conference*. Electronic Workshops in Computing Series, Dundee, Scotland.

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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Book reviews

Social networking tools such as blogs, wikis, Flickr, You Tube, Facebook, Elgg, Ning, MySpace, Twitter and Second Life (a 3D virtual environment) are increasingly being used to share and collaborate in a variety of contexts such as educational, social, political and in business. In line with the social networking theme of this issue of *Interfaces*, I have reviewed two of the latest books in this area: *E-learning and Social Networking Handbook: Resources for Higher Education*, by Robin Mason and Frank Rennie; and *Coming of Age in Second Life: An Anthropologist Explores the Virtually Human*, by Tom Boellstroff.

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 us to present reviews of books on a particular theme or domain, please let us know. Many thanks.

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E-learning and Social Networking Handbook: Resources for Higher Education

Robin Mason and Frank Rennie

Routledge (Taylor and Francis Group), 2008
ISBN-10: 0 415 42607 3

This book addresses the issue of designing courses with Web 2.0 tools and social networking approaches. The primary audience for this book are educators who are interested in the kinds of social networking tools available for educational purposes and in how these tools could be incorporated in their practice.

Chapter 1 sets the context of Web 2.0 and social networking tools, and reviews the current literature in the area. Chapter 2 discusses the implications of these tools in course design. Chapter 3 moves away from the core theme of the book and focuses on the use of media such as text, audio, images and video in course design and how to best use these in different contexts. Chapter 4 examines the various tools being used in educational contexts. The advantages and disadvantages of each are listed along with a small case study of how the tool could be used in practice. Chapter 5 discusses the limitations and problems in using social networking tools and Chapter 6 presents a case for Emergent Design as an approach for course design rather than traditional top-down models.

The book reviews the various literature sources in each chapter. However, it lacks a personal voice, a personal interpretation or discussion of any of the authors' experiences. Therefore I was neither excited nor absorbed by this book. For an educator making early explorations in the area of Web 2.0 tools, this book would help to set them in context and show why including them in the curriculum can enhance collaborative learning. The literature review covers extensive ground, from early mailing lists and discussion forums to Web 2.0 tools. It also traces the history of educational technologies and the contexts in which they have been employed over the last two decades.

The challenges faced by educators in adopting these tools in practice are discussed in Chapter 2. These include lack of understanding of how the tools might be used; lack of appropriate guidance for linking tools with the pedagogy and learning outcomes of the course; the perceived instability of the tools and their immaturity and constantly evolving nature; and organisational barriers to their use, such as concerns about security and privacy of students' data. This chapter, like the book as a whole, largely emphasises situating the tool(s) within the course pedagogy and communicating their value to students, to encourage their adoption and successful use. The discussion in Chapter 3 of using various media, such as images, text and audio, has already been covered in other texts, and devoting a whole chapter to this in a social networking book is rather odd.

Chapter 4 is one of the most useful chapters for an educator who wants to get a feel for the social networking toolbox and potential applications of the tools. Tools covered in the chapter range from blogs and wikis to Skype and mashups. For each tool, the advantages, disadvantages, and key points for effective practice are discussed, with references to how the tool has been used in various contexts and its pedagogical effectiveness. Chapter 5 revisits the challenges of incorporating the tools in practice, discussed in Chapter 2. These include increased workload; having the necessary skills to adopt these tools; and the intellectual property rights to content generated by using such tools. From an institution's perspective, there are also challenges related to staff development and training, and different models of assessment for social networking tools.

Though the book outlines these challenges and raises questions dealt with by other literature sources, it fails to address them. Perhaps the answers are unknown, or perhaps the solutions depend on various contextual factors at each institution. The final chapter of the book highlights some interesting issues: for example, how the emergence of online social networking communities could create a significant threat to universities as traditional repositories of wisdom and knowledge creation; and whether the growth of user-generated content will promote the culture of 'do-it-yourself' and how this would challenge the status of the academy as the elite source of knowledge.

The advantages of using social networking tools in socialisation, participatory learning, community building, and knowledge construction are discussed throughout the book. However, an educational or HCI researcher interested in investigating the usability and pedagogical effectiveness of these tools will be disappointed with this book, as it 'reports' the kinds of tools available rather than critically reviewing the usability and usefulness of these tools in education.

Coming of Age in Second Life: An Anthropologist Explores the Virtually Human

Tom Boellstroff

Princeton University Press, 2008
ISBN-13: 978-0-691-13528-1

Second Life is a 3D virtual world. 3D virtual worlds are multimedia immersive, simulated environments, often

continued on page 27…

Profile

Daniel Cunliffe talks to John Knight

I am a Senior Lecturer in multimedia computing at the University of Glamorgan in south Wales. I lecture at every level from Foundation Degree through to Masters on a variety of multimedia/hypermedia/web design/HCI related topics.

