

## The Highs and Lows of Streaming Media Solutions

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## Why Stream

- Increases retention through multiple neural pathways
- Learning styles accommodated
- Blah, Blah, Blah...there IS a right (*and wrong*) way to do it!

\*special note: any additional info not on the visual presentation should be provided in text format upon request for usability compliance

## Recording Software

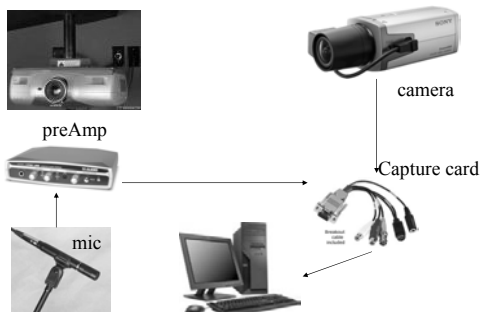
- Real
  - Helix Server Basic – Free. 25 Concurrent access. No multistream or bandwidth autosensing
  - Real Producer encoding software - \$200
  - Creates .rm file
  - MAC and PC
- Windows
  - Windows Server Standard - \$999. Limited concurrent access.
  - Windows Media encoder software – free.
  - Creates .wmv file
  - MAC (sort of) and PC

## Video Option 1

- Good for technique demonstration, offsite event.
- Quality microphone and jitter a concern
- Need capture card \$150



## Video Option 2 + 3



## Computer requirements

- 1.2GHz processor or higher
- 512mg RAM
- 20gig HD
- Pentium IV

## About the equipment

- Camera choice (\$803/\$250)
  - Camera with remote
  - Fixed camera
- Microphone (\$130)
- PreAmp choice (\$150/\$50)
  - Digital
  - Analog
- Capture card (\$150)
- Recording software (free/\$200)

- Sample 1 – remote camera
  - Note: someone is moving camera with remote, but can be done by instructor
  - Camera has 9 preset positions
- Sample 2 – fixed camera
  - Note: should use darker slide background, but goal is not to read slides which are posted on web

## Video option summary

- Characteristics
  - Easy to use
    - Instructor records, IT transfers file to server
  - cost is higher
  - bandwidth is higher 1.5 hours = 60mg
- Components – total cost \$880

Camera - \$250	Microphone - \$130
Capture card - \$150	Preamp - \$150
Recording software - \$200	

## Fixed Camera specs - \$250

- 1/3 type Interline Transfer HAD CCD
- Picture elements 768 H x 494 W
- Sensing area 1/3 type format (4.8 x 3.6mm)
- Horizontal resolution 480 TV lines
- Lens mount CS
- Minimum illumination 0.7 lx at F1.2 (50 IRE)
- AGC TURBO/OFF switchable
- CCD IRIS ON/OFF switchable (1/60 to 1/100,000 s)
- Auto White Balance
- Back-Light Compensation (BLC) ON/OFF switchable
- S/N ratio More than 50 dB (AGC OFF, WEIGHT ON)
- Power requirements AC 24V ±10%, 60 Hz or DC 12V +/- 10%, Power consumption 3.7 W
- 2.8-12mm Super Wide-Narrow Angle Auto Iris Lens+6inch Mount+24V/AC adapt(+\$65)
- <http://www.surveillance-video.com/sosshireexha.html>

## Remote Camera specs - \$803

- 26x optical zoom
- 1 lux minimum subject illumination
- Night Mode (Infrared imaging in 0 lux) and built-in infrared light
- Slow Shutter (controlled via the RS-232C interface, not available via wireless control)
- Noise Reduction (controlled via the RS-232C interface, not available via wireless control)
- 12x digital zoom, Multi-connector, Pan and tilt
- ID setting function for up to 9 camera preset positions
- <http://www.holcombs.com/technology/index.html>

## Microphone - \$130

- Avlex C133 is a Cardioid Condender mic
  - SPECIFICATIONS
  - FREQ. RES.: 50Hz-18KHz
  - IMPEDANCE: 100W ± 30%
  - SENSITIVITY: -60dB ± 3dB 0dB=1V/Microbar
  - VOLTAGE: 48V D.C.
  - CONNECTOR: Gold-plated 3-PIN XLR-Male
  - <http://www.earthshakingmusic.com/avlex.lasso>

## Other costs

- Real Producer software  
<http://www.realnexus.com/products/producer/> \$200
- Osprey capture card \$150
- Real Server Basic  
25-stream entry-level, delivers RealAudio 10, RealVideo 10



## Other Options

- Windows media encoder - free
- Goldwave audio recorder (free/\$45)  
<http://www.goldwave.com/>
- Windows server Standard edition 2003 with RTSP streaming - \$999

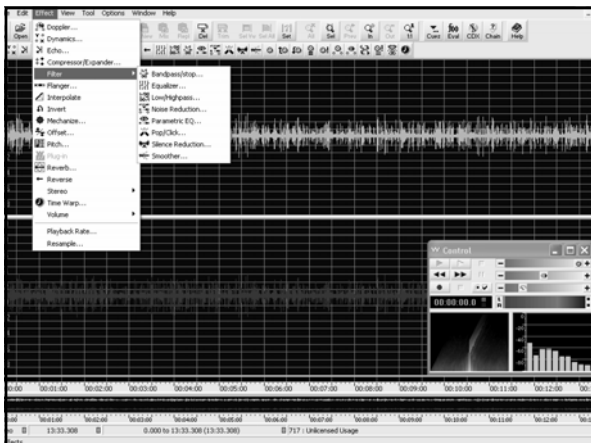
## PreAmps

- Mobile Pre USB \$150
- Digital
- <http://www.m-audio.com>
- EuroRack UB802 \$50
- Analog
- <http://www.behringer.com>



## Audio Option

- GoldWave audio recording software (\$45)
  - Record onto cassette and digitize
  - Use headset to record straight to computer (\$30)
- Real Producer Basic (free) – create .rm
- PresenterOne Basic (free) – create 15 min clips



## Low end solution - summary

- Characteristics
  - Easy to use
    - Instructor records, IT does all the production
  - Lowest cost
  - Lowest bandwidth – 15 min = 5mg (30mg for 1.5 hours)
- Components – total cost roughly \$70  
\*depends on selections
- Sample 3

Recording software - \$45	Microphone (\$30)
May also need cassette tape	Production cost (time)