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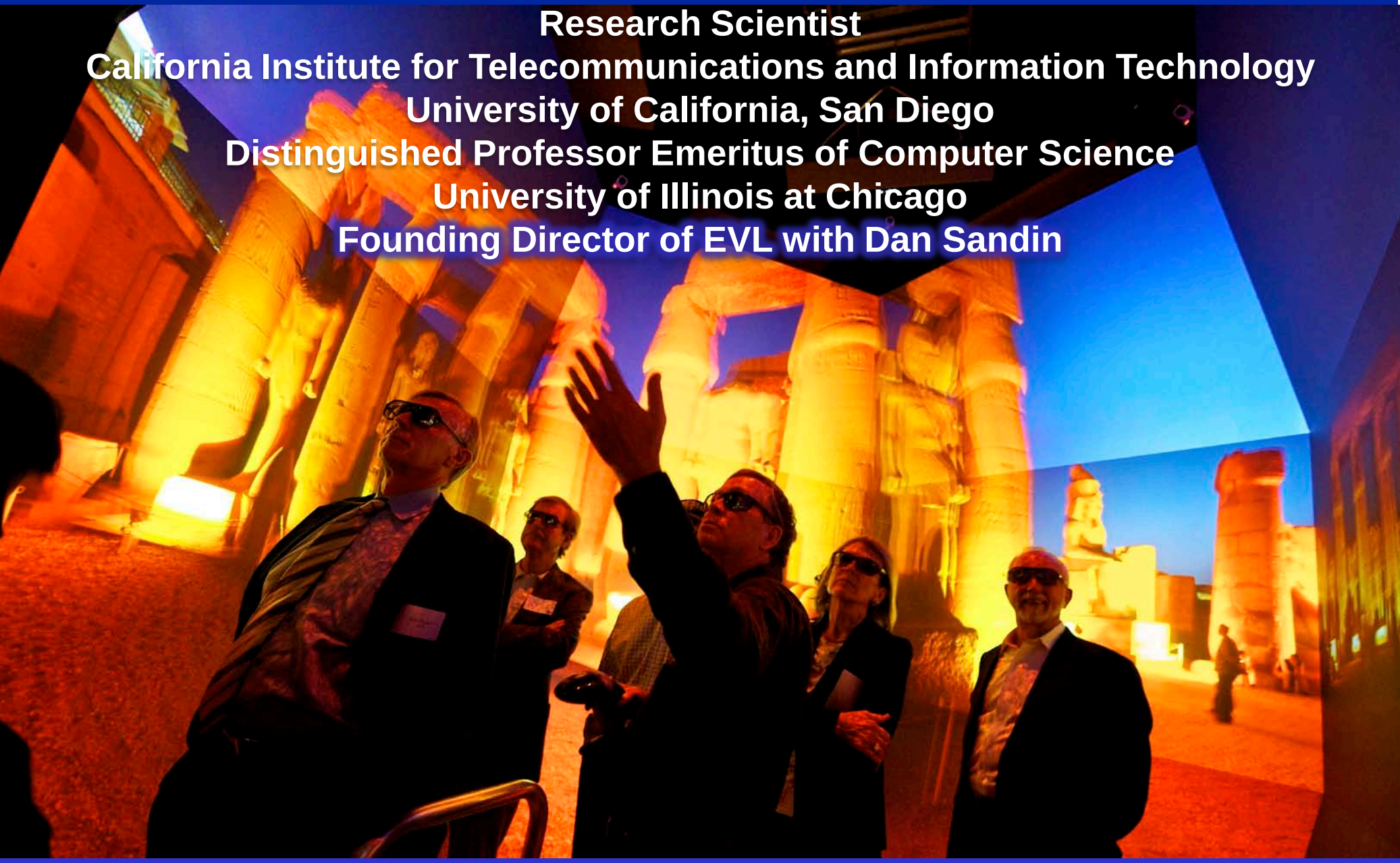


Collaborative Virtual Analytics

Collaboration and Virtual Analytics!

