

# Session:

## High-End Video Transmission over IP

*When:* September 21, 2005,  
10:30 AM – 11:45 AM EDT (UTC-4, DST)

*Where:* Philadelphia South

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Internet2 Fall Member Meeting 2005, Philadelphia, 2005-09-21



# Why Do We Need Such a Thing?

- Image quality  $\propto$  resolution
  - $\implies$  going (more than) high-def
- Image color fidelity  $\propto$  color depth (+ calibration)
  - $\implies$  going 10 b per channel or more
  - $\implies$  using 4:4:4 sampling
- Interactivity  $\propto$  latency
  - $\implies$  going uncompressed
  - $\implies$  using fast (low latency) hardware and software
  - $\implies$  using optics with lower refraction index
- Motion tracking  $\propto$  frame rate (field rate)
  - $\implies$  going with high framerate
- Having too much spare bandwidth ;-)))
  - $\implies$  going all of them

# What Is the High-End Video?

- Rather vague definition, depends largely on the audience.
- 19,2 Mbps ... MPEG-2 HD
- 30 Mbps ... DV (SD)
- 30 Mbps ... HDV HD
- 143 Mbps HDCAM HD
- 270 Mbps ... uncompressed SD
- 270 Mbps HDCAM HD
- 1.485 Gbps uncompressed 10 b 4:2:2 HD
- 2.228 Gbps uncompressed 10 b 4:4:4 HD
- uncompressed 2K
- uncompressed 4×HD
- uncompressed 4K
- uncompressed 6K
- uncompressed 16×HD

# Speakers

- Bob Riddle, Internet2
- Miloš Liška, CESNET/Masaryk University
- Michael Wellings, ResearchChannel/UW
- Petr Holub, CESNET, Masaryk University