My rather 'boutique' research investigates the relationship between technology and minority language maintenance and revitalisation. Most recently I have been looking at Welsh language blogging and the use of Welsh on Facebook. The use of technology for language activism is also an interest.

I was Chairman of the IASTED HCI conference in 2007 and 2008 and I am Associate Editor of the journal *The New Review of Hypermedia and Multimedia*.

I live in the Swansea valley where I don't spend enough time being lovely to my wife, playing with our daughters, or stroking our cats.

What is your idea of happiness?
Having nothing else to do other than spend time with our daughters… teaching them to fly kites… by the sea… with ice-cream.

What is your greatest fear?
That by the time I get round to teaching them to fly kites our daughters will be too old to want to.

With which historical figure do you most identify?
The ordinary unnamed masses, I'm not really one for fame and glory.

Which living person do you most admire?
You'd think there would be someone, wouldn't you. No, can't think of anyone – I wonder if that says more about me or about people? Probably someone who has just gone about doing wonderful things without making a song and dance about it – which is why I haven't heard of them!

What is the trait you most deplore in yourself?
Using my time badly.

What is the trait you most deplore in others?
A failure to use their powers for good – selfishness, conceit, self-interest, greed, vanity…

What vehicles do you own?
My sensible everyday car is a Seat Leon, 2.0 litre turbo diesel. My fun car (which is currently on loan to a friend) is a race modified Mini (a proper Mini, not the baby BMWs). I also have a very neglected bicycle which is noteworthy as it is the only vehicle I have ever owned from new.

What is your greatest extravagance?
In the past it has always been cars, though I have never owned more than five at any one time! These days my extravagances are on a more modest scale – the occasional CD or sci-fi paperback and time to enjoy them.

What makes you feel most depressed?
Apparently I come from a long line of manic depressives, so I'm prepared to blame any feelings of depression on genetics :)

What objects do you always carry with you?
It depends what I am wearing. Most basic – wedding ring and watch. If I am wearing trousers, then also loose change, office keys, cheque book, wallet full of receipts and business cards of people I really should contact, and a small carved wooden head (not as weird as it sounds – broken off from keyring). If I am wearing a coat, then also car keys, mobile phone, sunglasses and assorted daughter-related oddments (currently a tissue, a hairband, a keyring torch and a green plastic whistle).

What do you most dislike about your appearance?
I don't seem to be as slim as I used to be, but it hasn't yet reached the stage where I feel I should do something about it.

What is your most unappealing habit?
I actually asked my wife – and all she could come up with was that I am not romantic enough. I'm not sure that is really an unappealing habit, but I thought I should quit asking whilst I was ahead.

What is your favourite smell?
Smoked bacon frying, or that fresh early-morning dewy smell of a day still full of potential.

What is your favourite word?
I'm very fond of old words – like trollop, rapscallion, filibuster, tosspot. I also like the words in my own everyday vocabulary that mark different places I have lived, daps, clatty, cwtch.

What is your favourite building?
Avebury (not sure if it counts as a building?), the Eiffel tower, the Mezquita in Cordoba, almost any military architecture.

What is your favourite journey?
Anything that involves me driving, anywhere on the London underground, anywhere that involves waiting in airports (the only time I get to read sci-fi), going home (but that is more about the destination than the journey).

What or who is the greatest love of your life?
Our daughters, my wife, my family… nothing very extraordinary I'm afraid.

Who would you invite to dinner if you could invite anyone?
I had always thought it would be great to invite people who are clever with words and ideas, like Stephen Fry, but I don't know if I could really relax and enjoy it. It would be nice just to have a quiet meal with my wife, or maybe some friends that we haven't seen for a while. I also owe John McCarthy a thank-you meal for being Keynote at IASTED HCI 2008 so perhaps he could come along too? And maybe Dr Seuss.

What or who annoys you the most?
Either politicians or celebrities, I can't decide.

Which words or phrases do you over-use?
"Like I just said." Which is OK if I am about to reiterate a point, but particularly irritating if I haven't actually just said what I am about to say.

What is your greatest regret?
If years of reading sci-fi have taught me anything it is that if you go back in time and change something, everything in the present changes too (and rarely for the better). I like the way things have turned out, so wouldn't want to risk changing anything, so no regrets.

When and where were you happiest?
I nostalgically recall the summers of my

youth on archaeological excavations, long hot hard days, pints of beer, long wet cold hard days, cups of tea and mars bars, followed by pints of beer. But I wouldn't want to go back – here and now is great.

How do you relax?
I don't remember. At the moment either I am awake and not relaxed, or asleep. So maybe I relax by sleeping.

What single thing would improve the quality of your life?
More time for everything – if I can't have that then I'll have to make do with an obscene amount of money.

