SLIS Digitization Station Fellowship Handbook
OU School of Library and Information Studies
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University of Oklahoma, School of Library and Information Studies
2018
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1.1 SCOPE AND THE PROJECT ESSENTIALS

THE SCOPE OF THE PROJECT AND FINAL DELIVERABLES FOR PHASE 1 FELLOW INCLUDED:

- Assessed and selected the material within the host station collection for digitization
- Created an inventory of the material to be digitized using PBCORE cataloging format (due to the host station)
- Digitized master and proxy files to go towards the 30-60 hours of station material (master files due to the host station and the Library of Congress, proxy files due to the host station and the AAPB)
- Created detailed cataloged records for the digitized material (due to the AAPB)
- Generated technical metadata and MD5 checksums for the digitized materials (due to the Library of Congress and the AAPB)
- Researched the significance of the collection and created a special collection highlighting the significance of the digitized collection within the AAPB (due to the AAPB)
- Created a blog post highlighting the significance of the digitized material (due to the AAPB)
- Created a handbook documenting how to use the digitization equipment provided for the fellowship (due to the University)
- Created a short video tutorial on use of the equipment for the benefit of future students (due to the University)
1.2 Things to Consider as You Prepare to Work with the Selected Assets and Contacts

Proper Handling and Care - Perform format-based triage of assets and implement:
• Be aware of deterioration, damage, and preservation challenges
• Identify older or obsolete formats to digitize as a priority
• Attempt to locate and use master material (vs dub material)
• Consider proper handling during check-out and transportation of material

Identification and Inventory - Know how to identify both physical and digital assets:
• Identify assets and instantiations using PBCore data model and metadata schema.
• Become familiar with AAPB Cataloging Guidelines prior to creation of inventory.

Equipment & Migration Concerns - Familiarize yourself with the equipment, software, and preservation reformatting process:
• Familiarize yourself with the equipment you will use and, if possible, be involved in the upkeep and sustainability of the preservation station.
• Check that your decks are clean and working.
• Familiarize yourself with your software prior to digitization such as Vrecord or BlackMagic Media Express, and Adobe Premiere Pro.
• Install (or update) all tools and familiarize yourself with development platforms prior to digitization such as Github using Homebrew, FFmpeg, MediaInfo, MediaConch, etc. These have been preinstalled by the first fellow and may need updates.
• Review your knowledge of technical metadata and MD5 checksums for the migration of digitized material.

Contacts
Graduate Program: University of Oklahoma, School of Library and Information Studies Public Broadcasting Preservation Fellow Spring 2018: Evelyn Cox – Evelyn.D.Cox1@ou.edu
Broadcasting Preservation Fellow Summer 2018: Laura Haygood - LauraHaygood@ou.edu
Public Broadcasting Organization: Oklahoma Educational Television Authority OETA
Host Mentor: Janette Thornbrue – Jthornbrue@oeta.tv
SLIS Faculty Advisor: Susan Burke – sburke@ou.edu
Local Mentor: Lisa Henry – lisah@ou.edu
2.1 Checking Equipment and Preparing for Digitization

**Asset Format:** To get familiar with the type of tapes you have, the videotape identification and assessment guide created by Texas Commission on the Arts (2004) is a great tool. The formats you will need to become most familiar with are included in the table below.

The School of Library of Information Studies Digital Lab consists of two working decks: Sony UVW-1800 BetacamSP player and Panasonic AJ-HD1400 DVCPro player.

<table>
<thead>
<tr>
<th>FORMAT NAME</th>
<th>Betacam and BetacamSP (aka Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANALOG OR DIGITAL</td>
<td>Analog</td>
</tr>
<tr>
<td>DATE INTRODUCED</td>
<td>Betacam – 1982 – BetacamSP – 1986</td>
</tr>
<tr>
<td>DATES IN USE</td>
<td>Betacam – 1982 to present – BetacamSP – 1986 to present</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FORMAT NAME</th>
<th>DVCPro (aka D7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANALOG OR DIGITAL</td>
<td>Digital</td>
</tr>
<tr>
<td>DATE INTRODUCED</td>
<td>1995</td>
</tr>
<tr>
<td>DATES IN USE</td>
<td>1995 to present</td>
</tr>
<tr>
<td>TAPE WIDTH</td>
<td>1/4”</td>
</tr>
</tbody>
</table>


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**BETACAMSP**

Make sure to put all archival material in safe mode prior to inserting into deck just to be sure not to record over material.
2.2 Transporting Archival Material