Source: Jason Leigh, EVL

This is the Future of Virtual Reality

3D VR Collaboration

- **Virtual Reality adds stereo vision and tracking so that the user sees the correct perspective in real-time**
  - **First improvement in image rendering since the European Renaissance**
- **Networking allows models to be delivered and explored and linked over distance**
- **It has been very expensive, but is now getting cheaper**
  - **Video game cards in PCs now used instead of $1M computers**
  - **Conference room HDTV projectors and LCD panels instead of $100,000 movie theater video projectors**
  - **It's ready for general deployment!**

Bezels and Panels

- **Thick bezels are annoying**
  - **They interrupt the image**
  - **They create edge violations in 3D**
  - **For now, we work with them**
- **3D Ultra-narrow bezel displays now available in 720p micro-polarization (xpol), but are expensive**
  - **UIC/EVL leading the research and development**
- **Ultra-narrow bezel displays are not available in:**
  - **Active Stereo**
  - **Autostereo1080p**
- **LG OLED 55” UNB 9-kilogram screen with xpol coming September?**

Tiled Micropolarized (Xpol) 3D Panels (w/Glasses)

Image for **left eye** (**1080i/60** interlace scan)

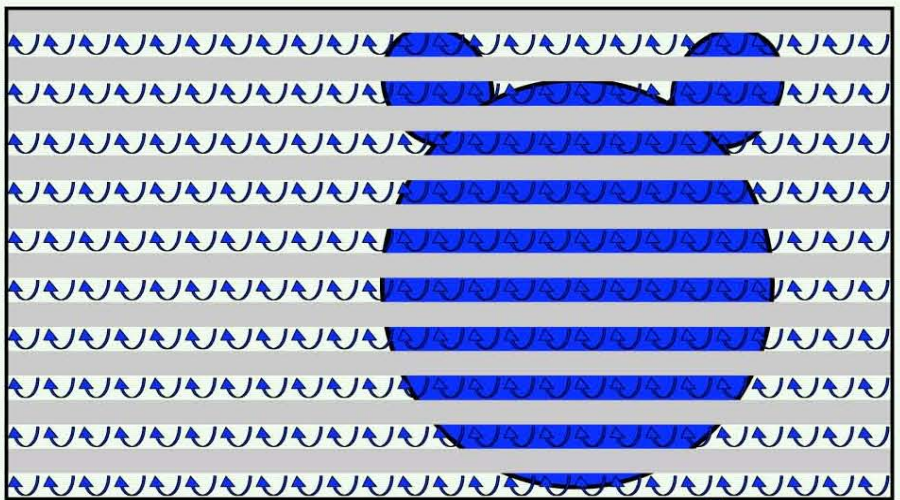
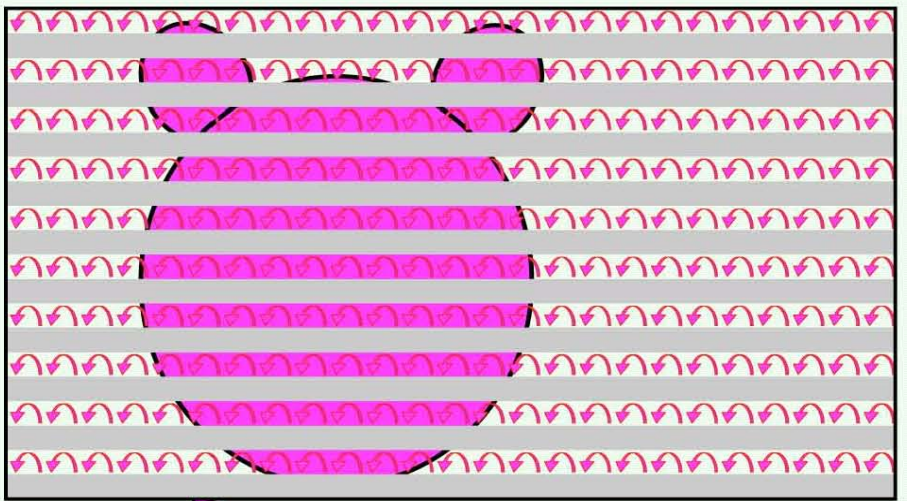
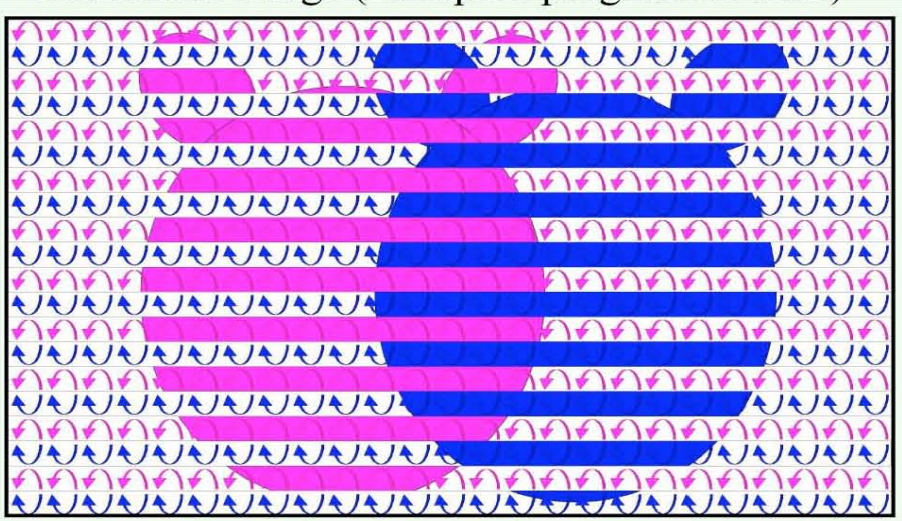


