People and Computers XXIV Games are a Serious Business

Proceedings of HCI 2010

The 24th British HCI Group Annual Conference

University of Abertay, Dundee, UK

6 - 10 September 2010

Editors:

Tom McEwan

Lachlan MacKinnon

Abstract

The current state of HCI is an amazing topology of interlinked topics and techniques, with ideas bouncing between and across other domains. What was once the struggle to identify and encourage the adoption of good practice, has grown into a massive multiplayer game, a global endeavour that makes vast forests of business and commerce possible and viable, and that potentially empowers and sustainably enables the disadvantaged in every society. The game has indeed become a serious business.

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Full Synopsis

Welcome to the proceedings of the 24th BCS Interaction Specialist Group conference on People and Computers, held at the University of Abertay, Dundee, Sept 6-10, 2010. Our theme was "Games are a serious business", reflecting the successful interaction industry of our host city.

Within these proceedings is a record of the double-blind peer-reviewed academic content of the conference, the necessary and the sufficient. We have added four industrial papers, both in tribute to the quality of the work and of the importance our conference places on industrial involvement. Consistent with our traditions, the other (and substantial) additional content of the conference, the workshops, the tutorials, the networking opportunities and the entertainment, must find their own way into the archive. However, we are supporting, for example, workshop organisers to have their own location in eWiC to include their participants' contributions.

There are many ways that these papers could be presented to you, and we have had the luxury of reflection, of seeing the presentations, and making the unexpected links within, and between, sessions. We've been a party to the discussions and debates that ran deep into the evening and continued after the conference through various social networking channels and within our own institutions. We've seen the bloggers' reviews and the write-ups in usabilitynews.com.

We conclude that the current state of HCI is an amazing topology of interlinked topics and techniques, with ideas bouncing between and across other domains. What was once the struggle to identify and encourage the adoption of good practice, has grown into a massive multiplayer game, a global endeavour that makes vast forests of business and commerce possible and viable, and that potentially empowers and sustainably enables the disadvantaged in every society. The game has indeed become a serious business.

You will notice that, as in our other recent conferences, only a minority of papers link directly to the annual theme. This is a strength of the conference; we mean it in the small print of CFP, when annually we state that "we will accept work in any other aspect of HCI". You will further note a wide, yet still manageable, range of HCI topics covered here, a range that emerges each year without intelligent design, but by the Darwinian instincts of our reviewers.

We are indebted to the 2009 chair, Alan Blackwell, for his accomplishment in revitalising our pool of international reviewers. 167 reviewers returned reviews, 120 of whom are UK-based. Overall 33 countries are represented in this conference, either as reviewers or authors. Out of almost 500 reviews, we had cause to reject less than 1% of reviews as being cursory or incompetent. We thank our reviewers for both the volume and the quality of their work.

This year, your organising committee sought to swing the pendulum back in favour of trusting the combined judgment of the reviewers rather than prolonged committee discussion to make the final selection decisions. BCS Interaction SG welcomes your feedback on the effectiveness of this.

Editors

This conference was edited by:

Tom McEwan MSc FHEA FBCS CITP CEng - Tom McEwan is a senior lecturer in the Institute for Informatics and Digital Innovation at Edinburgh Napier University. He has won awards for knowledge exchange and public communication and takes a human-centred approach to commercialisation of university research. He is the Scottish member of the BCS Government Relations Group, promoting BS 8878 as a route to citizen engagement and digital inclusion. He sits on SIGCHI International Public Policy Committee and the European Society for Socially Embedded Computing (eusset.eu). 200 of his songs and details of 1200 past gigs can be found at tgmcewan.wordpress.com.