Which talent would you most like to have?
I'd really like to be able to speak Welsh, or play the mouth organ (the ultra-portable of musical instruments).

What would your motto be?
Immanent deadlines turn infinite pleasures into finite chores. It's a bit wordy for fitting under the family crest but I bet it sounds great in Latin.

What keeps you awake at night?
I'd like to say something important, like climate change or global food shortages, but actually more likely to be requests from one or other of our daughters for milk/water/pink cat/flashing rabbit ears…

How would you like to die?
Peacefully in the knowledge that there is nothing left that still needs to be done. Either that, or in spectacular fashion taking all the politicians and celebrities with me!

How would you like to be remembered?
An annual bank holiday and fireworks extravaganza would be nice. Failing that, fondly will do.

What is your favourite possession?
At the moment we are in (hopefully almost at the end of) an extended process of moving house, so almost all of my possessions have been in storage for the last eight months. I don't really seem to have missed any of them. There is my 1960s cocktail cabinet that I am a little anxious about getting back from storage, but that's because my wife hates it and may have paid the removal men to drop it!

What is your favourite piece of music
What is it about you and favourites? I suppose if I have to… favourite band… MOFRO, favourite album… Blackwater, favourite track… ummm… Florida, or maybe Brighter Days. Happy now?

... continued from page 25

managed over the web, which users can 'inhabit'. They interact via their own graphical, humanoid, self-representations, known as 'avatars'. 3D virtual worlds are being used in many applications: education/training, gaming, social networking, marketing, and commerce. Examples include There.com and Activeworlds.com for social networking; the role-playing game World of Warcraft; Wonderland (Sun Microsystems) and Second Life, primarily for education and business. In education, Second Life has become one of the most popular 3D worlds and many institutions now have a 'presence' in Second Life. With its growth have come many books on Second Life, from *Second Life for Dummies* to guides for conducting business in Second Life. However, this book by Tom Boellstroff stands out in terms of its intellectual content, thoroughness and attention to detail, with an absolute focus on the reader. Tom is associate professor of anthropology at the University of California, Irvine, and HCI colleagues there, including Paul Dourish and Bonnie Nardi, are mentioned in the 'Acknowledgments' as having given a inter-disciplinary environment for his work.

The book begins by explaining how one interacts in Second Life, conveying its capabilities through vignettes and scenarios. The author sets the agenda of the book early on – to provide an 'ethnographic portrait of the culture in Second Life' – an anthropological study of Second Life from 2004 to 2007. Therefore, the book covers wide areas, from the history of virtual worlds to cultures within them, from issues of presence, immersion, self, community and identity to the role of virtual worlds in political economy. Most importantly, the author demonstrates the potential of ethnography for studying virtual worlds. One of the goals of this book is to contribute towards a better understanding of virtual worlds, which are constantly transforming and evolving.

In Part 1, the author provides a theoretical and methodological agenda for the anthropological study of virtual worlds. There are influences from sociological texts, philosophy and linguistics in the early chapters, which set out the motivation or justification for conducting ethnography 'inside' Second Life and invite readers to think about issues of reality, imagination and fantasy in real or 'first' lives, arguing that being 'virtually human' is what we have been all along in real lives and that the culture has always harboured the notion of the virtual. Chapter 3 discusses the 'Method' of conducting ethnography in Second Life: participant observations, interviews and focus groups, and the particular ethical issues in this context. This chapter is a real gem for HCI researchers and practitioners who conduct contextual and ethnographical studies, whether in virtual worlds or not.

In Part 2, Culture in a Virtual World, the author analyses Second Life as a 'social world', exploring issues of place and time, personhood, gender, race and embodiment. He looks at friendships and relationships in Second Life, community-building and anti-social behaviour or 'griefing'. The final part of the book examines economics, politics, governance and inequality in virtual worlds, and considers what place 'the virtual' might hold in human existence into the future.

The book is thorough, sometimes too detailed, thought-provoking, challenging, and has influences from sociology, anthropology, linguistics, philosophy, HCI, CSCW, and politics; at least two readings of each of the chapters help to grasp the ideas. It will be useful to those with an interest in anthropology, including students. The book is also useful for game designers, HCI practitioners and scholars and practitioners who are interested in virtual reality, cyber sociality, community building, ethnography, game studies and research methods in general. It may not be of direct interest to educators who are aiming to integrate 3D virtual worlds in course activities, since it doesn't cover the educational benefits of 3D virtual worlds explicitly, but it does cover issues such as visual presence, immersion and engagement. If someone is struggling with the scepticism surrounding 3D virtual worlds and negative interpretations of social life in these worlds, then this book will help to enlighten and allay those concerns.

Both these books were reviewed by
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The British HCI 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:

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Interfaces is published quarterly by the British HCI Group.