

How's that Sound?

Quality control for Preservation of Archival
Sound Recordings

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Organizational requirements for quality assurance

Is the transfer work carried out inhouse or outsourced?



Whether In-sourced or Outsourced

- Establish internal process, policy, and standard practice
- Quality control carried out by a trained professional
 - Benefits:
 - Raises the level of quality assurance by having skills that can match the quality to the organizational needs
 - Ideal Requirements:
 - Technical prowess
 - Knowledge of analog and digital media capture processes
 - Musical/aural training
 - Ability to interpret organizational QC standards
 - Ability to operate capture equipment for auditioning
 - Without this, do QC anyway, to the best you can in your context
 - Can lead to higher quality output inhouse and outsourced

What can cause problems in capture
and transmission?



Physical Condition

- Vinegar syndrome
- Soft binder syndrome
- Bad splices
- Palmitic acid
- Mold...
- You get the picture

- Resources
 - ViPIRS, NYU Libraries
 - Richard Hess's Webpage
 - FACET, Indiana University

Points of Failure in the Capture Process



- Playback
- Capture / Signal Chain
- Digital File integrity
- Post Transfer Quality Control



Tracking of signal flow for transfers can be useful

The screenshot shows a web-based interface for managing digital assets. The top navigation bar includes a search bar and several icons. Below the navigation, there are tabs for 'Item tracking', 'physical characteristics', 'condition and treatment', 'digitization', 'file tracking', 'audio tech metadata', and 'video tech metadata'. The 'audio tech metadata' tab is active, displaying various fields for an audio item. The 'Shared Attributes' section includes 'Item Type' (audio), 'Releasing Label', 'Brand and Model', 'Media Duration', 'Release Date', and 'Item Label Metadata'. The 'Audio Item Attributes' section includes 'Item ID' (23790), 'Format' (Disc), 'Audio Type' (Disc - Transcription (Aluminum Base)), 'Type Width or Disc Diameter' (16 in.), 'Cartridge Choice' (Shure M44-7), 'Stylus Choice' (2.5 ET), 'EQ' (Other (Describe in Notes)), 'Speed' (33.33 rpm), and 'Type' (Mono). There are also sections for 'Video Item Attributes', 'Film Item Attributes', and 'Born Digital Item Attributes', each with a red 'X' icon. The bottom of the interface shows a table with columns for 'Finding aid location', 'Object ID', 'Druid', and 'Source ID'.

Finding aid location	Object ID	Druid	Source ID
ars0033_16inch_b211_d4841	43214	kr605ens391	ars0033_16inch_b211_d4841

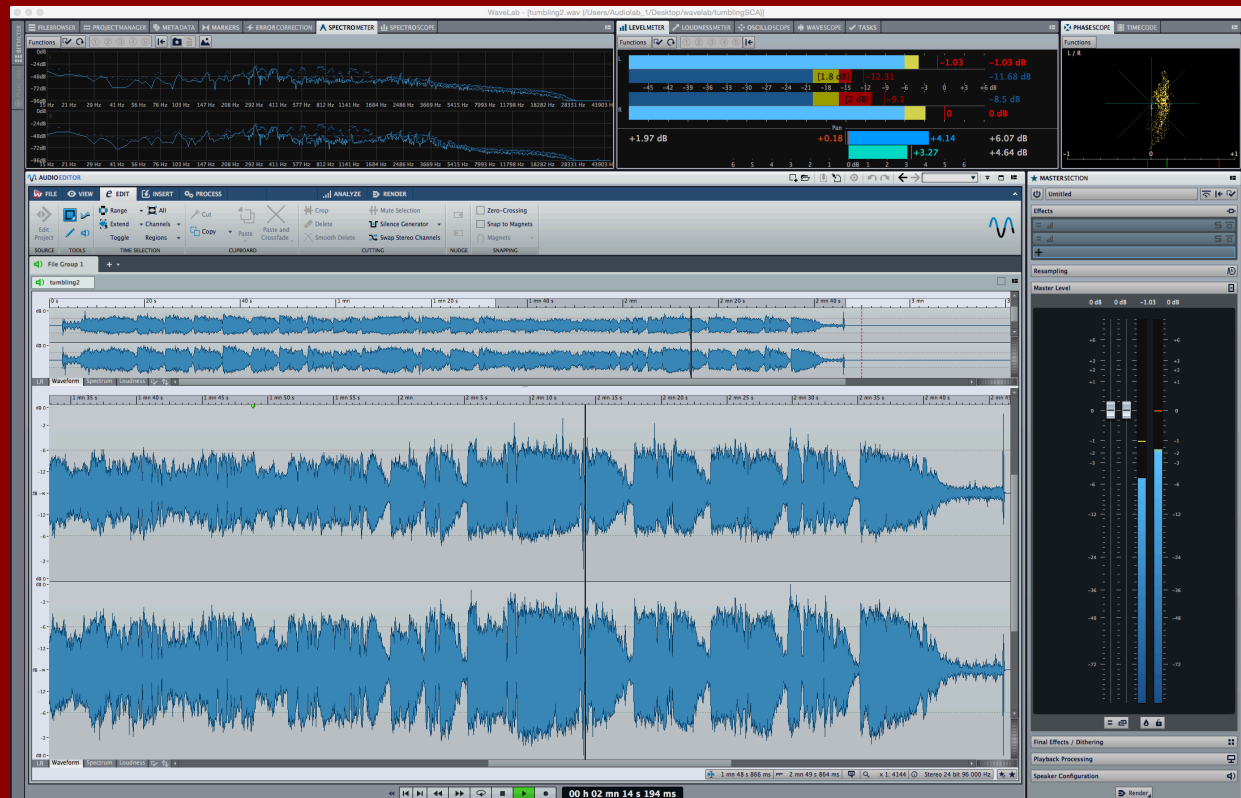
The screenshot shows the same web-based interface as the previous one, but with the 'digitization' tab active. It displays a table of digitization records. The table has columns for 'Item ID', 'Date/Time digitized', 'Machine used', 'Signal chain used', 'Digitization note', and 'Operator'. The first row shows a record for item 23790, dated 1/10/2017, with a note about cuts on the original disc recording. The second row shows a record for item 23790, dated 11-05-35, with a note about the digitization process. There are red 'X' icons next to the 'Operator' column for both rows. The bottom of the interface shows the same table as the previous screenshot.

