

# Adventures with the LadyBug-3 camera.

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## Update from 2009: The LadyBug-3 camera

- Reported at the APS in 2009 on projects at the Rio Tinto iron ore ship loader at Karratha and the ARC Centre of Excellence for Electromaterials Science at Wollongong University.
- These were using the LadyBug-2 camera.
- Both of these have now been repeated with the higher resolution LadyBug-3 camera.
- Full resolution of the camera is a spherical projection of 5400x2700 pixels @ 16fps.
- Upscaled to 30fps by Kronos tools in FinalCutPro.

## ARC Centre of Excellence for Electromaterials Science



[See example in the dome]

## Rio Tinto Iron ship loader: Remote operations interface



## 2010: LadyBug-3 footage from Turkey

- Footage captured for YER-Turkiye (Place Turkey)

Concept, Design, Production: Sarah Kenderdine, Jeffrey Shaw

Videography and image processing: Paul Bourke

Audio: Cedric Maridet

[ City University, Hong Kong ]

- 12 LadyBug-3 sequences captured in total.
- 200+ high quality stereoscopic panoramic images captured. These are omnidirectional stereo pairs, a technique that allows for viewing across a wide range of view directions. Something stereo fisheye producers should also be using.
- Each panoramic and LadyBug image/movie has an associated ambisonic recording.
- Final intended viewing environment is a large 10m cylinder with stereoscopic projection system.
- The LadyBug-3 footage can be repurposed for domes, indeed it captures the equivalent to a 360 x 280 degree fisheye. That is, longitude 0 to 360, latitude 90 degrees (north pole) to -50.

## Whirling dervishes: Orient Express Train Station



Semazenler (Istanbul Sirkeci Train Station)  
Mevlâna Semazenler (The Whirling Dervishes)

[See example in the dome]

