Catholic Archives in the Digital Age:
A Conference for Reporters, Archivists, and Scholars

Afternoon Roundtable/Discussion:
What to Digitize? How to Digitize it?

In-house vs. Outsourcing

- First decision you need to make is whether or not you want to set up your own operation or hire an outside vendor.
- In-house might be good if plan to digitize a large number of av-items [hundreds vs. tens]
- Vendor has special skills you may not have on your staff and you have to purchase playback equipment.
- Digitizing can be a time consuming process.
- Even if you outsource the digitization there are still many issues you will need to understand in order to make informed decisions with your vendor.
- A vendor’s advice might not always be the right way to go.
- Third party reviews of vendor recommendations can be very helpful.
Why digitizing a/v materials?

• Preservation:
  Format of the original is obsolete / deteriorating
  Original is deteriorating
  Playback equipment is rare

Access

Original can be made available across a variety of digital platforms

The web: 

Tablets: 

Smartphones:
How to get started!

• Appraisal – What to digitize first

Valuable Content

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Deterioration – Obsolescence of playback equipment

You first want to work with the most important items that are in the worst shape. These categories can be somewhat arbitrary but the general principle is clear.

• On Demand

Research / Use requests can help you determine what items are most important in your collections.

In most collections a minority of your items will account for the majority of requests.
Steps in Digitizing

• Playback equipment
Cost and maintenance of this equipment is one of the main reasons for outsourcing your digitization. We can play 25 different video formats and the playback equipment can be difficult to find and maintain.

Steps in Digitizing

• Software:
We use for audio capture:
Steinberg Wavelab.
For Noise Reduction, etc.
Izotope Ozone and Rx2
For video capture:
Virtual dub [lossless]
Blackmagic Media Express [lossy]
Matrox Max H.264 [lossy]
For Video editing:
Final Cut Pro X

There are many more software packages and file formats available. There is a learning curve for all of the software.
File Formats:

• What to consider:
  Platforms [Mac or Windows]
  Proprietary or Open Source
  File Quality / File Size
  File Storage Space

Choosing a file format can be very complicated, but it is probably the most important decision in the digitization process. You have to make this decision whether you do the work in-house or outsource it.

Digital audio formats are more standard than digital video formats. If you use a vendor it is important for you to know the pros and cons of the various digital formats the vendor might suggest.

We use 24 bit 88.2 khz wav files for audio and the Apple Prores [Mac] and FFV1 [Windows] codecs for video.

Digital File Storage

• Digital a/v files will take up a lot of space
• You need more than one back up of your files
• High quality file audio and video file sizes for Broadcast / Preservation [e.g. not youtube or smartphone]:
  • 1 hour of 24/88.2 audio = 1.8 gb
  • 1 hour of NTSC apple pro res video = 24 gb
  • 1 hour of NTSC FFV1 video = ca. 25 gb
  • 1 hour of HD 720p video in apple prores HQ = 44 gb
  • 1 hour of HD 720p video in 8bit avi video [uncompressed] = 222 gb
Web Resources:

General Links:
- The Association for Recorded Sound Collections
  http://www.arsc-audio.org/messageboard.html
- The Association of Moving Image Archivists
  http://www.amianet.org/
- The International Association of Sound and Audiovisual Archives
  http://www.iasa-web.org/listserv

Audio and Video Collections Assessment Tool by the University of Illinois Library
http://library.illinois.edu/prescons/projgrants/grants/avsap/index.html

Image Permanence Institute:
https://www.imagepermanenceinstitute.org/

Audio links:
- Specialist for audio tape transfers of any kind: http://www.richardhess.com/tape/index.htm
- Transfer of lacquer discs and tape: http://www.theaudioarchive.com/
- Transfers unusual formats like dictation belts, wires, etc.: http://www.soundsaver.com/
- Wire transfer specialist: http://shifrin.net/
- Vendor for remanufactured Ampex Atr-102 ¼ inch reel to reel machines: http://www.atservice.com/4901.html
- Vendor for remanufactured Studer reel to reel decks: Fred Thal / ATAE ahal@gmail.com
- Vendor for empty cassette shells, splicing blocks & tape, etc.: http://www.tapecenter.com/noname3.html
- Vendor for everything related to digitizing of audio: http://www.tracertek.com/
- Vendor for blank reel to reel tape and accessories: http://usrecordingmedia.com/
- Vendor for turntables: http://www.kabusa.com/frameset.htm?
- Vendor for turntables: http://www.esotericsound.com/
- DAW (Digital Audio Workstation) builder: http://adkproaudio.com/
- Soundcard: http://www.lynxstudio.com/
- Vendor for audio editing and recording software: http://www.steinberg.net/en/products/wavelab.html
- Vendor for audio restoration software: http://www.algorithmix.com/
- Vendor for audio restoration and mastering software: http://www.izotope.com/products/audio/ozone/
- How to bake tapes to make them play again: http://en.wikipedia.org/wiki/Tape_baking
- Repair of Nakamichi tape decks and maybe source for used decks: http://www.eslabs.com/

Sources for used equipment:
- eBay
- www.audiogon.com
- Source for used professional vcrs and very reasonable rentals: http://www.usedvideo.org/