You will be responsible for the proper care and handling of all archival material. Consult with the host station, OETA, regarding your method for signing out this material, time and date of return, and transportation of material. Here are some useful sites for a refresher on proper care and handling but you will also receive this information during or before bootcamp:

- Library of Congress Care, Handling, and Storage of Audio Visual Material
- Moving Collections
- Videotape Preservation Handbook by Jim Wheeler

Remember, that you will be physically transporting archival audiovisual material from the host station to the university, which is about 40 minutes travel time. You need to ensure that materials are protected from harm during this process. Make sure to account for road conditions, weather conditions such as heat or cold, rain or humidity. You may need to prepare a container that is appropriate for this process in advance. For the transportation of archival material from the host station to the university, I prepared a cooler that was used only for this, ensuring that the tapes stayed cool and was not exposed to heat, dirt, contamination in any format, or excessive vibrations.

Equipment

- Apple MacBook Pro Computer Property of SLIS (This should be returned to Cony or Sarah in the SLIS Office upon completion of the fellowship!)
- CRT TV (Located in or near the SLIS Lab)
- Sony VO-5800 UMATIC
- Panasonic DVCPro HD AJ-HD1400
- Mackie Soundboard
- Leitch Analog TBC
- Horita Black Burst Generator
- Horita Color Sync Generator
• SONY BETACAMSP UVW-1800
• BLACKMAGIC DESIGN ULTRASTUDIO EXPRESS

CLEANING OF TAPES AND DECKS AND TAPE HANDLING AND MAINTENANCE

CLEANING MAGNETIC TAPE

Normally, tapes do not need to be cleaned, except when they have powder shed or a gummy residue. In these cases, the tape can be cleaned (or baked) to make it playable. Only a person who understands the potential problems should bake tapes and we do not have that capability here at the university so you should not have to do this at any time. If a tape makes noise when you put it in the deck, immediately remove it without damaging the tape. If there is a problem with the master tape, return it to the host station and let them know what issues you came across.

TAPE HANDLING AND PRECAUTIONS

• Always wind a cassette tape to one end before ejecting.
• Never touch a tape except at the end/beginning of an open reel tape.
• Always place reels of tape and cassettes on a clean, flat area.
• Keep tapes away from direct sun.
• Do not place tapes near a heat source, an electric motor, or a transformer.

TAPE DECK MAINTENANCE

Proper maintenance of your tape decks is critical. A misaligned or dirty tape deck will produce unusable recordings. Clean your decks after each recording or daily if you are working with archiving material that might leave residue on your deck if they are used often. You should also clean your deck at the end of each day. If you play a dirty tape, always clean the deck before playing another tape.

• Clean all parts of the decks that touch the tape with alcohol and a wipe or Q-tip for hard to reach areas.
• Clean before and after each pass through the machine, for every tape.
3.1 AMS Ingest- Upload of OETA Inventory for GUIDS

For the AMS upload you must use Firefox or Explorer as your browser, do not use Google Chrome! This part has already been done for our station due to equipment issues so you should not have to do this step unless you have time during the fellowship to select additional inventory beyond the 74 items originally selected. The first fellow was only able to digitize 31 of the original 74 items on the OETA inventory sheet located on the hard drive and the computer as “deliverables to the host station.”

Follow the directions below:

AAPB Inventory Ingest Documentation
1. Sign into the AMS at ams.americanarchive.org.
2. Go to the Records tab.
3. Under the Operations button, click Import Collection.
4. In the dialog window that appears next, select the organization you are importing records for, and click Import Collection again. This will bring you to the MINT interface.
5. Click Choose File, and select the .csv of the records you want to ingest.
6. Leave “Define the field separator” as comma.
7. Change “Define the escape character” to “\”. By the time you’re done, the MINT upload form should look like this:
1. Click Submit.
2. A list of recently imported datasets will appear. Select the dataset that you just uploaded from the list. (click the .xml icon.)

3. When you click the database, several icons will appear underneath it. Click the mapping icon, in the middle of the three.

4. To Create new mapping:
   - In the dialog box that appears, click the “Add New Mapping” icon on the far right, which looks like a document with a green + over it. Name your new mapping something distinctive. A good format might be the name of the organization or collection followed by the date.
Note that there is already a mapping template that has been created, see image (steps 5-7 might vary):

5. When your mapping opens, you will see the source schema down the left-hand side, the target schema down the right-hand side, and the mappings in the middle. The page will look empty at first. To see all of the spreadsheet column headings that you will be mapping, click the plus signs on the left, under ‘Source Schema,’ to expand the view. To see the fields that you can map to, click the pbcoreCollection button on the right-hand side, under ‘Target Schema’.