Sample frame from the LadyBug-3



Can create a fisheye projection at any angle



## Cylindrical panorama projections

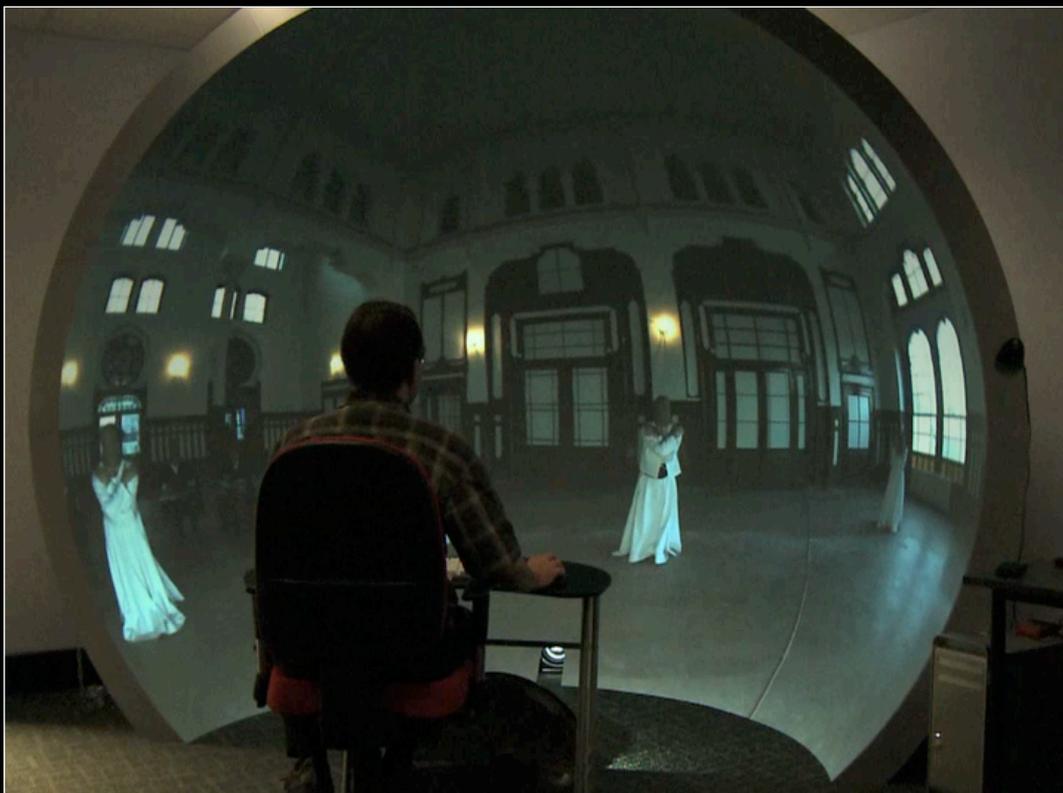


Vertical FOV: 37 degrees



Vertical FOV: 67 degrees

## Use of full spherical projection for interaction in the iDome



## Quick tour of the LadyBug-3 in Turkey



Bosphorus river

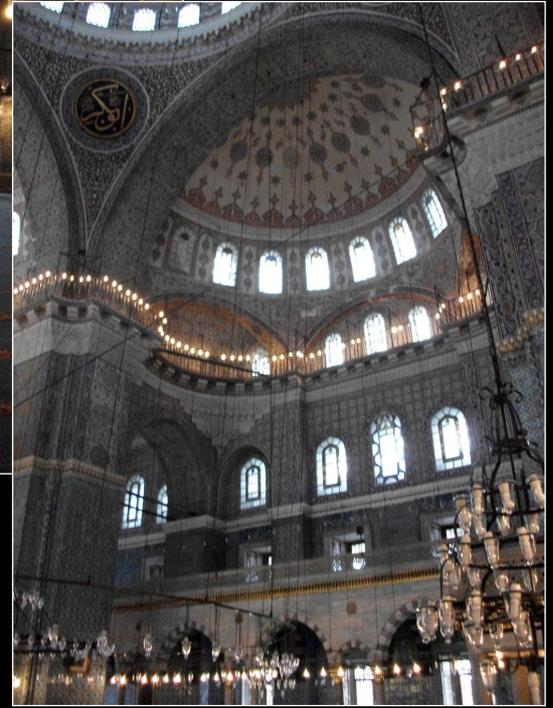
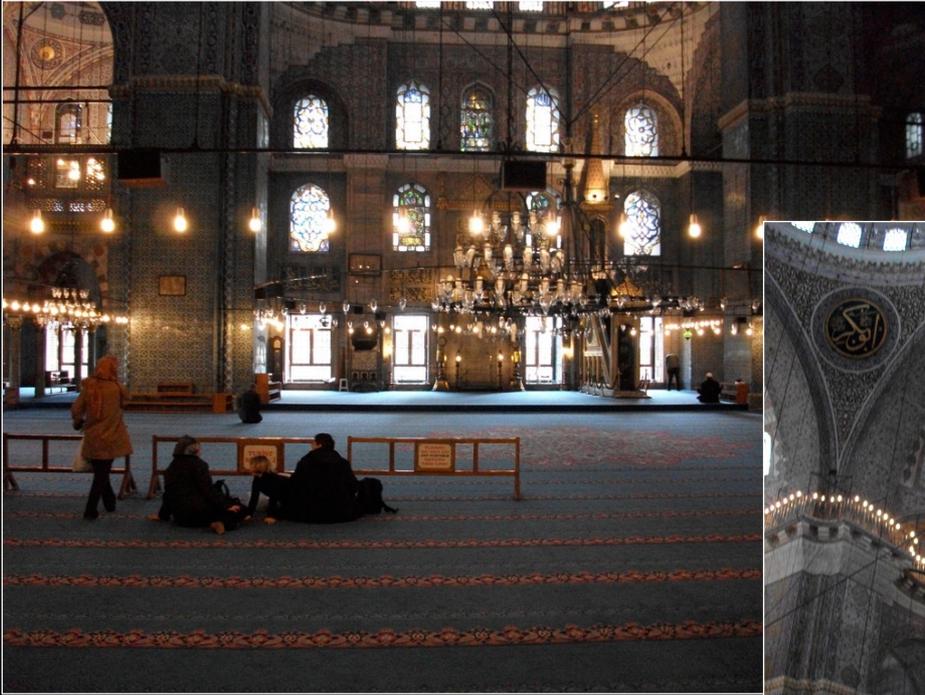
## Borusan Philharmonic Orchestra





