SO530 Multi-Display Roundtable
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Simulation/Training

- Max visual quality at a fixed frame rate (usually 60Hz)
- Low latency

- Multiple overlapped projectors often HD although moving to 4K
- Usually implemented on a cluster
Simulation/Training

- Computer based visual training is becoming more and more prevalent
- Systems are pushing image closer to the limits of human vision
  - 4K Projectors for improved PPI and latency
  - 120Hz monoscopic projection to reduce smearing
- Stereo 3D improving the training experience in some use cases
Data Exploration

- Maximum Immersion
- 3D Stereo, often tracked

- Clusters
- Specific Applications or middle ware
Data Exploration

- Video Walls growing in popularity
  - Passive Interlaced Stereo or Active Stereo Cubes

- Ultra-High Resolution, pixel accurate

- Mosaic & G-Sync being used together to keep cluster size manageable
Design Review

- Maximum Image Quality, *interactivity optional*
- Ray tracing for global illumination
- Retina Display resolution (4k, 8k, 16k)
- Color accurate
Design Review & Design Development

- Clusters are moving to single desktop to reduce cost/complexity
- Multiple 4K projectors drive life size 1:1 walls for cars, trains and airplanes
- Ray tracing for global illumination becoming GPU accelerated
  - NOTE: when building systems with this make sure to include GPUs for running the ray tracing
- Design development walls are starting to move from print to displays
Control Rooms

- Show *LOTS* of data all at the same time usually not heavy 3D
- Multiple people looking at the same data
- When there is a crisis, relevant apps are maximized so all eyes are on them
Control Rooms

- Single desktop with multiple data inputs
  - HDMI, DVI, H.264, etc

- Windows 7 UI for window placement and management

- Basic 3D for Google Earth and other similar applications
Conference/Collaboration Room

- Show multiple applications next to each other
- Integrate Video Conferencing

- 3D perf varies, usually showing a mix of apps
- High resolution for detail in context
Conference/Collaboration Room

- Multi Projector blending with nvWarp
- Input from HDMI or HD-SDI capture for video conferencing or laptop input
- Thin bezel LCD displays becoming more prevalent
Contact Us

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