

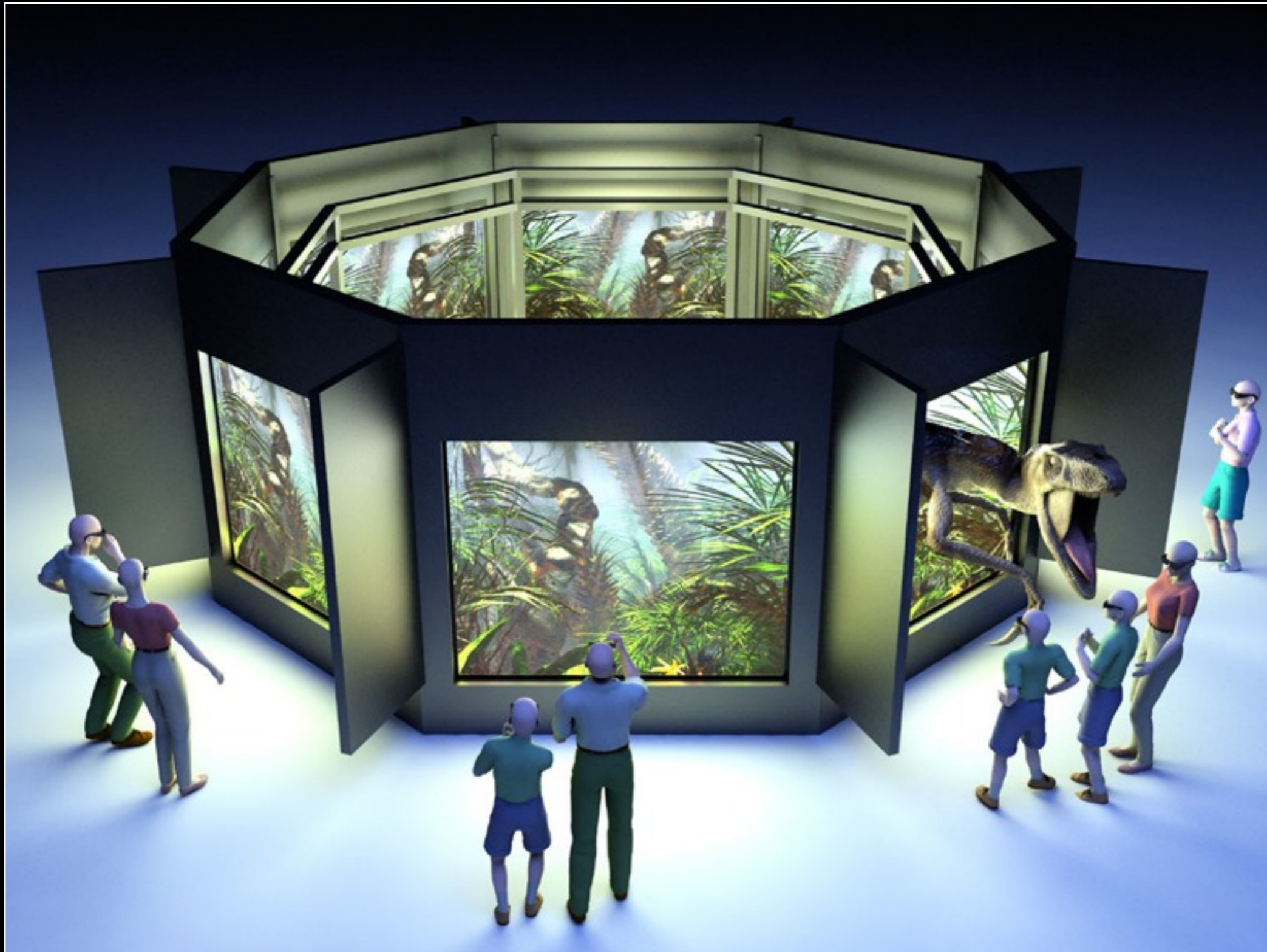
Virtual Environments, Visualisation, Novel Displays

Project Summaries

Paul Bourke
iVEC@UWA

Virtual room

Collaboration with Museum Victoria



Inside-out CAVE



Phar Lap





Adapted from Samuel Beckett's narrative 'The Lost Ones', UNMAKEABLELOVE is a virtual reality installation that focuses and makes interactively tangible a state of confrontation and interpolation between our selves and a society of computer generated people who are living in a severe state of physical and psychological entropy.