Feeding pigeons in front of the Yeni (New) Mosque





## Hashbecktashi Dancers



Kardeslik Semahi & Aliyar Semahi (Hacibektas Veli Museum)  
Bektasi Semahi (Hacibektas Veli Museum performers)

[See example in the dome]

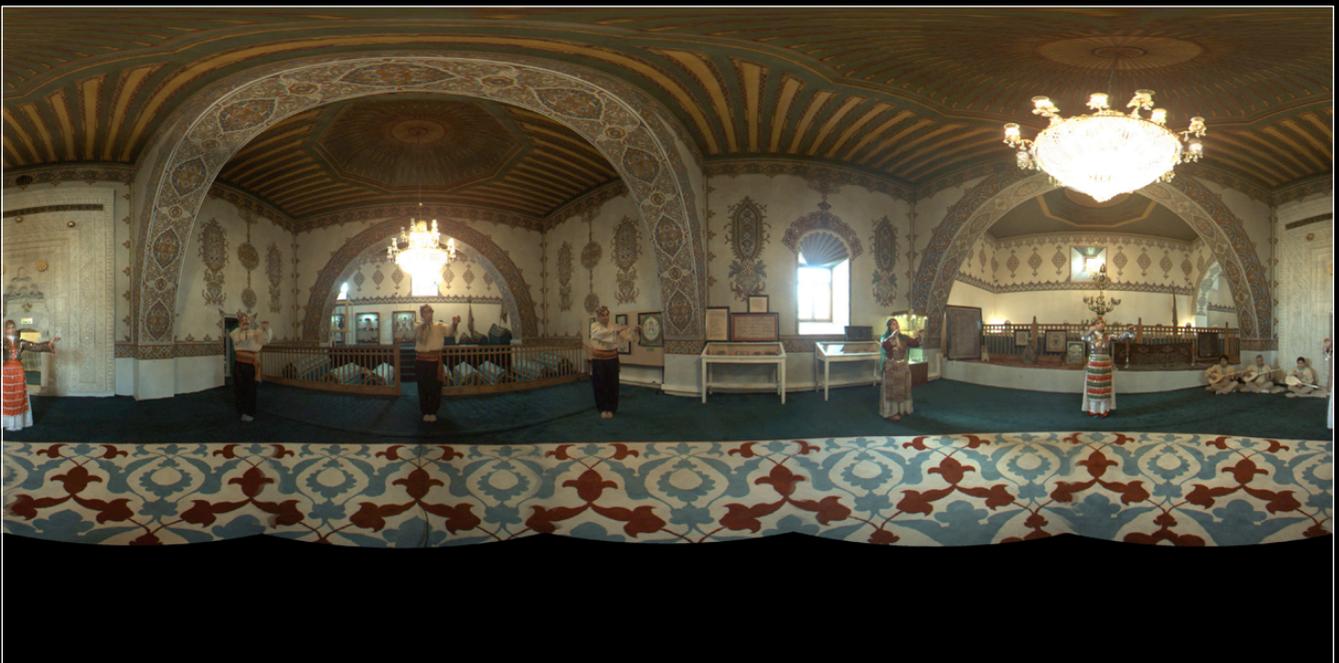
The heat comes from the fire, not from the sac

The grace comes from the cloak, not from the crown

Whatever you seek, seek within yourself

Not in Mecca, Jerusalem, or Damaseus

Sample frame as a spherical projection



## Hashbeckashi dancers in the iDome



Seek and find  
Educate women  
Do not hurt even if you are hurt  
Whatever you seek seek within yourself  
Be master of your hand (actions), tongue (words), and passions  
Wise men are both pure and purifying  
The first stage to spiritual wisdom is right conduct  
Human perfection is the beauty of his/her words  
Do not do to others what comes hard to yourself  
Do not blame any human or nation  
A path not guided by science goes to darkness  
How happy is he who eliminated the darkness of thoughts  
Do not forget that even your enemy is human  
The prophets and saints are God's gift to mankind

## Highest resolution (non-digital) dome in the world



Panorama 1453: Capture of Istanbul by the Turks

## Sample frame from the LadyBug-3 camera



## Scale model of the installation



# Questions?

