

Session:

High-End Video Transmission over IP

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Petr Holub

hopet@ics.muni.cz

CESNET z. s. p. o. and Masaryk University of Brno

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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