Item ID	Date/Time digitized	Machine used	Signal chain used	Digitization note	Operator
23790	1/10/2017	Enter ID: 47	Enter ID: 86	a-00:04:10 cuts on original disc recording	ncoy
23790	11-05-35	Technica SP-15/SME 3012-R	TimeStep -> Prism ADA-8XR -> RME HDSPa -> Mac Pro 3.5 Ghz six core -> WaveLab	a-00:07:18 skip from original disc playback when this disc was out	

Thoughts on Quality Control Criteria

- Content type, where does the value reside?
 - Spoken Word
 - Music
 - Other
- Capture machine availability/challenges
- Possible commercial re-use
- Workflow of capture
 - 1 to 1
 - 1 to many
- New vendor or established relationship?
- Listening to 3rds? 10% of completed transfers? 3-4 minutes?
- Use a visual and aural hybrid approach
- Have a back up (with checksums) if opening files in an editor

Quality Control Equipment and Problems



Digital Clipping

Equipment Needs For Quality Control

- Hardware
 - A Workstation
 - High Quality Headphones and Headphone Amplifier
 - High Quality Digital to Analog Converter
 - Magnetic Viewer
 - Possibly machines
 - If well maintained
 - If skilled operator of given format/machine
- Software
 - DAW
 - Metering software

Tools for interacting with Possible Problems

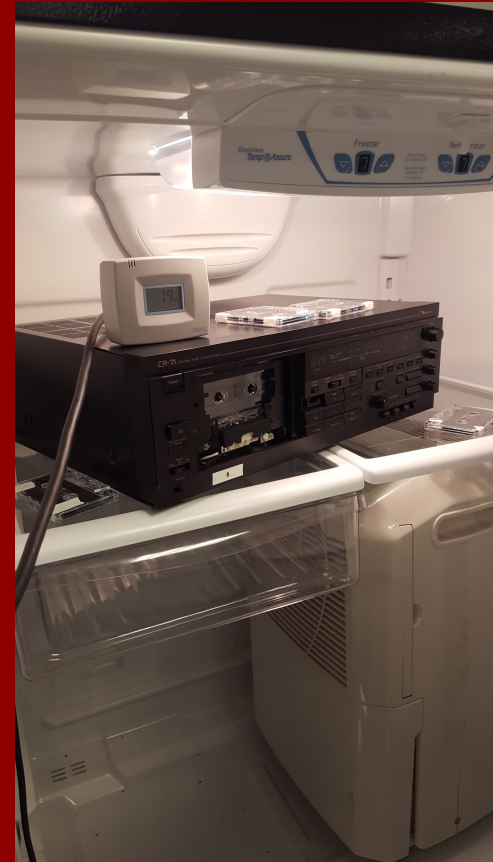
- Trained ears
- A/V Artifact Atlas, BAVC
- Machines on hand
- Comparing different transfers from the same signal chain
- Physical examination
- Comparing the image of the media with the recording
- Comparing files to the RFP/statement of work

Examples of Problems



Soft Binder Syndrome

- Cassettes and Open reel tape



Incorrect EQ Selection

- Mostly pre-1955 (ish) discs and magnetic tape (to some extent)