Lachlan MacKinnon - <http://staffweb.cms.gre.ac.uk/~ml80/>

Papers:

Keynote Talks

Ben Shneiderman Getting Serious About Social Media: Strategies for Increasing Civic Participation
<http://dx.doi.org/10.14236/ewic/HCI2010.1>

Peter Raad Building the Best: The Academy-Industry Interface Experience at the Guildhall at SMU
<http://dx.doi.org/10.14236/ewic/HCI2010.2>

Information Visualisation & Retrieval

Nadine Amende A Structured Review of Information Visualization Success Measurement
<http://dx.doi.org/10.14236/ewic/HCI2010.3>

Hanna Stelmaszewska, William Wong, Nazlin Bhimani and Balbir Barn User Behaviour: searching for scholarly material using electronic resource discovery systems
<http://dx.doi.org/10.14236/ewic/HCI2010.4>

Pedro Teixeira, Daniel Gonçalves and Manuel Fonseca Interactive File Searching Using File Metadata and Visualization
<http://dx.doi.org/10.14236/ewic/HCI2010.5>

Research Tools & Methods 1

Patrick Jermann, Marc-Antoine Nüssli and Weifeng Li Using dual eye-tracking to unveil coordination and expertise in collaborative Tetris
<http://dx.doi.org/10.14236/ewic/HCI2010.6>

Anneli Olsen, Linnea Smolentzov and Tommy Strandvall Comparing different eye tracking cues when using the retrospective think aloud method in usability testing
<http://dx.doi.org/10.14236/ewic/HCI2010.7>

Gavin Sim and Janet Read The Damage Index: An aggregation tool for usability problem prioritisation
<http://dx.doi.org/10.14236/ewic/HCI2010.8>

Information Visualisation

Darius Dadgari and Wolfgang Stuerzlinger Novel User Interfaces for Diagram Versioning and Differencing <http://dx.doi.org/10.14236/ewic/HCI2010.9>

Saturnino Luz and Masood Masoodian Improving Focus and Context Awareness in Interactive Visualization of Time Lines <http://dx.doi.org/10.14236/ewic/HCI2010.10>

Carolyn Salimun, Helen Purchase, David Simmons and Stephen Brewster Preference ranking of screen layout principles <http://dx.doi.org/10.14236/ewic/HCI2010.11>

Security & HCI

Sacha Brostoff, Philip Inglesant and Angela Sasse Evaluating the usability and security of a graphical one-time PIN system <http://dx.doi.org/10.14236/ewic/HCI2010.12>

Karen Renaud and Mike Just Pictures or Questions? Examining User Responses to Association-Based Authentication <http://dx.doi.org/10.14236/ewic/HCI2010.13>

Chris Riley, David Benyon, Graham Johnson and Kathy Buckner Security in Context: Investigating the Impact of context on Attitudes towards Biometric Technology <http://dx.doi.org/10.14236/ewic/HCI2010.14>

Research Tools & Methods 2

Jay Bradley, David Benyon, Oli Mival and Nick Webb Wizard of Oz Experiments and Companion Dialogues <http://dx.doi.org/10.14236/ewic/HCI2010.15>

Shamal Faily and Ivan Fléchais Barry is not the weakest link: Eliciting Secure System Requirements with Personas <http://dx.doi.org/10.14236/ewic/HCI2010.16>

Mieke Haesen, Jan Meskens, Kris Luyten and Karin Coninx Draw Me a Storyboard: Incorporating Principles & Techniques of Comics <http://dx.doi.org/10.14236/ewic/HCI2010.17>

Gaming & HCI

Paul Coulton, Kate Lund and Andrew Wilson Harnessing Player Creativity to Broaden the Appeal of Location Based Games <http://dx.doi.org/10.14236/ewic/HCI2010.18>

Christian Martyn Jones and Kay Pozzebon Being Safety Smart: Social Issue Game for Child Protective Behaviour Training <http://dx.doi.org/10.14236/ewic/HCI2010.19>

Timothy Sanders and Paul Cairns Time Perception, Immersion and Music in Videogames <http://dx.doi.org/10.14236/ewic/HCI2010.20>

Health & Social HCI

Chitra Acharya, Harold Thimbleby and Patrick Oladimeji Human Computer Interaction and Medical Devices <http://dx.doi.org/10.14236/ewic/HCI2010.21>

Julie Doyle, Zoran Skrba, Ronan McDonnell and Ben Arent Designing a Touch Screen Communication Device to Support Social Interaction amongst Older Adults <http://dx.doi.org/10.14236/ewic/HCI2010.22>

Lorna Gibson, Wendy Moncur, Paula Forbes, John Arnott, Christopher Martin and Amritpal Bhachu Designing Social Networking Sites for Older Adults <http://dx.doi.org/10.14236/ewic/HCI2010.23>