ALIVE exhibition, City Universty of Hong Kong

AVIE: Advanced Visualisation and Interaction Environment

Collaboration with iCinema, UNSW



AVIE: Place Hampi

Collaboration with Sarah Kenderdine and Jeffrey Shaw

Roundshot camera



Drum scanned 75mm film.



Left camera



Right camera



AVIE: Place Türkiye

Collaboration with Sarah Kenderdine and Jeffrey Shaw



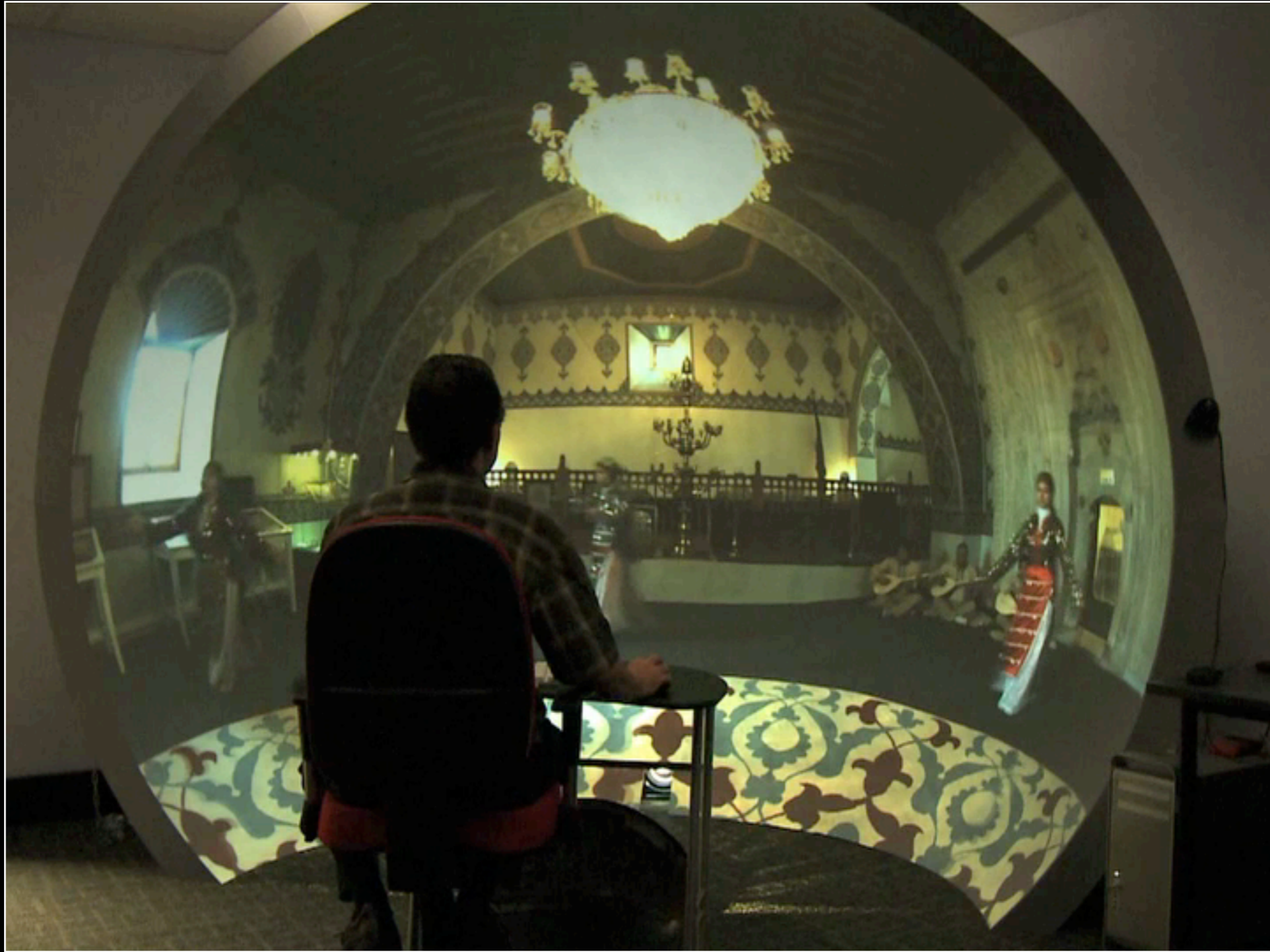
Left eye



Right eye

iDome: Place Türkiye

Collaboration with Sarah Kenderdine and Jeffrey Shaw



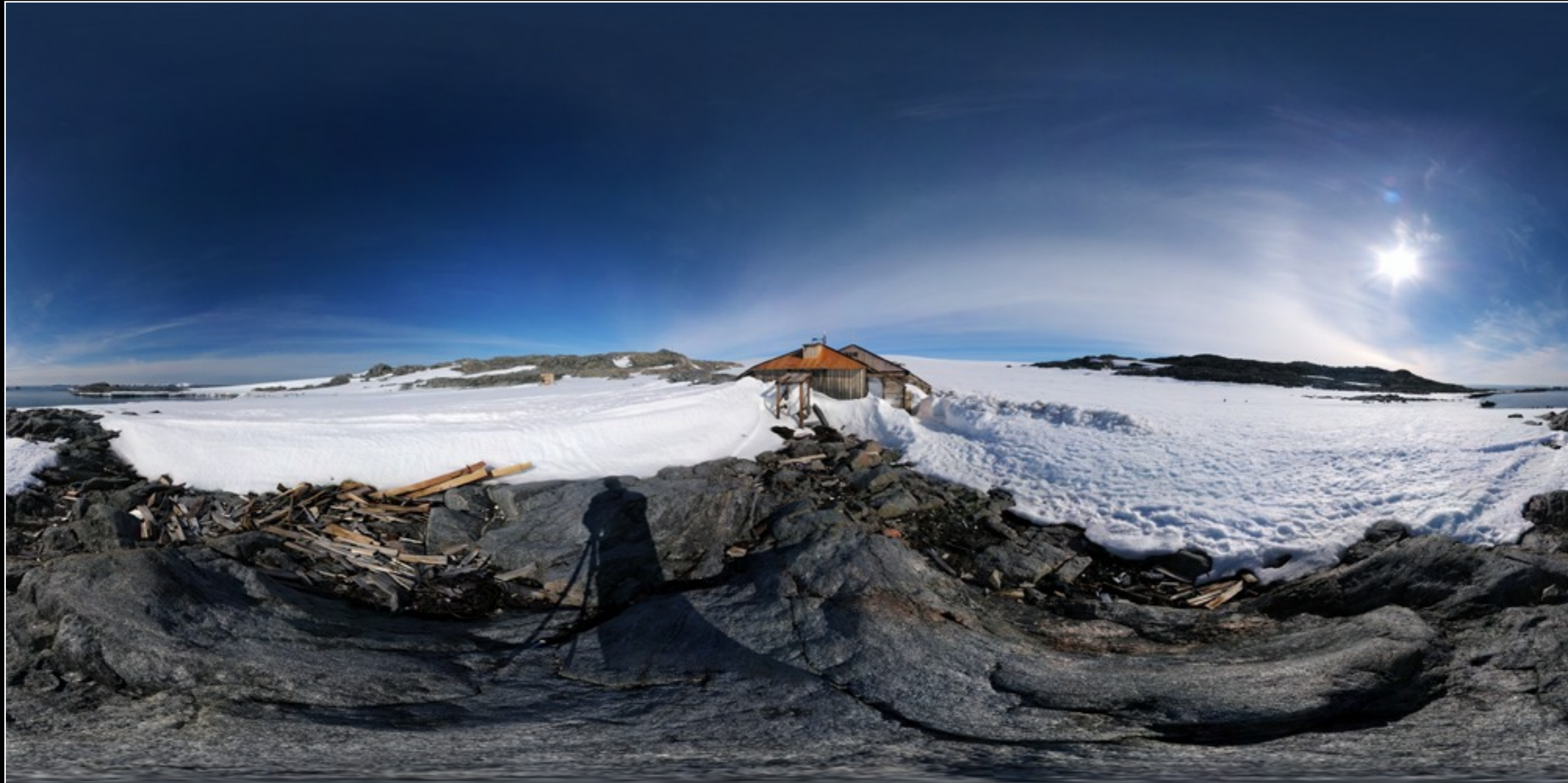
