# 3D Multi-View Projection
# Six independent Points of View

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# Multi-View... what is it?

- Several Viewers
    - Each being tracked
    - Each having own view with correct perspective
    - Usually 3D but can be 2D
- Mutual confidence that the perspective is correct for all viewers encourages Collaboration
- Participants see and interact with one another; shared environment

# Multi-View... Applications

- CAD, Engineering & Design, Architecture,
- Virtual Environments for Education & Entertainment
- Reproduction of real environments
  - Construction
  - Geology
  - Archeology
  - Behavioral analysis
- "Big Data" Visualisation

# Multi-View... How?

- Time Division Multiplex
  - Projector accepts and displays 360 fps (6 x 60 fps sources)
  - Three 3D views or Six 2D Views
  - Double up to Six 3D views with second projector
  - Fast Switching Glasses ensure that each viewer gets correct image in each eye
  - Viewers are Head Tracked to maintain perspective
- 4K Resolution to generate large field of view images
- Laser Light Source ensures bright images (despite sharing between viewers).

# A "Multi-View" Capable Projector
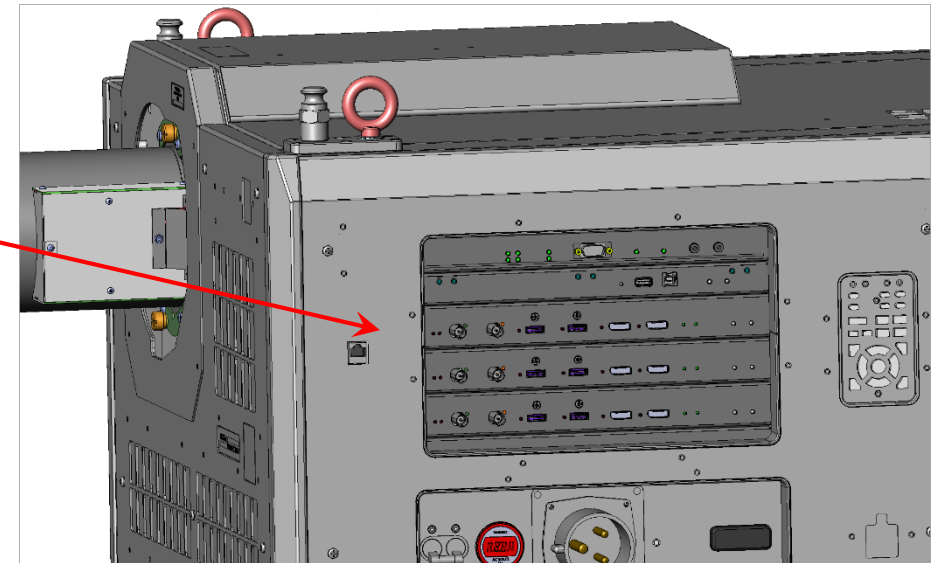
# Glasses and Head Tracking

# "Multi-View" - Sources

- Powerful, low latency, fast rendering Graphics Cards…
  - At 4K, each view has to generate info. for about half a billion pixels/second.
  - NVIDIA's Pascal GPU's that can do 5 Trillion "Hard Sums"/second.