6. In the mapping section, drag the column headers from the left-hand side to where it says “unmapped” in the mapping section next to the corresponding element or attribute. Since PBCore is a hierarchical standard, some elements are nested under their parent elements, and will not appear in the mapping area until you click the “+” next to the parent element. This screenshot shows the pbcoreRelation element, expanded out to show its child elements; the pbcoreCoverage element, which is still nested and therefore does not show its child elements; and the pbcoreAudienceLevel element, which has no child elements.
As a note, all instantiation elements exist within the ‘pbcoreInstantiation’ container, and will not appear in the mapping section unless that container element is expanded.

Any attributes that can be applied to an element can be seen by clicking the small @ symbol next the element. Here is a screenshot of the same three elements shown above, now with the attribute fields expanded out.

7. For repeating elements, click the green plus sign on the right of the element you’d like to repeat. It will appear at the bottom of the mapping section. The screenshot
below shows the pbcoreCreator element, the elements that come after, and the duplicated pbcoreCreator element at the bottom.

<table>
<thead>
<tr>
<th>pbcoreCreator</th>
<th>structural</th>
</tr>
</thead>
<tbody>
<tr>
<td>pbcoreContributor</td>
<td>structural</td>
</tr>
<tr>
<td>pbcorePublisher</td>
<td>structural</td>
</tr>
<tr>
<td>pbcoreRightsSummary</td>
<td>structural</td>
</tr>
<tr>
<td>pbcoreInstantiation</td>
<td>structural</td>
</tr>
<tr>
<td>pbcoreAnnotation</td>
<td>unmapped</td>
</tr>
<tr>
<td>pbcoreExtension</td>
<td>structural</td>
</tr>
<tr>
<td>ams:pbcoreCreator</td>
<td>structural</td>
</tr>
</tbody>
</table>

- It’s best practice to map going in descending order from the top of either the source schema section or the mapping section. The first time you map a source field to a mapping field, the source field will highlight blue. But if you map another source field to that same mapping field repeated, it will not turn blue. So the source fields turning blue is not a reliable indication that the field has been mapped, which is why going down in order is better to keep track of what’s been mapped already.

- When all of your source fields have been mapped, click the Preview button at the top of the screen. You will be able to preview the data here, but the most important part is to check that the validation tab says that the xml is valid. If it’s not valid, this tab will list your errors (which could be in the mapping or in the data). For example, this validation shows a failure to provide a ‘source’ attribute for ‘pbcoreIdentifier,’ which is required by the schema.

- Once the validation tab tells you the xml is valid, click “finished” along the top of the window to save your work. This will take you back to the screen showing recent datasets.
- Select the dataset you’ve been working on again, and click the “Transform” button, on the right of the three icons that appear.
8. A new dialogue screen will appear which offers a drop-down menu to select a mapping. Select the mapping that you just created, and click “submit.” Your mapping will be whatever you named it.

9. When the transformation has completed, click the approve button that appears next to the dataset.

10. The data has been ingested into the AMS and should begin appearing if you search for it in the records tab, as it is processed.
3.2 Generating GUIDs

1. Log into the AMS at am.americanarchive.org
2. Click the Records tab
3. Filter to the records from the organization you just added records for by identifying the correct organization in the search options on the left-hand side of the screen.

1. Once you have the set of records that you’re looking for, click the Instantiations tab on the top of the screen.

1. Click the Operation button, right under the ‘Instantiation’ tab, and select Limited CSV. A dialog box will appear asking if you’re sure you want to export records; click ‘yes.’ Either download the csv when it presents the option, or wait for the AMS to email you a link for the download (which will only happen if it’s a really big file).
1. When you have the csv, open it.
2. Make another copy of the original spreadsheet, and add “withGUIDs” to the end of the filename of the copy. Work in the copy.
3. Open the copy in Excel. Create a second sheet in the workbook, and copy the GUID and the UniqueID columns from the csv that you just downloaded into the second sheet of the workbook (preferably the UniqueIDs in the first column, and the GUIDs in the second column).
4. Select the first sheet of the workbook.
5. Create a new column to the right of the column with the pbcoreIdentifiers.
6. In that column, run a VLOOKUP, for the GUID, against the 2 columns on the next sheet, printing the 2nd column, specifying FALSE for possible match. Make sure you mark all of the column and row numbers in the reference table with $.
   a. Example: =VLOOKUP(A1, Sheet2!$A$1:$B$300, 2, FALSE)
7. Copy and paste the VLOOKUP formula down the entire column. It should print all of the GUIDS in the column.
8. Create a new column as the first column of the spreadsheet. Copy the GUIDS from the VLOOKUP column, and use a paste special (values only) to paste the GUIDS into the first column.
9. Delete the VLOOKUP column and the second sheet.
10. You now have a copy of the original spreadsheet with the new GUIDS added.

