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IFIP – The International Federation for Information Processing

IFIP was founded in 1960 under the auspices of UNESCO, following the First World Computer Congress held in Paris the previous year. An umbrella organization for societies working in information processing, IFIP's aim is two-fold: to support information processing within its member countries and to encourage technology transfer to developing nations. As its mission statement clearly states,

IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is in information may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly, National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

Ryohei Nakatsu Naoko Tosa Fazel Naghdy
Kok Wai Wong Philippe Codognet (Eds.)

Cultural Computing

Second IFIP TC 14
Entertainment Computing Symposium, ECS 2010
Held as Part of WCC 2010
Brisbane, Australia, September 20-23, 2010
Proceedings

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IFIP World Computer Congress 2010 (WCC 2010)

Message from the Chairs

Every two years, the International Federation for Information Processing (IFIP) hosts a major event which showcases the scientific endeavors of its over one hundred technical committees and working groups. On the occasion of IFIP's 50th anniversary, 2010 saw the 21st IFIP World Computer Congress (WCC 2010) take place in Australia for the third time, at the Brisbane Convention and Exhibition Centre, Brisbane, Queensland, September 20–23, 2010.

The congress was hosted by the Australian Computer Society, ACS. It was run as a federation of co-located conferences offered by the different IFIP technical committees, working groups and special interest groups, under the coordination of the International Program Committee.

The event was larger than ever before, consisting of 17 parallel conferences, focusing on topics ranging from artificial intelligence to entertainment computing, human choice and computers, security, networks of the future and theoretical computer science. The conference History of Computing was a valuable contribution to IFIP's 50th anniversary, as it specifically addressed IT developments during those years. The conference e-Health was organized jointly with the International Medical Informatics Association (IMIA), which evolved from IFIP Technical Committee TC-4 "Medical Informatics".

Some of these were established conferences that run at regular intervals, e.g., annually, and some represented new, groundbreaking areas of computing. Each conference had a call for papers, an International Program Committee of experts and a thorough peer reviewing process of full papers. The congress received 642 papers for the 17 conferences, and selected 319 from those, representing an acceptance rate of 49.69% (averaged over all conferences). To support interoperation between events, conferences were grouped into 8 areas: Deliver IT, Govern IT, Learn IT, Play IT, Sustain IT, Treat IT, Trust IT, and Value IT.

This volume is one of 13 volumes associated with the 17 scientific conferences. Each volume covers a specific topic and separately or together they form a valuable record of the state of computing research in the world in 2010. Each volume was prepared for publication in the Springer IFIP Advances in Information and Communication Technology series by the conference's volume editors. The overall Publications Chair for all volumes published for this congress is Mike Hinchey.

For full details of the World Computer Congress, please refer to the webpage at <http://www.ifip.org>.

June 2010 Augusto Casaca, Portugal, Chair, International Program Committee
Phillip Nyssen, Australia, Co-chair, International Program Committee
Nick Tate, Australia, Chair, Organizing Committee
Mike Hinchey, Ireland, Publications Chair
Klaus Brunnstein, Germany, General Congress Chair

Preface

Welcome to the Second International IFIP Entertainment Computing Symposium on Cultural Computing (ECS 2010), which was part of the 21st IFIP World Computer Congress, held in Brisbane, Australia during September 21–23, 2010. On behalf of the people who made this conference happen, we wish to welcome you to this international event.

The IFIP World Computer Congress has offered an opportunity for researchers and practitioners to present their findings and research results in several prominent areas of computer science and engineering. In the last World Computer Congress, WCC 2008, held in Milan, Italy in September 2008, IFIP launched a new initiative focused on all the relevant issues concerning computing and entertainment. As a result, the two-day technical program of the First Entertainment Computing Symposium (ECS 2008) provided a forum to address, explore and exchange information on the state of the art of computer-based entertainment and allied technologies, their design and use, and their impact on society.

Based on the success of ECS 2008, at this Second IFIP Entertainment Computing Symposium (ECS 2010), our challenge was to focus on a new area in entertainment computing: cultural computing.

In the 21st century we are entering the era of “cultural computing” where computers would be able to handle specific forms and human characteristics that hide behind each culture. In this symposium we introduced and discussed still-unveiled possibilities of cultural computing, analyzing and visualizing substantial cultural issues such as sensitivity, memory, spirituality, storytelling, cultural diversity, etc. that have not been dealt with in computer science and engineering so far.

There are various possibilities in this area. From the point of view of art, cultural computing could go beyond the present media art by treating various kinds of cultural issues. From a technology viewpoint, it would open up a new area in computer technologies that so far have only been treating the digitization of cultural heritages/contents to preserve them.

The Second IFIP Entertainment Computing Symposium attempted to focus on this emerging and challenging area by bring various fields together and exploring boundaries and new frontiers. This symposium comprised a single track, with a highly selective set of presentations and discussions of visionary concepts, advanced technology, interactive demonstrations/installations, etc.

