

Inhabiting the Cultural Imaginary

Key themes: Immersive Visualization; Distributed Interfaces; Theories of Interactive Narrative; Digital Cultures and Heritage; Technologies and; Tools

Chairs: Professor Jeffrey Shaw (ARC Federation Fellow, Director, iCinema Centre, UNSW) & Ms Sarah Kenderdine (Special Projects, Museum Victoria)

Keynote speakers: Prof. Lev Manovich, Prof. Sean Cubitt, Prof. Johannes Goebel

iCinema Directors: Prof. Jeffrey Shaw, Dr Dennis Del Favero, Prof. Neil Brown

Abstract:

This symposium focuses attention on new virtual heritage and electronic art research applied to the Advanced Visualisation Interactive Environment (AVIE), at the iCinema Centre for Interactive Cinema Research, University of New South Wales. Internationally acclaimed theorists and practitioners will demonstrate the unprecedented advances in immersive and narrative exchange between human & place, human & machine agent, human & human that such a virtual platform—its operating infrastructure and software—allows for. The concentration of experience brought together in this symposium will allow robust theoretical and technical proficiencies in applied virtual heritage and media art to emerge.

There is an internationally acknowledged deficit of large-scale, multi-participant, sophisticated immersive platforms currently available for virtual heritage applications, and this seminar addresses some of the groundbreaking research taking place at iCinema in conjunction with its research partners Museum Victoria (Melbourne), EMPAC (Troy, New York), MRL (Nottingham) and ZKM (Karlsruhe).

Following an intensive series of seminars over five hours participants will have opportunity to engage with several large scale works in production for AVIE including **Place-Hampi: augmented stereographic panoramas of the Vijayanagara** (Museum Victoria & iCinema), **T-Visionarium** (iCinema). In addition participants will be introduced to the key technologies that support these applications.

The symposium will be followed by a cocktail party at the venue. Morning and Afternoon tea provided during the symposium however delegates will take lunch independently.

Location

Scientia, The iCinema Centre for
Interactive Cinema Research
Kensington Campus,
University of New South Wales,
Anzac Parade, Kensington, Sydney

<<http://www.icinema.unsw.edu.au/>>

Schedule

1 day symposium in association with
VSMM 2007
Friday 21st September, 2007
registration fee: \$165.00

Register early @

<<http://australia.vsmm.org>>

Programme

Morning Session:

Keynote 1: Professor Lev Manovich

Lev Manovich <<http://www.manovich.net/>> is a Professor of Visual Arts, University of California, San Diego <visarts.ucsd.edu> and a Director of a Center for Software Studies at California Institute for Telecommunications and Information Technology <<http://www.calit2.net>>. His publications include *Soft Cinema: Navigating the Database* (The MIT Press, 2005), *The Language of New Media* (The MIT Press, 2001) and over 90 articles which have been published in 28 countries. According to the reviewers, *The Language of New Media* offers "the first rigorous and far-reaching theorization of the subject" (CAA reviews); "it places [new media] within the most suggestive and broad ranging media history since Marshall McLuhan" (Telepolis). Since 1999 Manovich presented over 220 lectures, seminars and master classes in North and South America, Europe, and Asia. Currently Manovich is working on two new books: *Info-aesthetics* and *Expanded Image*.

Keynote 2: Professor Johannes Goebel

Johannes Goebel joined Rensselaer Polytechnic Institute as Founding Director of the Experimental Media and Performing Arts Center (empac) in July 2002. He holds a tenured position as Professor in the Arts Department and in the School of Architecture. Between 1990 and 2002, Goebel was the Founding Director of the Institute for Music and Acoustics at the Zentrum für Kunst und Medientechnologie (ZKM) in Karlsruhe, Germany. Under his directorship, more than 90 international artists produced roughly two-hundred works at the Institute, ranging from compositions with live and interactive electronics to pure sound synthesis, interactive operas and radio plays, sound installations, ballet music and music films with live orchestras. During his tenure at ZKM, Goebel lectured and published internationally on aesthetics, technology and music, co-directed 1996 Stanford University's Center for Computer Research in Music and Acoustics (CCRMA), taught a summer course at the Catholic University Porto, Portugal in 2000, and was a guest professor at the Music Academy Graz, Austria, in 1992.

more @ <<http://empac.rpi.edu/about/biography/>>

Keynote 3: Professor Sean Cubitt

Sean Cubitt is Professor and Director of the Program in Media and Communications at the University of Melbourne and Honorary Professor of Duncan of Jordanstone College of the University of Dundee. Previously Professor of Screen and Media Studies at the University of Waikato, New Zealand and Professor of Media Arts at Liverpool John Moores University, he is the author of *Timeshift: On Video Culture* (Comedia/Routledge, 1991), *Videography: Video Media as Art and Culture* (Macmillans/St Martins Press, 1993), *Digital Aesthetics (Theory, Culture and Society)* (Sage, 1998), *Simulation and Social Theory (Theory, Culture and Society)* (Sage, 2001), *The Cinema Effect* (MIT Press, 2004) and *EcoMedia* (Rodopi, 2005); and coeditor of *Aliens R Us: Postcolonial Science Fiction* with Ziauddin Sardar (Pluto Press 2002), *The Third Text Reader* with Rasheed Araeen and Ziauddin Sardar (Athlone/Continuum, 2002) and *How to Study the Event Film: The Lord of the Rings* with Thierry Jutel, Barry King and Harriet Margolis (Manchester UP 2007, in press). He is the author of over 300 articles, chapters, papers and catalogue essays on contemporary arts, culture and media.