Hashibektashi Dancers



5400 x 2700 @ 16fps

iDome: Mawsons Huts

Collaboration with Peter Morse





40,000 x 20,000 pixels

Left eye image

40,000 by 20,000 pixels



Hurleys darkroom, Mawsons hut (Antarctica).



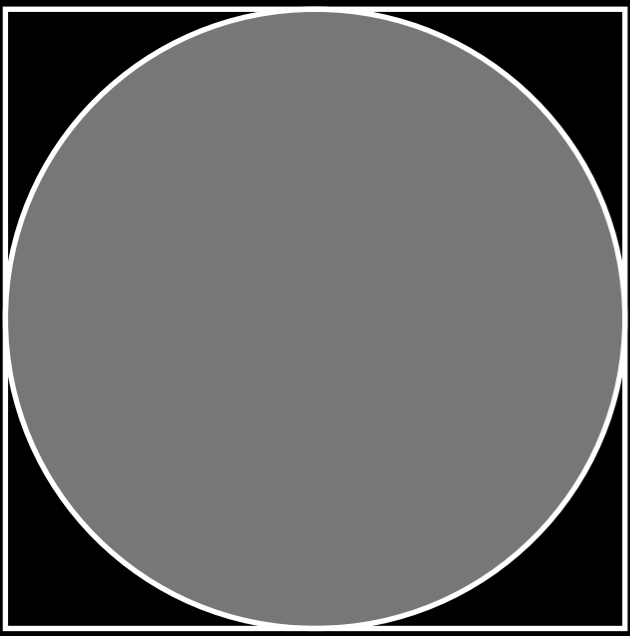


Planetarium: Virtual Heritage (Mawsons Huts)

Collaboration with Peter Morse



HD
1920x1080



8192x8192

8K x 8K planetarium production

iDome: Science Centre Wollongong

Collaboration with Wollongong Science Centre and ARC Centre of Excellence for Electromaterials Science (University of Wollongong)



Looking
the
nanoworld

printing materials

Why Printing?

Inkjet Printing

8. Invitation

Extrusion Printing

Applications for ACES

creating advanced materials

1. Welcome

materials synthesis
energy conversion
energy storage
medical bionics

bionics

Spinal Cord Repair



Muscle Regeneration

2. Nanostructured Electromaterials

3. O N

Drug Delivery Systems

Smart factors
- Fibers
- Micelles
- Nanoparticles
- Hydrogels
- Conjugated Polymers
- Neurological drugs
- Epilepsy
- Parkinson
- Biodegradable