Bad Splices

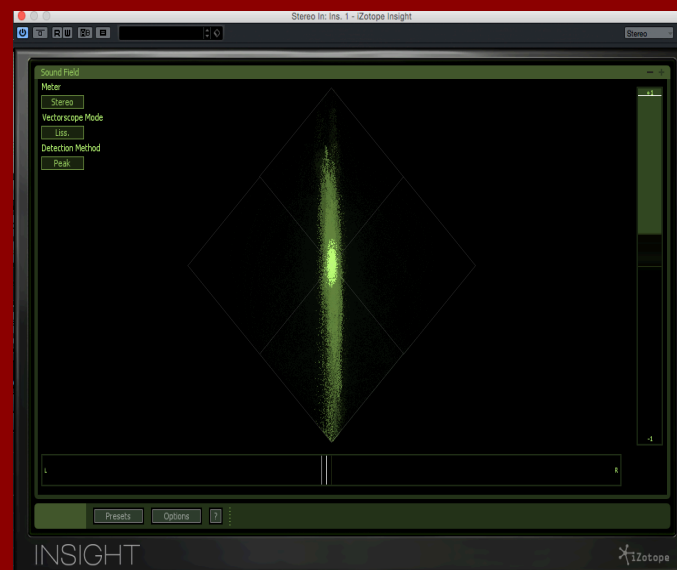
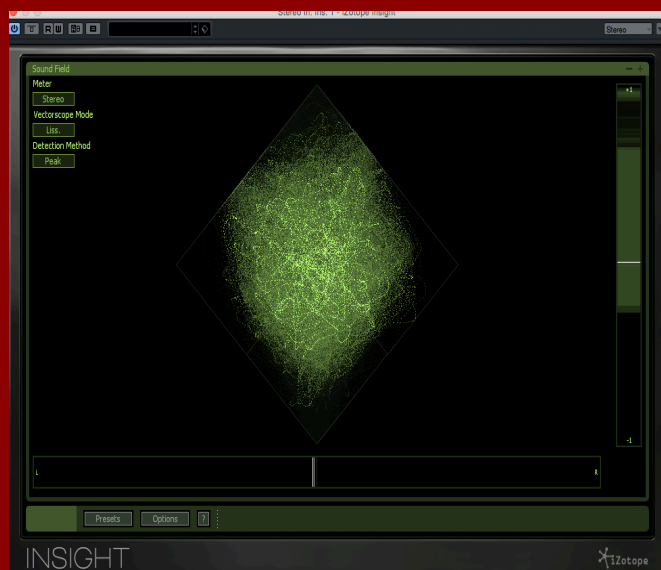
- Open reel tape (mostly)



A screenshot of a web browser displaying a page titled "BAD AUDIO SPLICE". The page is part of the AVAA (Audio Visual Artifact Atlas) project. The browser's address bar shows the URL "https://bavc.github.io/avaa/artifacts/bad_audio_splice.html". The page features a navigation menu with tabs for "Analog", "Audio", "Magnetic Tape", and "Cleaning". Below the navigation is a search bar. The main content area includes a section titled "Can it be fixed?" which explains that bad splices can often be identified during the preview stage of a transfer and should be removed. It also mentions that the area around the splice should be cleaned and a new splice should be made. The page concludes with a section titled "Examples" which shows a video player with a play button and a "Bad Splice" label. The AVAA logo, which says "AVAA AV ARTIFACT ATLAS", is visible in the top left corner of the page content.

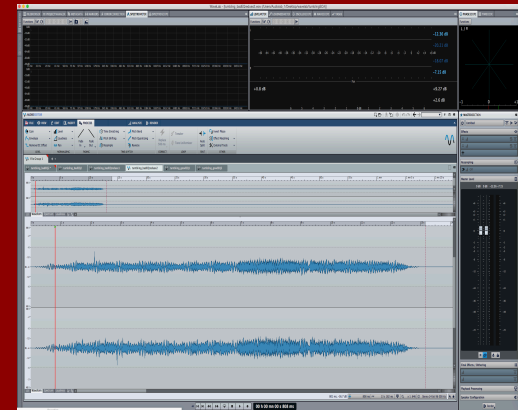
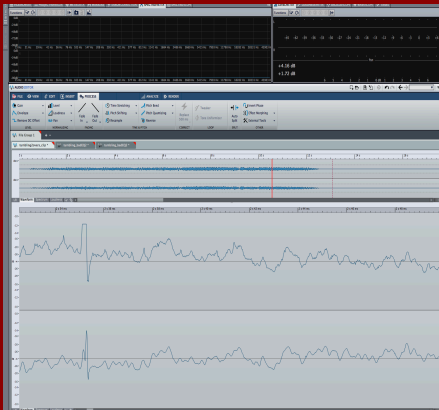
Azimuth Alignment

- Magnetic tape (Default alignment from tape then by ear/scope)
- Left (high mono compatibility recording) - not correct
- Right (high mono compatibility recording) - correct



Digital Clipping

- Affects all formats. Pretty easy to tell visually, sometimes aurally, with meters, and automated process in many DAW (i.e. Wavelab global analysis). DATS can't generally be helped ...



Thank You

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