# Doubling Up "Multi-View"

- Total of six 3D/Stereo Views with no additional loss of brightness

- Combine Active and Passive 3D Technologies

- Switching HFR 3D Glasses Inherently Polarise the light

  - Left and Right eyes use complimentary polarization

  - Matching polarization filter added to projector
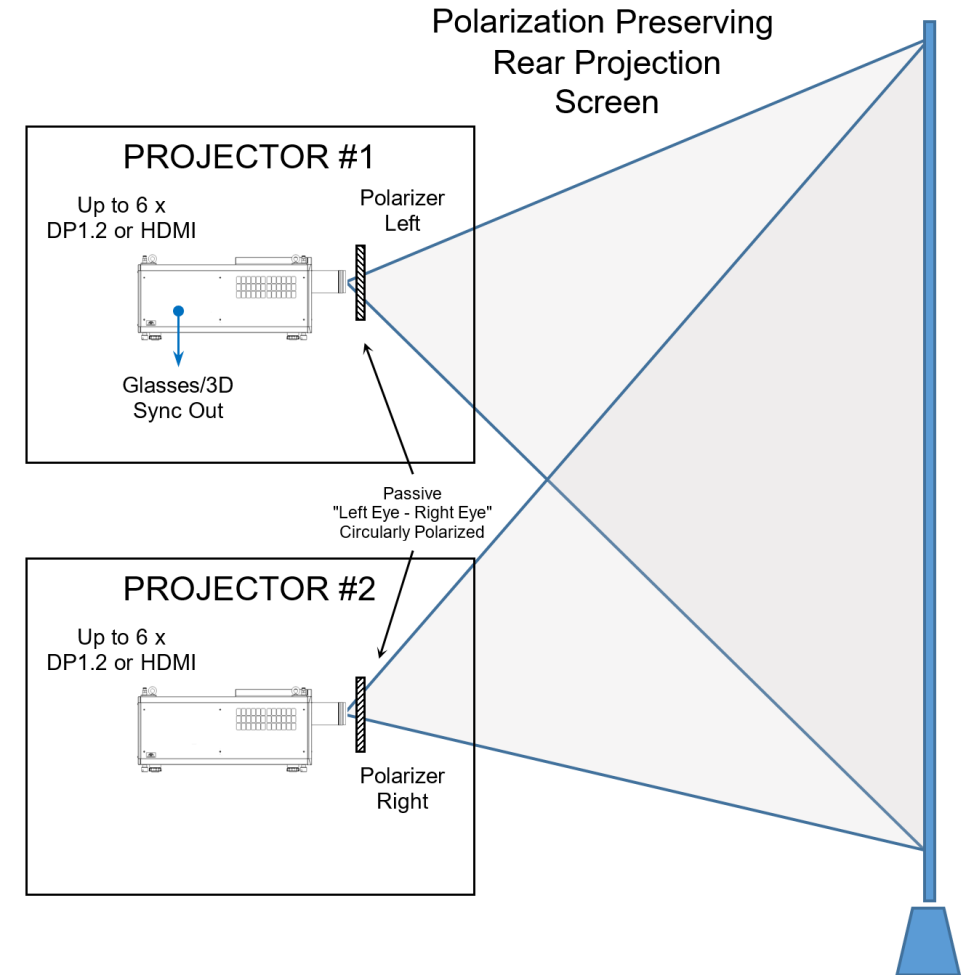
# Multi-View... The Real Thing
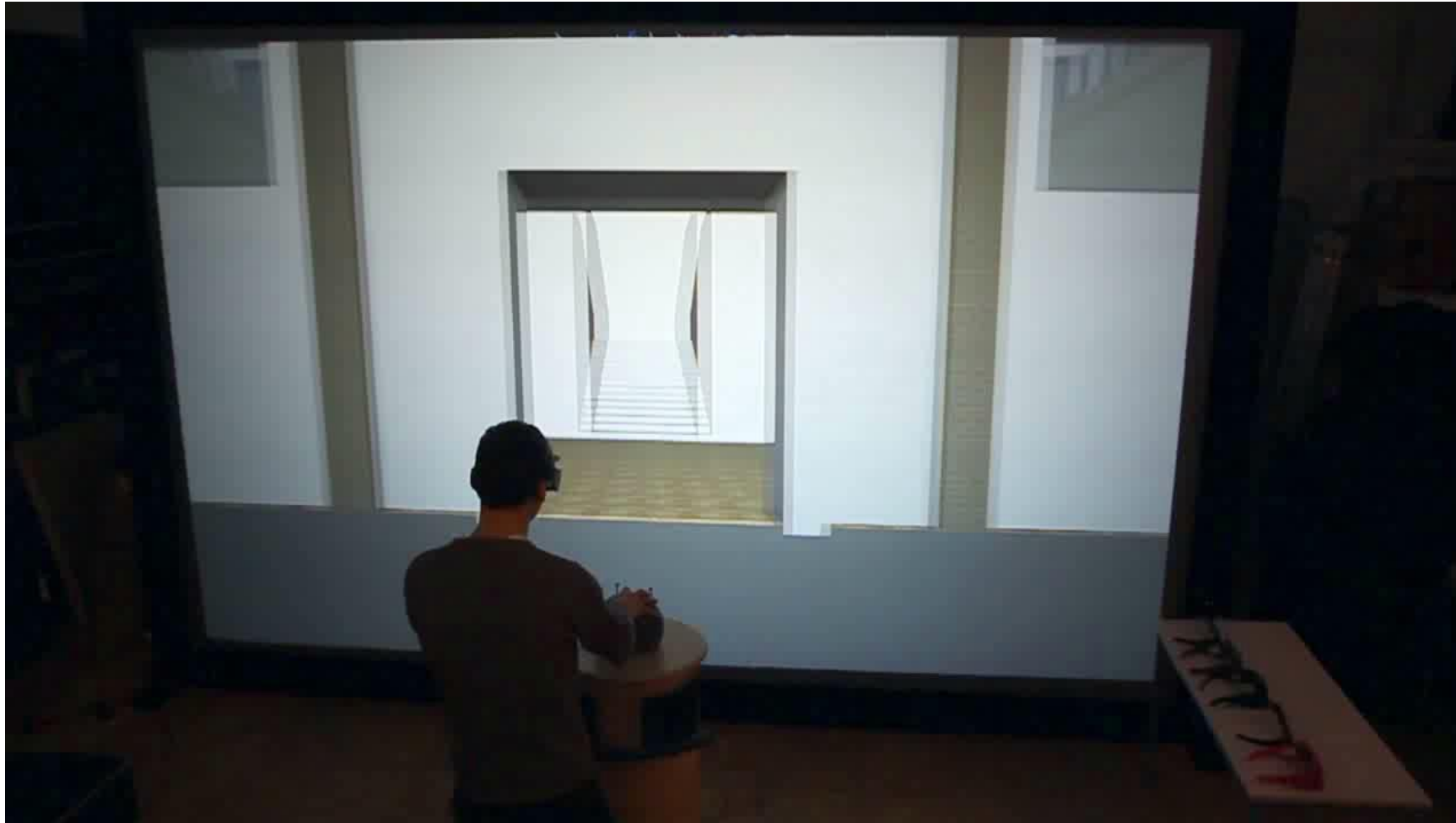


Courtesy of

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