Image for **right eye** (**1080i/60** interlace scan)



Combined Image (**1080p/60** progressive scan)



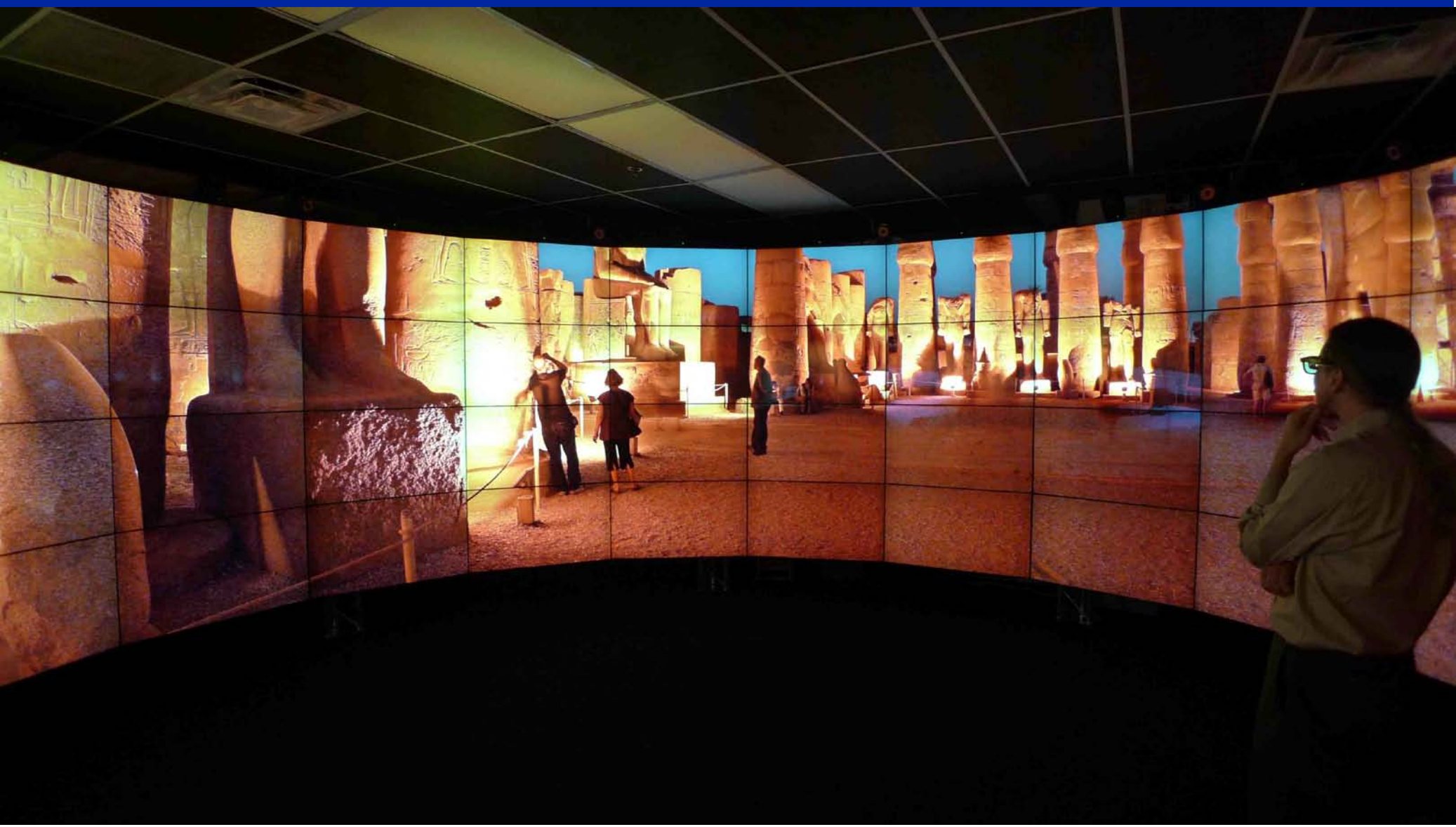
Polarizing Glasses filter the light so the viewer can perceive a correct 3D image