Industry Papers

Phil Day, Graham Johnson, Charlie Rohan, Chris Riley and Maggie Carlisle User Experience at NCR: An Organisational Overview <http://dx.doi.org/10.14236/ewic/HCI2010.24>

Remigius Fierley and Stephan Engl User Experience Methods and Games: Lessons Learned <http://dx.doi.org/10.14236/ewic/HCI2010.25>

Gerrit Meixner, Nils Petersen and Holger Koessling User Interaction Evolution in the SmartFactory <http://dx.doi.org/10.14236/ewic/HCI2010.26>

Haptics, Gesture & Multimodal Interaction

Sara Comai and Davide Mazza Haptic and Visual Rendering for Multi-Modal Exploration of Molecular Information <http://dx.doi.org/10.14236/ewic/HCI2010.27>

Adam Fourney, Michael Terry and Richard Mann Gesturing in the Wild: Understanding the Effects and Implications of Gesture-Based Interaction for Dynamic Presentations
<http://dx.doi.org/10.14236/ewic/HCI2010.28>

Manish Parekh and Chris Baber Tool Use as Gesture: new challenges for maintenance and rehabilitation
<http://dx.doi.org/10.14236/ewic/HCI2010.29>

Mobile HCI

Marina Abad, Itxaso Diaz and Markel Vigo Acceptance of Mobile Technology in Hedonic Scenarios
<http://dx.doi.org/10.14236/ewic/HCI2010.30>

Juha Leino, Sanna Finnberg and Kari-Jouko Räihä The Times They Are A-Changin': Mobile PIM is leaving the Paper Trail Behind
<http://dx.doi.org/10.14236/ewic/HCI2010.31>

En Peng, Patrick Peursum, Ling Li and Svetha Venkatesh Portable Form Filling Assistant for the Visually Impaired
<http://dx.doi.org/10.14236/ewic/HCI2010.32>

Physical & Urban HCI

Alex Carmichael, Mark Rice, Freya MacMillan and Alison Kirk Investigating a DTV-based physical activity application to facilitate wellbeing in older adults
<http://dx.doi.org/10.14236/ewic/HCI2010.33>

Patrick Fischer, Christian Zöllner and Eva Hornecker VR/Urban: Spread.gun – Design Process and Challenges in Developing a Shared Encounter for Media Façades
<http://dx.doi.org/10.14236/ewic/HCI2010.34>

Jennifer Sheridan When Clapping Data Speaks to Wii: Physical Creativity and Performative Interaction in Playground Games and Songs
<http://dx.doi.org/10.14236/ewic/HCI2010.35>

User Experience

Christina Dicke, Viljakaisa Aaltonen, Anssi Rämö and Miikka Vilermo Talk to me: The Influence of Audio Quality on the Perception of Social Presence
<http://dx.doi.org/10.14236/ewic/HCI2010.36>

Nele Van den Ende, Jettie Hoonhout and Lydia Meesters Measuring involvement with audio/video content
<http://dx.doi.org/10.14236/ewic/HCI2010.37>

Christopher Wilkinson, Pat Langdon and John Clarkson Observing learning and conceptual development through novel product interaction <http://dx.doi.org/10.14236/ewic/HCI2010.38>

HCI in the Market

Ahmed Ataullah and Edward Lank Googling Bing: Reassessing the impact of brand on the perceived quality of two contemporary search engines <http://dx.doi.org/10.14236/ewic/HCI2010.39>

Paul Robertson, Andrea Szymkowiak and Graham Johnson Investigating the Future of Self-Service Technology <http://dx.doi.org/10.14236/ewic/HCI2010.40>

K.C. Scott-Brown, O. Ahrani Dahrani, N. Tandas, H. Mclaughlin, R. Henderson, D. Cernagovs, J. Turner and H. Tarbert Making a financial Time Machine: A Multitouch application to enable interactive 3-D visualization of distant savings goals <http://dx.doi.org/10.14236/ewic/HCI2010.41>

Interaction Methods

Dominik Bial, Florian Block and Hans Gellerson A Study of Two-Handed Scrolling and Selection on Standard Notebook Computers <http://dx.doi.org/10.14236/ewic/HCI2010.42>

