



The 1st IEEE Symposium on 3D User Interfaces 2006

March 25 and 26, Alexandria, Virginia USA

Symposium Chairs

Yoshifumi Kitamura (Osaka University, Japan)

Doug Bowman (Virginia Tech, USA)

Bernd Froehlich (Bauhaus University Weimar, Germany)

Wolfgang Stuerzlinger (York University, Canada)

Final Program



SPONSORED BY IEEE COMPUTER SOCIETY VISUALIZATION AND GRAPHICS TECHNICAL COMMITTEE

Saturday, March 25

13:00-13:15 opening

13:15-14:45 session 1: Navigation (chair: Mary Whitton)

Evaluating Distributed Cognitive Resources for Wayfinding in a Desktop Virtual Environment
Shamus Smith, Jonathan Hart

Overcoming World in Miniature Limitations by a Scaled and Scrolling WIM
Chadwick Wingrave, Yoncah Haciahmetoglu, Doug Bowman

Coordination Strategies for Assisted Viewpoint Interaction
Stephen Hughes

Interactive Perspective Cut-away Views for General 3D Scenes (Technote)
Chris Coffin, Tobias Hollerer

14:45-15:15 coffee break

15:15-16:30 session 2: Applications and Implementation (chair: Anthony Steed)

A Hybrid User Interface for Manipulation of Volumetric Medical Data
Alexander Bornik, Reinhard Beichel, Ernst Kruijff, Bernhard Reitinger, Dieter Schmalstieg

Spatial Analysis Tools for Virtual Reality-based Surgical Planning
Bernhard Reitinger, Dieter Schmalstieg, Alexander Bornik, Reinhard Beichel

A Cost-effective Approach for Developing Application-control GUIs for Virtual Environments
Carlos Andujar, Marta Fairen, Ferran Argelaguet

16:30-16:40 short break

16:40-18:05 session 3: Collaborative and Bimanual Interface (chair: Wolfgang Broll)

Using the Non-Dominant hand for selection in 3D
Joan De Boeck, Tom Deweyer, Chris Raymaekers, Karin Coninx

iSith - Intersection-based Spatial Interaction for Two Hands (Technote)
Roland Blach, Hans Peter Wyss, Matthias Bues

The Bent Pick Ray: An Extended Pointing Technique for Multi-User Interaction (Technote)
Kai Riege, Gerold Wesche, Thorsten Holtkämper, Bernd Fröhlich

A Collaborative Interface for the IllusionHole using a Control-Ring and a Set of Mice (Technote)
Martin Hachet, Ryoichi Watanabe, Yoshifumi Kitamura

SkeweR: a 3D Interaction Technique for 2-User Collaborative Manipulation of Objects in Virtual Environments (Technote)
Thierry Duval, Anatole Lécuyer, Sébastien Thomas

Sunday, March 26

8:30-9:30 Keynote

Why aren't we using 3D user interfaces, and will we ever?

Ravin Balakrishnan

9:30-10:00 coffee break

10:00-11:55 session 4: 3D Interaction Techniques (chair: Sabine Coquillard)

Interactive Reconfiguration Techniques of Reference Frame Hierarchy in the Multi-viewport Interface

Kouichi Hirose, Takefumi Ogawa, Kiyoshi Kiyokawa, Haruo Takemura

Grab-and-Throw Metaphor: Adapting Desktop-based Interaction Paradigms to Virtual Reality (Technote)

Frank Steinicke, Klaus Hinrichs

Toward Disambiguating Multiple Selections for Frustum-Based Pointing

Greg Schmidt, Dennis Brown, Erik Tomlin, J. Edward Swan, Yohan Baillot

Group Selection Techniques for Efficient 3D Modeling

Ji-Young Oh, Wolfgang Stürzlinger, Darius Dadgari

Towards a General Model for Selection in Virtual Environments

Anthony Steed

11:55-13:30 lunch

13:30-15:10 session 5: Augmented Reality (chair: Haruo Takemura)

Interaction Techniques for Exploring Historic Sites through Situated Media

Sinem Guven, Steven Feiner

Virtual Vouchers: Prototyping a Mobile Augmented Reality User Interface for Botanical Species Identification

Sean White, Steven Feiner, Jason Kopylec

Survey on Challenges Regarding the Design of 3D User Interfaces for Car Drivers

Marcus Tönnis, Verena Broy, Gudrun Klinker

SSIML/AR: A Visual Language for the Abstract Specification of Augmented Reality User Interfaces

Arnd Vitzthum

15:10-15:45 coffee break

15:45-17:30 session 6: Devices (chair: Stephen Hughes)

The VR Scooter: Wind and Tactile Feedback Improve User Performance

Leonidas Deligiannidis, Robert Jacob

Gesture-recognition with Non-referenced Tracking

Paul Keir, Jocelyn Elgoyhen, Martin Naef, John Payne, Martyn Horner, Paul Anderson

Turning Pages of 3D Electronic Books

Lichan Hong, Stuart Card, Jindong Chen

"two - 4 - six" - A Handheld Device for VR-Presentations (Technote)

Alexander Kulik, Roland Blach, Bernd Froehlich

SpaceActor - Interface Prototypes for Virtual Environments (Technote)

Mario Doulis, Victor Zwimpfer, Jan Pflüger, Andreas Simon, Christian Stern, Till Haldimann, Christoph Jenni

17:30-17:45 closing

18:00- Reception