SI 678 - Preserving Sound and Motion, Winter 2010

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SI 678 Preserving Sound and Motion

Class 3 – Analog and Digital Sound
Themes

1. What is sound
2. What is recorded sound
3. Machines and standards
4. Analog versus digital

“There are no technical barriers to archiving.”
What is recorded sound?

- Electrical or mechanical inscription and re-creation of sound waves.
- Many historical formats since 1889
- Magnetic tape as our focus
  - Bing Crosby, Ampex, 3M
  - Format, speed (ips), track structure
- Enforced industry standards made recording and distribution possible.
What is recorded sound?

- Tape Recording Process

http://hyperphysics.phy-astr.gsu.edu/hbase/audio/tape.html

HyperPhysics (SGU): http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html
Post-transfer decision making

- **Levels of modification**
  - The recording as it was heard in its time
  - The recording as it has been produced
  - The recording as produced, but with compensation for historical imperfections
  - The recording enhanced to contemporary taste

- **Digital transfer enables and challenges these assumptions**

Machines and Standards

- Initial rarity of technology – all in one system
- Standards emerge from cooperation among tape and tape deck manufacturers
- Standardization of tape speeds, tape tracking, tape sensitivity
- No attention (really ever) to longevity.
What is re-recording?

- “to preserve the original sonic content of a recording”
- “preserve history, not re-write it”
- “maintain objectivity”


- Supports accurate transfer; quality fidelity; skilled vendor services; fully documented processes
Analog vs. Digital

- How born (media, format, technique)
- Aging patterns
- Rebirth – gain and loss
- What are the advantages of analog signals
- What are the advantages of digital signals
Thank you!

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