more @ <<http://www.mediacomm.unimelb.edu.au/aboutus/staff/seanc.html>>

Afternoon Session:

Theme 1: *Introduction to the iCinema Centre: its projects, applications and technologies*

Professor Jeffrey Shaw,

ARC Federation Fellow, Director of iCinema Centre, UNSW Sydney

Theme 2: *Experimental Aesthetics and Digital Narratives*

Professor Emeritus Neil Brown, co-Director of iCinema Centre

Dr Dennis Del Favero, Chairman iCinema Centre

iCinema Demonstrations:

Both applications and technologies of iCinema Centre will be shown throughout the day. Participants are free to attend the demonstrations which run at 30 minutes intervals.

About the technologies:

AVIE (Advanced Visualisation and Interaction Environment)

AVIE consists of a 360° stereoscopic immersive interactive visualisation environment with motion and shape tracking systems and a multi-channel audio system. It is a set of state-of-the-art resources that enables the development and study of applications in the fields of immersive visualisation, immersive sonification, and human interaction design.

<http://www.icinema.unsw.edu.au/projects/infra_avie.html>



Intelligent Vision-Based Interaction and Motion Tracking Systems

It provides a multi-purpose sensory environment for unencumbered tracking of viewer movement and gesture, offering a large range of motion capture and interaction design functions. Covering the entire AVIE area, the system is able to accurately track the spatial position and movements of up to thirty people. When applied to smaller groups of up to five people, it generates high-resolution three dimensional voxel models of their body movements and gestures, enabling real time motion tracking and some gesture recognition.

Panoramic Spatialized Audio System

Directly complementing the unique visualisation and interaction features of AVIE is its spatialised audio system. This is a multi-channel system with custom surround audio application software. This system enables fully immersive 360° placement of sounds anywhere around the viewers. As with visual projection, the audio system can be coupled with the Intelligent Vision-Based Interaction and Motion Tracking Systems to allow voices to 'follow' projected characters, or to be activated only when viewers move within 'earshot' of the virtual audio sources, or correctly perform some task.

Sphercam

Building on research into panoramic video camera clusters begun by Prof. Shaw at the ZKM Karlsruhe in 2000, the iCinema high-definition digital SPEHERCAM offers the unprecedented ability to record a panoramic or spherical (360 x 240 degrees) field of view at 30 frames per second with a resolution of over twenty Megapixels. Its modular and configurable cluster of twelve high-resolution CCD cameras records directly to a four Terrabyte array of hard discs using Gigabit Ethernet technology. The camera includes a twelve-channel ambisonic audio recording system and a high-definition post-production facility.

<http://www.icinema.unsw.edu.au/projects/infra_sphercam.html>



About the applications:

Place-Hampi (2006-2008)

Within the context of a renegotiation of virtual heritage PLACE-HAMPI engages *co-evolutionary narrative* as a mechanism of interpretation—digitally modelled inside multiple stereoscopic panoramas of the UNESCO World Heritage site of Vijayanagara, the ruined medieval Hindu imperial capital in Karnataka, southern India. The project uses symbolic logic and high level cognitive programming of computer graphic characters in conjunction with intelligent immersive virtual reality to enable dialogues between participant and place. PLACE-HAMPI demonstrates that when machine agents are provided with a modest ability to sense and interpret symbolically the actions of real participants sharing a mixed reality environment, their interactive responses will co-evolve with their human participants.

<http://www.icinema.unsw.edu.au/projects/prj_hampi.html>.



T-Visionarium (2002-2006)

Recombinatory Experimental Narrative

T_Visionarium is an interactive immersive virtual environment that allows viewers to spatially navigate a televisual database and apply a recombinatory search matrix to create emergent narratives from the database's network of digital streams.

T_Visionarium allows its massive database of over twenty-four hours of broadcast television recordings to be spatially distributed and navigated. **T_Visionarium I** is a dome environment using a mobile projector to allow the viewer to interactively explore the spatial distribution of its forty-eight TV channels over the entire dome surface. **T_Visionarium II** shows up to five hundred video streams in 3D space within iCinema's AVIE 360 degree panoramic projection environment. The user can interactively rearrange its database of over twenty thousand video clips and associated metadata, so that their spatial navigation presents new and emergent fields of meaning.

<http://www.icinema.unsw.edu.au/projects/prj_tvis.html>



About the facilities @ Scientia:

http://www.icinema.unsw.edu.au/projects/infra_scientia.html