The **Xpol**™ is attached on the surface of the LCD HDTV Display alternately

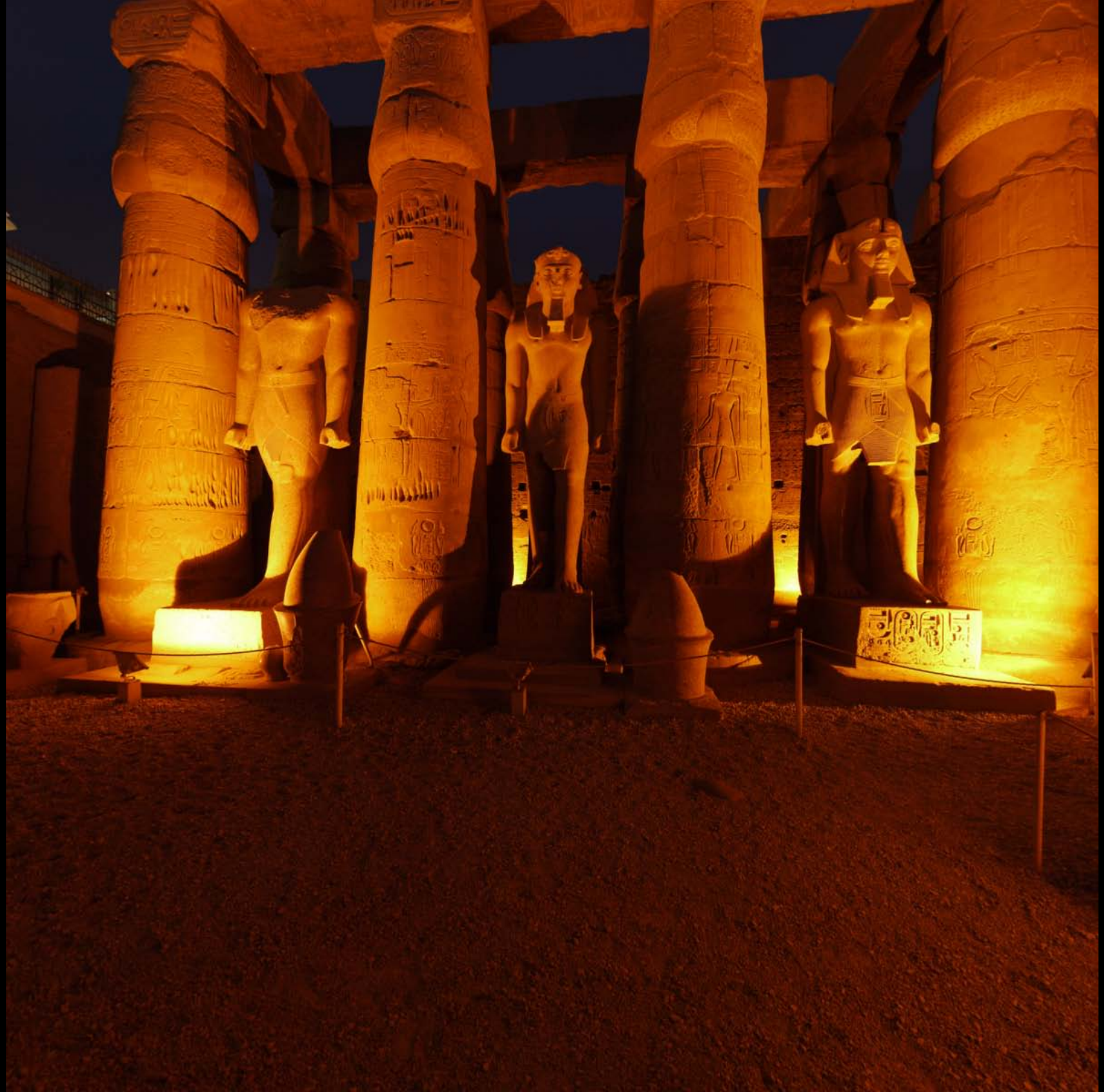
Source: NHK Media Technology, Inc.

VR Collaboration with Calit2's 17-Panel NexCAVE

EVL's CAVE2



Uses Planar Shifted Xpol 46" 720p UNBs
See www.evl.uic.edu



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