Hoda Dehmeshki and Wolfgang Stuerzlinger Design and Evaluation of a Perceptual-Based Object Group Selection Technique <http://dx.doi.org/10.14236/ewic/HCI2010.43>

Adriana Ispas, Beat Signer and Moira Norrie A Study of Incidental Notetaking to Inform Digital Pen and Paper Solutions <http://dx.doi.org/10.14236/ewic/HCI2010.44>

Haptics to Hardware

Phil Day, Jim Colville and Charlie Rohan An Evaluation of Sunlight-Viewable Displays <http://dx.doi.org/10.14236/ewic/HCI2010.45>

Stephen Fitchett and Andy Cockburn MultiScroll: Using Multitouch Input to Disambiguate Relative and Absolute Mobile Scroll Modes <http://dx.doi.org/10.14236/ewic/HCI2010.46>

Julio Miró-Borrás, Pablo Bernabeu-Soler, Raul Llinares and Jorge Igual Evaluation of an Ambiguous-Key Keyboard Prototype Scanning-System with Word and Character Disambiguation <http://dx.doi.org/10.14236/ewic/HCI2010.47>

Research in Progress 1

Stephen Brewster and Aurora Constantin Tactile Feedback for Ambient Awareness in Mobile Interactions <http://dx.doi.org/10.14236/ewic/HCI2010.48>

Andrew Crossan, Stephen Brewster and Alexander Ng Foot Tapping for Mobile Interaction <http://dx.doi.org/10.14236/ewic/HCI2010.49>

Jochen Huber, Jürgen Steimle, Roman Lissemann, Simon Olberding and Max Mühlhäuser Wipe'n'Watch: Spatial Interaction Techniques for Interrelated Video Collections on Mobile Devices <http://dx.doi.org/10.14236/ewic/HCI2010.50>

Timo Partala, Antti Nurminen, Teija Vainio, Jari Laaksonen, Miika Laine and Jukka Väänänen Saliency of visual cues in 3D city maps <http://dx.doi.org/10.14236/ewic/HCI2010.51>

Research Ideas & Student Work

Neesha Kodagoda, William Wong and Nawaz Khan Open-Card Sort to Explain Why Low-Literate Users abandon their Web Searches Early <http://dx.doi.org/10.14236/ewic/HCI2010.52>

Michael Leitner, Bernhard Wöckl, Özge Subasi and Manfred Tschelgi Towards the use of 'negative effects' in technology design and evaluation <http://dx.doi.org/10.14236/ewic/HCI2010.53>

Ben Rolfe, Christian Martyn Jones and Helen Wallace Designing Dramatic Play: Story and Game Structure <http://dx.doi.org/10.14236/ewic/HCI2010.54>

Naisan Yazdani, Fatemah Khazab, Sean Fitzgibbon, Martin Luerssen, David Powers and Richard Clark Towards a brain-controlled Wheelchair Prototype <http://dx.doi.org/10.14236/ewic/HCI2010.55>

Research in Progress 2

Jake Rowan Byrne and Brendan Tangney CAWriter: A CSCW/CSCL Tool to Support Research Students' Academic Writing <http://dx.doi.org/10.14236/ewic/HCI2010.56>

Souleymane Camara, Sujana Shrestha, José Abdelnour-Nocera and John Moore Village eLearning: An offline mobile solution to rural communities' knowledge requirement <http://dx.doi.org/10.14236/ewic/HCI2010.57>

Tim Coughlan, Anna Adams and Yvonne Rogers
<http://dx.doi.org/10.14236/ewic/HCI2010.58>

Designing for Balance: Out There and In Here

Mark Lochrie, Kate Lund and Paul Coulton
<http://dx.doi.org/10.14236/ewic/HCI2010.59>

Community Generated Location Based Gaming

Research in Progress 3

Richard Hoadley
<http://dx.doi.org/10.14236/ewic/HCI2010.60>

Form and Function: Examples of Music Interface Design

Natalie Ruiz, Guang Liu, Bo Yin, Damian Farrow and Fang Chen Teaching Athletes Cognitive Skills:
Detecting Cognitive Load in Speech Input <http://dx.doi.org/10.14236/ewic/HCI2010.61>