

Table of Contents – Part I

Long and Short Papers

3D Navigation

Assessing the Impact of Automatic vs. Controlled Rotations on Spatial Transfer with a Joystick and a Walking Interface in VR	1
<i>Florian Larrue, Hélène Sauzéon, Déborah Foloppe, Grégory Wallet, Jean-René Cazalets, Christian Gross, Martin Hachet, and Bernard N’Kaoua</i>	
Designing Intuitive Multi-touch 3D Navigation Techniques	19
<i>Damien Marchal, Clément Moerman, Géry Casiez, and Nicolas Roussel</i>	
Truly Useful 3D Drawing System for Professional Designer by “Life-Sized and Operable” Feature and New Interaction	37
<i>Shun’ichi Tano, Shinya Yamamoto, Junko Ichino, Tomonori Hashiyama, and Mitsuru Iwata</i>	

3D Technologies - 3D Object Manipulation

A One-Handed Multi-touch Method for 3D Rotations	56
<i>Douglas Scheurich and Wolfgang Stuerzlinger</i>	
HandsIn3D: Supporting Remote Guidance with Immersive Virtual Environments	70
<i>Weidong Huang, Leila Alem, and Franco Tecchia</i>	
MotionBender: A Gesture-Based Interaction Technique for Editing Motion Paths	78
<i>Frederic Raber, Quan Nguyen, and Michael Kipp</i>	
RelicPad: A Hands-On, Mobile Approach to Collaborative Exploration of Virtual Museum Artifacts	86
<i>Steven Neale, Winyu Chinthammit, Christopher Lueg, and Paddy Nixon</i>	

Augmented Reality

Funneling and Saltation Effects for Tactile Interaction with “Detached” Out of the Body Virtual Objects	104
<i>Jaedong Lee, Sangyong Lee, and Gerard J. Kim</i>	

Precise Pointing Techniques for Handheld Augmented Reality	122
<i>Thomas Vincent, Laurence Nigay, and Takeshi Kurata</i>	

The Unadorned Desk: Exploiting the Physical Space around a Display as an Input Canvas.....	140
<i>Doris Hausen, Sebastian Boring, and Saul Greenberg</i>	

Cognitive Workload

GSR and Blink Features for Cognitive Load Classification	159
<i>Nargess Nourbakhsh, Yang Wang, and Fang Chen</i>	

<i>Information Holodeck</i> : Thinking in Technology Ecologies	167
<i>Sharon Lynn Chu and Francis Quek</i>	

Managing Personal Information across Multiple Devices: Challenges and Opportunities	185
<i>Simone Beets and Janet Wesson</i>	

Mobility Matters: Identifying Cognitive Demands That Are Sensitive to Orientation	193
<i>G. Michael Poor, Guy Zimmerman, Dale S. Klopfer, Samuel D. Jaffee, Laura Marie Leventhal, and Julie Barnes</i>	

Cognitive Workload and Decision Support

Ambient Timer – Unobtrusively Reminding Users of Upcoming Tasks with Ambient Light	211
<i>Heiko Müller, Anastasia Kazakova, Martin Pielot, Wilko Heuten, and Susanne Boll</i>	

Novel Modalities for Bimanual Scrolling on Tablet Devices	229
<i>Ross McLachlan and Stephen A. Brewster</i>	

Public Information System Interface Design Research	247
<i>Ning Zhang, Junliang Chen, Zhengjie Liu, and Jun Zhang</i>	

Creating Effective 3D Displays

Comparison of User Performance in Mixed 2D-3D Multi-Display Environments	260
<i>Abhijit Karnik, Tovi Grossman, and Sriram Subramanian</i>	

Touching the Void Revisited: Analyses of Touch Behavior on and above Tabletop Surfaces	278
<i>Gerd Bruder, Frank Steinicke, and Wolfgang Stuerzlinger</i>	

Understanding Hand Degrees of Freedom and Natural Gestures for 3D Interaction on Tabletop	297
<i>Rémi Brouet, Renaud Blanch, and Marie-Paule Cani</i>	

Cross-Cultural, Intercultural and Social Issues

Considering Communities, Diversity and the Production of Locality in the Design of Networked Urban Screens	315
<i>Wallis Motta, Ava Fatah gen Schieck, Holger Schnädelbach, Efstathia Kostopoulou, Moritz Behrens, Steve North, and Lei Ye</i>	

Growing Existing Aboriginal Designs to Guide a Cross-Cultural Design Project	323
<i>Margot Brereton, Paul Roe, Thomas Amagula, Serena Bara, Judy Lalara, and Anita Lee Hong</i>	

Web Accessibility in Africa: A Study of Three African Domains	331
<i>Daniel Costa, Nádia Fernandes, Sofia Neves, Carlos Duarte, Raquel Hijón-Neira, and Luís Carriço</i>	

Webpage Designs for Diverse Cultures: An Exploratory Study of User Preferences in China	339
<i>Yin Su, David Liu, Xiaomeng Yuan, Justin Ting, Jingguo Jiang, Li Wang, and Lin Gao</i>	

Your Phone Has Internet - Why Are You at a Library PC? Re-imagining Public Access in the Mobile Internet Era	347
<i>Jonathan Donner and Marion Walton</i>	

Data Entry Mechanisms and Devices

A Performance Review of Number Entry Interfaces	365
<i>Patrick Oladimeji, Harold Thimbleby, and Anna L. Cox</i>	
Predictive Input Interface of Mathematical Formulas	383
<i>Yoshinori Hijikata, Keisuke Horie, and Shogo Nishida</i>	
Selection-Based Mid-Air Text Entry on Large Displays	401
<i>Anders Markussen, Mikkel R. Jakobsen, and Kasper Hornbæk</i>	

