

Video-Conferencing System—Checklist

Evan Broder and C. Christoher Post

Introductory Digital Systems Laboratory

November 16, 2007

Expected Accomplishments

- When two labkits are connected, one should output audio and video inputs of the other
- Use switches to remove from the pipeline:
 - Transmission line (Packer connects internally to Unpacker)
 - Packer/Depacker
 - Entropy/Huffman Encoder/Decoder
 - Quantizer/Dequantizer
 - DCT/iDCT
 - (Each switch would remove the blocks plus any in between them)

If There's Time Left

- Display image from camera and image from transmission line side-by-side
(With a loopback adapter, show uncompressed/compressed at the same time)
- Display difference of image from camera and image from transmission
(With a loopback adapter, this would show where compression altered the image)
- Module inserted into physical connection that pseudo-randomly drops some percentage of packets (to demonstrate robustness to packet loss)

If There's Lots of Time Left

- Corrupt packets to demonstrate CRC check
- Load new quantization tables over RS-232 connection