INTELLIGENT POLYMER
BY THE UNIVERSITY

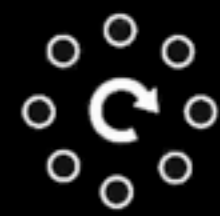




5400 x 2700 pixel spherical projection

EON: Eye of Nagaur

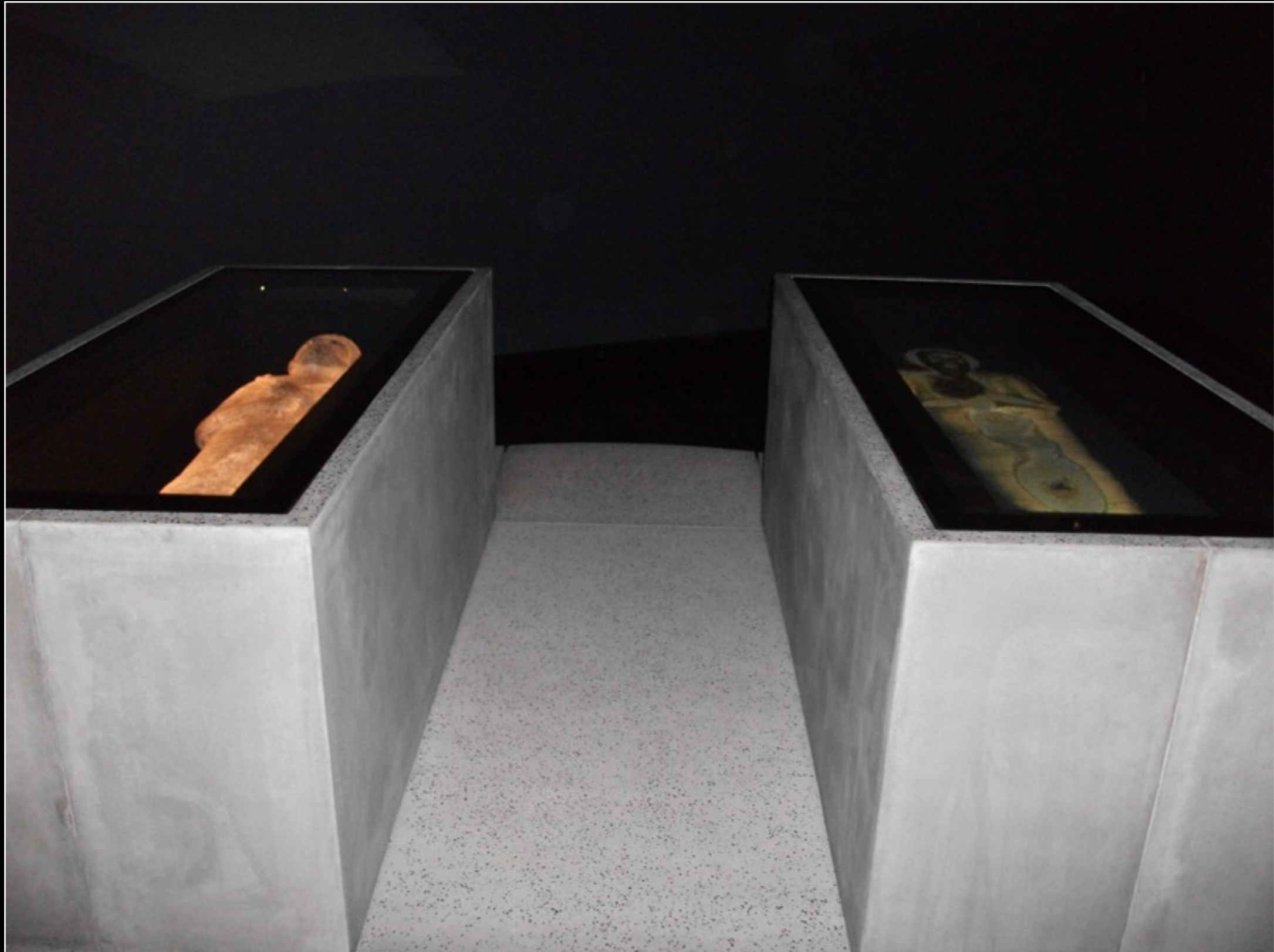
Collaboration with Sarah Kenderdine and Jeffrey Shaw



Exploration of 16 nodes from the Fort/Temple complex

Pausiris Mummy

Collaboration with Peter Morse and MONA (Museum of New and Old Art)



Opened January 2011





LadyBug-3 camera

PtGrey Research Inc.