Design and Evaluation

Evaluating Multivariate Visualizations as Multi-objective Decision Aids	419
<i>Meirav Taieb-Maimon, Lior Limonad, David Amid, David Boaz, and Ateret Anaby-Tavor</i>	

Homestead Creator: Using Card Sorting in Search for Culture-Aware Categorizations of Interface Objects	437
<i>Kasper Rodil, Matthias Rehm, and Heike Winschiers-Theophilus</i>	
The Influence of Website Category on Aesthetic Preferences	445
<i>Eleftherios Papachristos and Nikolaos Avouris</i>	
WATTSBurning: Design and Evaluation of an Innovative Eco-Feedback System	453
<i>Filipe Quintal, Lucas Pereira, Nuno Nunes, Valentina Nisi, and Mary Barreto</i>	

Design and Evaluation of Prototypes

<i>Finding-NEVO: Toward Radical Design in HCI</i>	471
<i>Sharon Lynn Chu, Francis Quek, Yao Wang, and Rex Hartson</i>	
Method Card Design Dimensions: A Survey of Card-Based Design Tools	479
<i>Christiane Wölfel and Timothy Merritt</i>	
The Design and Usability Testing of DACADE – A Tool Supporting Systematic Data Collection and Analysis for Design Students	487
<i>Madihah Sheikh Abdul Aziz, Gitte Lindgaard, and T. W. Allan Whitfield</i>	
The Effect of Physicality on Low Fidelity Interactive Prototyping for Design Practice	495
<i>Joanna Hare, Steve Gill, Gareth Loudon, and Alan Lewis</i>	

Design to Support Creativity

CapTUI: Geometric Drawing with Tangibles on a Capacitive Multi-touch Display	511
<i>Rachel Blagojevic and Beryl Plimmer</i>	
Evocative Computing – Creating Meaningful Lasting Experiences in Connecting with the Past	529
<i>Janet van der Linden, Yvonne Rogers, Tim Coughlan, Anne Adams, Caroline Wilson, Pablo Haya, Estefanía Martín, and Trevor Collins</i>	
Systematic Integration of Solution Elements: How Does Digital Creativity Support Change Group Dynamics?	547
<i>Florian Perteneder, Susann Hahnwald, Michael Haller, and Kurt Gaubinger</i>	

Designing for Inclusiveness I

Accessibility of Public Web Services: A Distant Dream?	566
<i>Kristiina Nurmela, Antti Pirhonen, and Airi Salminen</i>	
Augmenting Accessibility Guidelines with User Ability Rationales	579
<i>Christophe Ponsard, Pascal Beaujeant, and Jean Vanderdonckt</i>	
Lessons Learned from Crowd Accessibility Services	587
<i>Hironobu Takagi, Susumu Harada, Daisuke Sato, and Chieko Asakawa</i>	

Designing for Inclusiveness II

Designing for Different Users and Multiple Devices: A Roadmap towards Inclusive Environments	605
<i>Ig Ibert Bittencourt, Maria Cecília Baranauskas, Diego Dermeval, Juliana Braga, and Roberto Pereira</i>	
User Control in Adaptive User Interfaces for Accessibility	623
<i>Matthias Peissner and Rob Edlin-White</i>	
Vibro-Tactile Enrichment Improves Blind User Interaction with Mobile Touchscreens	641
<i>Maria Claudia Buzzi, Marina Buzzi, Barbara Leporini, and Maria Teresa Paratore</i>	

Designing with- and for People with Special Needs

Designing with Dementia: Guidelines for Participatory Design together with Persons with Dementia	649
<i>Niels Hendriks, Frederik Truyen, and Erik Duval</i>	
Navigating, Discovering and Exploring the Web: Strategies Used by People with Print Disabilities on Interactive Websites	667
<i>Christopher Power, Helen Petrie, David Swallow, Emma Murphy, Bláithín Gallagher, and Carlos A. Velasco</i>	
Participatory Design with Blind Users: A Scenario-Based Approach	685
<i>Nuzhah Gooda Sahib, Tony Stockman, Anastasios Tombros, and Oussama Metatla</i>	

Display Manipulations

An Evaluation of Stacking and Tiling Features within the Traditional Desktop Metaphor	702
<i>Clemens Zeidler, Christof Lutteroth, and Gerald Weber</i>	

Investigating Pointing Tasks across Angularly Coupled Display Areas . . .	720
<i>Fabian Hennecke, Alexander De Luca, Ngo Dieu Huong Nguyen, Sebastian Boring, and Andreas Butz</i>	
Semi-supervised Learning Based Aesthetic Classifier for Short Animations Embedded in Web Pages	728
<i>Dipak Bansal and Samit Bhattacharya</i>	
Switchback Cursor: Mouse Cursor Operation for Overlapped Windowing	746
<i>Shota Yamanaka and Homei Miyashita</i>	
Diversity/ICT in Social Development	
A Scandinavian Approach to Designing with Children in a Developing Country - Exploring the Applicability of Participatory Methods	754
<i>Nahid Wakil and Peter Dalsgaard</i>	
Availability4D: Refining the Link between Availability and Adoption in Marginalised Communities	762
<i>Fritz Meissner and Edwin Blake</i>	
Communication Choices to Engage Participation of Rural Indonesian Craftspeople in Development Projects	780
<i>Ellya Zulaikha and Margot Brereton</i>	
Content Prototyping – An Approach for Engaging Non-technical Users in Participatory Design	788
<i>Maletsabisa Molapo and Gary Marsden</i>	
Designing a Platform for Participatory Urbanism: Transforming Dialogue into Action in Underserved Communities	796
<i>Leonardo Giusti, Amelia Schladow, Amar Boghani, Steve Pomeroy, Nicholas Wallen, and Federico Casalegno</i>	
Author Index	805