The topics discussed in this symposium included, but were not limited to, the following:

- 1) Preservation of cultural heritage using computers
- 2) Preservation of traditional technologies using computers
- 3) Treating models and types in cultural contents
- 4) Education of cultures using computers
- 5) Interactive installation treating cultural contents

As this is a totally new and challenging area, in addition to the normal submission and reviewing process of papers, we carefully tried to select several researchers who have been doing pioneering research in these areas and asked them to contribute to this challenging area. Happily to us, most of them accepted our invitation and prepared papers despite their busy schedule. All the submitted papers went through rigorous peer review process with two reviewers for each paper. Our sincere gratitude goes to these people who contributed to this symposium by submitting their papers and responding to our requests.

On behalf of the Organizing Committee, we would like to extend our personal thanks to all the members of the International Program Committee who reviewed and selected papers. The success of this symposium is credited to them, as well as to Session Chairs, presenters and attendees.

Ryohei Nakatsu
Naoko Tosa
Fazel Naghdy
Kok Wai Wong
Philippe Codognet

Organization

Second IFIP Entertainment Computing Symposium (ECS 2010) Cultural Computing

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Table of Contents

Multiple Format Search and Rescue Robot as a Competitive Arena (Invited Paper)	1
<i>Andrew Chiou</i>	
An On-Line Classification Approach of Visitors' Movements in 3D Virtual Museums	9
<i>Kingkarn Sookhanaphibarn and Ruck Thawonmas</i>	
A Machine That Daydreams	21
<i>Graham A. Mann</i>	
Cluster Analysis for Personalised Mobile Entertainment Content	36
<i>Worapat Paireekreng, Kok Wai Wong, and Chun Che Fung</i>	
Auto-explanation System: Player Satisfaction in Strategy-Based Board Games	46
<i>Andrew Chiou and Kok Wai Wong</i>	
Comparing Binarisation Techniques for the Processing of Ancient Manuscripts	55
<i>Rapeeporn Chamchong, Chun Che Fung, and Kok Wai Wong</i>	
Complex Game Design Modeling	65
<i>Viknashvaran Narayanasamy, Kok Wai Wong, Shri Rai, and Andrew Chiou</i>	
Haptic Carillon: A Computationally Enhanced Mechanical Performing Instrument	75
<i>Mark Havryliv, Fazel Naghdy, Greg Schiemer, and Timothy Hurd</i>	
3D Geometric and Haptic Modeling of Hand-Woven Textile Artifacts . . .	87
<i>Hooman Shidanshidi, Fazel Naghdy, Golshah Naghdy, and Diana Wood Conroy</i>	
Pocket Gamelan: Realizations of a Microtonal Composition on a Linux Phone Using Open Source Music Synthesis Software	101
<i>Greg Schiemer, Etienne Deleflie, and Eva Cheng</i>	
Creating Memory: Reading a Patching Language	111
<i>Michael Barkl</i>	
The Promise of Fuzzy Logic in Generalised Music Composition	118
<i>Wendy Suiter</i>	

Structuralism, Attitude and the Computer: Questioning the Notion of “Cultural Computing”	128
<i>Warren Burt</i>	
Looking for Culture in Video Games: Three Conceptual Approaches . . .	137
<i>James K. Scarborough</i>	
Supporting Multiple Perspectives on 3D Museum Artefacts through Interoperable Annotations	149
<i>Jane Hunter and Chih-hao Yu</i>	
Interactivity in Games : The Player’s Engagement	160
<i>Stéphane Natkin</i>	
Co-production and Co-creation: Creative Practice in Social Inclusion . . .	169
<i>Atau Tanaka, Lalya Gaye, and Ranald Richardson</i>	
Opening the Can: Public Interaction with Ready-Made Contents	179
<i>Shlomo Dubnov and Philippe Codognet</i>	
Cultural Computing — How to Investigate a Form of Unconscious User Experiences in Mixed Realities	190
<i>Matthias Rauterberg, Jun Hu, and Geert Langereis</i>	
Emotions as a Communication Medium between the Unconscious and the Conscious	198
<i>Matthias Rauterberg</i>	
Emotional Expression of Korean Dance Assisted by a Virtual Environment System	208
<i>Taeyoung Uhm, Hanhoon Park, Mi-Hee Lee, Un-Mi Kim, and Jong-Il Park</i>	
Machine-Made Puzzles and Hand-Made Puzzles	214
<i>Hiroshi Higashida</i>	
Cultural Computing – Creative Power Integrating Culture, Unconsciousness and Software	223
<i>Naoko Tosa</i>	
Entertainment and Its Future	233
<i>Ryohei Nakatsu</i>	
Author Index	243