*As you digitize the material, you should take proper notes for the metadata of each inventoried item. This will provide sufficient information to upload to the AMS when all items on the inventory sheet have been transferred. You should go back in to the AMS and upload metadata for each digitized instantiation.

*To do this, you will need to log back to the AMS (do not use GOOGLE) using Explorer, FireFox, or Safari. You will log in with your email and password and to “RECORDS” and click on it. Find the files that were uploaded using the “Organization” tab under filter at the left of the screen. You will get a drop-down menu to search for the records. Locate the records “OETA- Oklahoma Educational Television Authority” which will need your metadata upload for the remaining 42 record of the original 74. Click on “OETA- Oklahoma Educational Television Authority” and it will take you to your assets page. Select the “AA GUID” number that is in blue for the asset that you will be uploading the metadata. This needs to be done one at a time, so I have completed this on a separates sheet titled “OETA SELECTION MATERIAL FOR PRESERVATION” that can be used to transfer material to the inventory sheet, the AMS site, and the “OETA_Digitized_Inventory” sheet. Once at the GUID page for the asset, locate the “EDIT Asset” icon and click.
it. Here you will search for the “Description” box and copy the information into this box. Do this for any other section that needs modifications and “SAVE CHANGES.”
4.1 Digitizing or Capturing Master Files

Process of using the equipment

1. **If you have not already, clean the deck prior to use using the supplies on the book shelf in the office. You will need the alcohol and Q-tips or wipes for this process.**
   
   Allow the heads to dry before inserting tapes. Do not use alcohol on rubber pieces to avoid damage to these pieces. For first time use, you may want to consult the manuals for each deck if that makes you comfortable.

2. **Turn on the deck, the soundboard, TBC, Horita, monitor, and the computer. The computer login is “SLIS” and is not case sensitive.**

3. **Allow the deck to warm up for at least 5 minutes before use.**

4. **Watch the video titled “AAPB Fellowship Tutorial.mp4” located on the desktop of the SLIS Laptop purchased for this process. This will detail the capturing and migration process for each deck.**

5. **Open terminal, type in “VRECORD –P” and hit enter. This should open VRECORD so that you can view the scope.**

6. **Click “Launchpad” on the icon bar at the bottom of the screen to select the “Blackmagic Media Express” software for digitization.**

7. **Pull up the software but do not plug in the Firewire hookup until the tape is in the deck and ready for digitization. Media Express will come up on the screen:**
1. Back in Vrecord, play the bars and tones at the beginning of the tape (as pictured below), and adjust luminance and chrominance using the TBC. The numbers on the image relate to the steps outlined below.

1. On the TBC, press the “chroma” button, then turn the knob until the color reaches the inner set of square targets, as shown on the yellow section.
2. On the TBC, press the “hue” button, then turn the knob to adjust the color so that the correct color is pointing in the right direction (yellow to Y, red to R, magenta to Mg, cyan to Cy, and green to G).
3. On the TBC, press the “black button” to adjust the black/white levels to be in range. Aim for the white bar to fall just below the “235” line.

2. Back in Black Magic, check the audio levels on the bottom right side of the screen. Audio should average around 18.
3. Check your settings for your software to make sure it is preservation quality, set the file destination (external hard drive for large, archival-quality files), and proceed to record. You may put in a test tape to make sure all settings are correct.
4. Click the “Log and Capture” tab in the software. Put a tape in the deck and plug up the “Firewire.” You should see bars or the picture come up on the Log and Capture picture frame on the screen. You can begin capturing.
5. As you digitize information from the original format, take detailed notes regarding the metadata and content. I do this on a different computer and...
TAKE THESE NOTES ON A FORM THAT I CREATED TITLED OETA SELECTION MATERIAL FOR PRESERVATION.