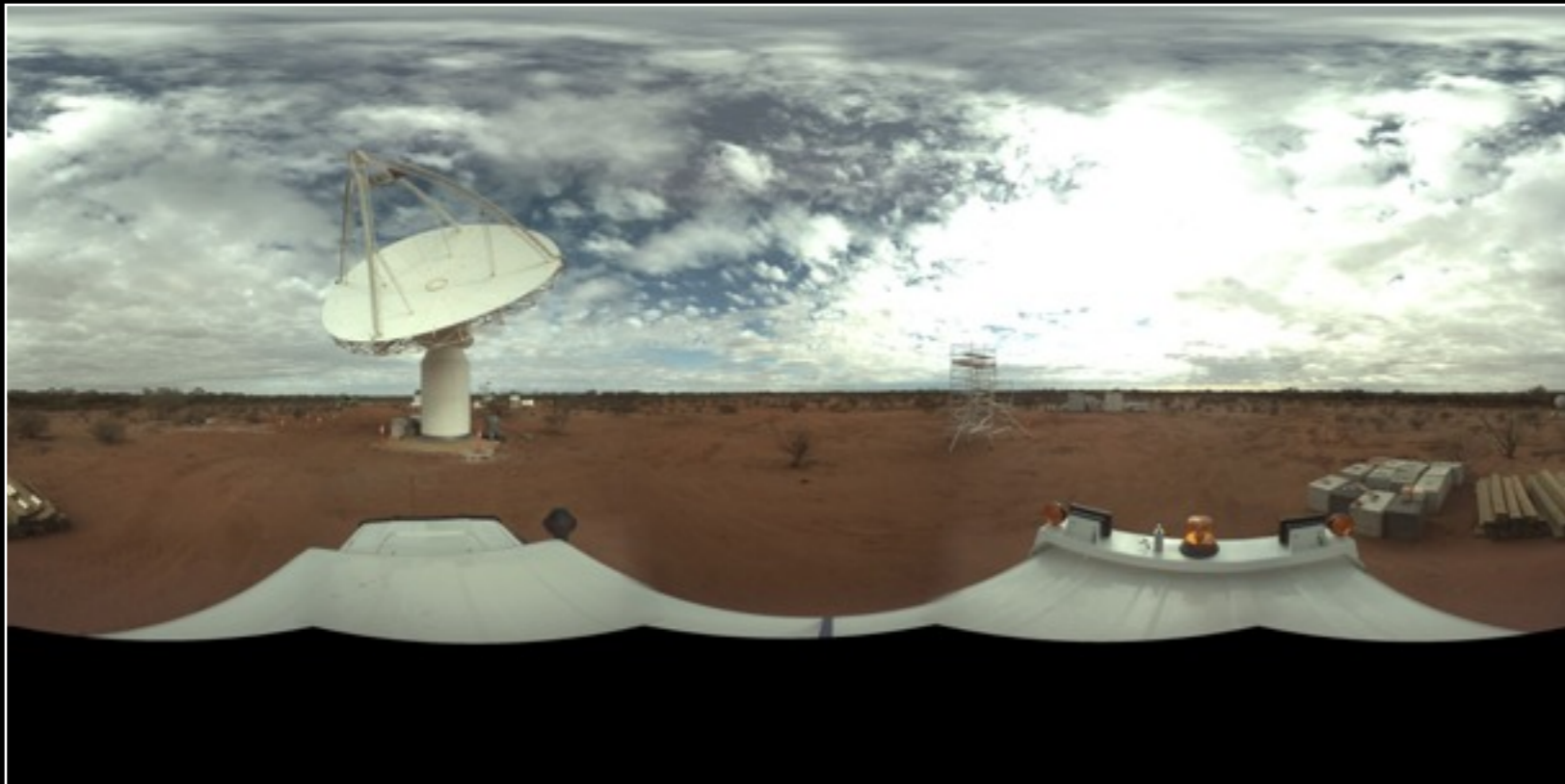




iCinema



Micoy



Spherical



Fisheye

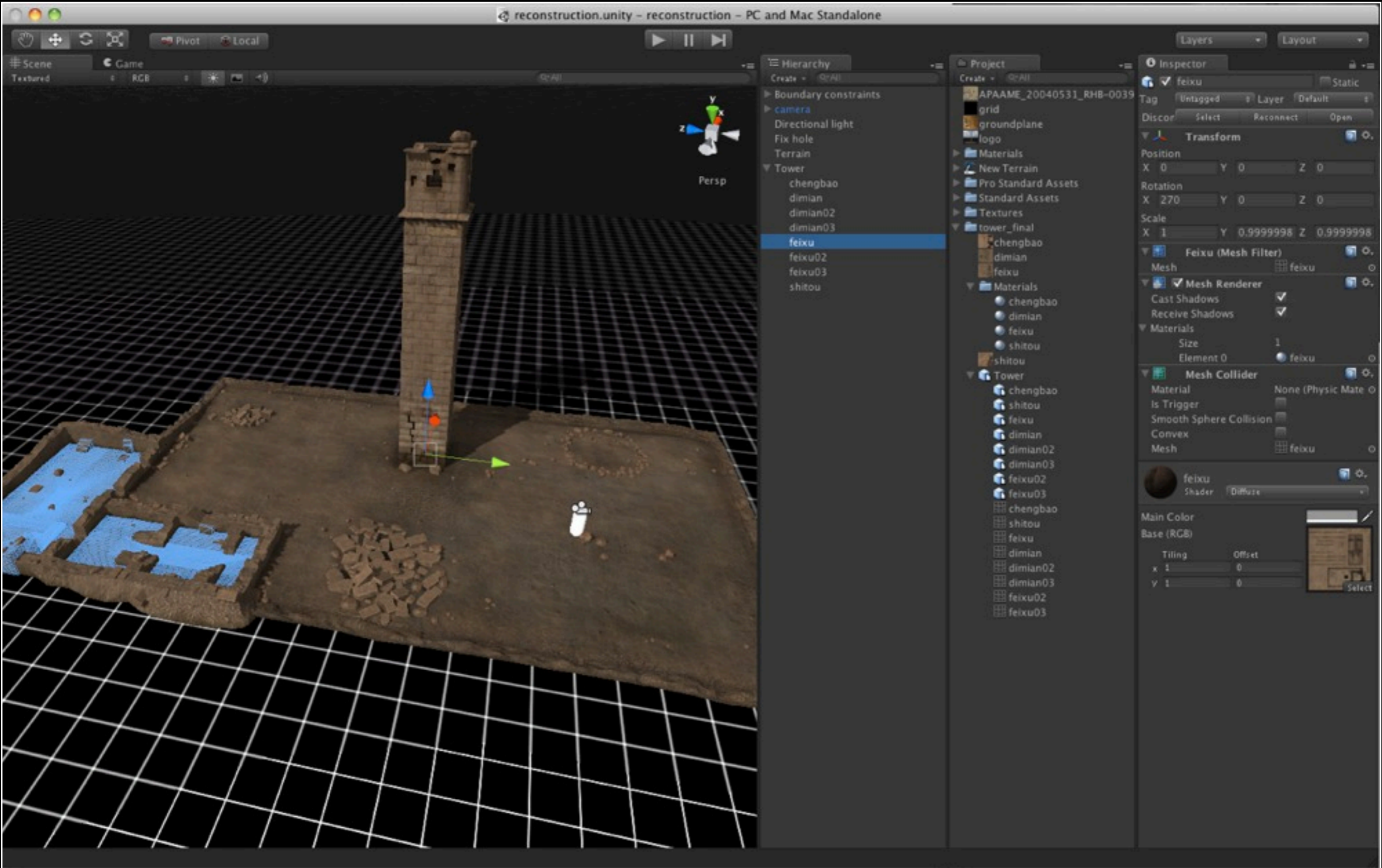
Cylindrical



Unity3D game engine

- Highly recommend Unity3D for implementing virtual environments.
- Mac and MSWindows development system.
- Supports stereoscopic, image warping (cylindrical/spherical) and multiple displays.
- Very stable and mature.
- Highly cross platform: Mac OS-X, MSWindows, IOS (iPad, iPhone, iPod), PS3, XBox360, Android.
- Modern physics and rendering engine.





Questions?