6. WHEN THE VIDEO IS DONE, YOU WILL NEED TO SAVE IT AND GIVE IT A NAME IN ORDER TO PULL IT UP IN QuickTime TO CHECK AUDIO AND RUN FOR QUALITY CONTROL (QC). YOU WANT TO SAVE THIS TO THE HARD DRIVE OR YOU WILL QUICKLY RUN OUT OF SPACE.

7. FOR THE AAPB PROJECT, YOU WILL SAVE THIS TO Windsform for the OU hard drive or SEAGate for the OETA and WGBH hard drive. I WOULD NAME THIS YOUR GUID NUMBER FOR THAT ASSET. IT WILL MAKE MD5 CHECKSUMS AND PROXY FILE TRANSFERS MUCH EASIER. YOU MIGHT ALSO GO AHEAD AND REPLACE ALL / IN THE GUID NUMBER WITH A -. THIS WILL ALSO MAKE TRANSFER EASIER. SEE PREVIOUS FILE NAMES.

8. ONCE THIS ASSET IS SAVED TO THE HARD DRIVE, YOU CAN PULL IT UP IN QUICKTIME TO LISTEN TO THE AUDIO AND MAKE SURE IT IS THE PROPER LENGTH AND THE PICTURE IS CLEAR.

9. YOU CAN THEN PUT IN ANOTHER VIDEO FOR DIGITIZATION AT THIS TIME. I WOULD SELECT “KEEP” AND START A NEW FILE FOR THE NEW ASSET UNTIL YOU CAN CHECK THAT EVERYTHING PROPERLY TRANSFERRED TO THE HARD DRIVE AT THE END OF YOUR SESSION.

10. MAKE SURE TO REMOVE ALL VIDEOS FROM THE DECKS AND CLEAN THE DECK AT THIS TIME.

11. MAKE SURE ALL EQUIPMENT IS PROPERLY SHUT OFF BEFORE LEAVING.

DVCPro DECK

- BECAUSE DVCPro IS ALREADY DIGITAL, YOU DO NOT NEED TO RUN IT THROUGH THE CAPTURE CARD. USING THE FIREWIRE ADAPTER, PLUG THE DECK DIRECTLY INTO THE LAPTOP, USING ADOBE PREMIERE PRO TO CAPTURE. YOU SHOULD NOT NEED TO USE THE TBC AND AUDIO MIXER TO MAKE ADJUSTMENTS.
- TIME CODE NOT SUPERIMPOSED ON RECORDING - WHEN USING THE PANASONIC AJ-HD1400 DVCPro PLAYER, YOU WANT TO RECORD WITH THE TIME CODE NOT DISPLAYED IN THE SCREEN IN THE RECORDING. TO DO THIS, TURN THE SUPER SWITCH OFF ON THE DECK (THIS SHOULD ALREADY BE SET TO OFF). IF YOU DO WANT THIS INFORMATION ON THE RECORDING, SWITCH THIS TO ON.

CAPTURING USING VRECORD

VRECORD CONFIGURATION FOR DIGITAL CAPTURE THIS STEP WILL HAVE TO BE PERFORMED BEFORE CAPTURING OR SETTING LEVELS.
1. OPEN NEW TERMINAL WINDOW
2. TYPE: vrecord -e
3. HIT ENTER

CONFIGURE CAPTURE SETTINGS:

SELECT FILE PATH FOR MASTER FILES:
- THIS IS WHERE YOU WILL SAVE THE MASTER FILES ON THE HARD DRIVE

SELECT FILE PATH FOR AUX FILES:
- THIS IS WHERE YOU WILL SAVE THE AUXILIARY
See Video with Detailed Instructions here. This may vary if issues with equipment are changed or fixed and you are able to use Vrecord:

- Video Input:
- File format:
- Codec for video: Uncompressed
- Video Bit Depth: 10-bit
- Television Standard: NTSC
- QC Tools: No (these will be checked after)
- MD5 Checksums: No (these will be created in the scripts)
- For UMatic: 1 Stereo (1 & 2 Channel)
- For Betacam or DigiBeta: 2 Stereo (4 channel)
- Select View: Broadcast range

Hit Enter when done (This will allow you to do the following commands)

- To set levels (entering passthrough mode):
- Type: P (See notes for setting levels) To capture:
  - Hit enter
  - Type file name
  - Type you name
  - Hit enter to capture, hit play on deck
  - Hit Esc. to end capture

Notes and Metadata

As you digitize the material, you should take proper notes for the metadata of each inventoried item. This will provide sufficient information to upload to the AMS when all items on the inventory sheet have been transferred. You should go back in to the AMS and upload metadata for each digitized instantiation.

Take timecode notes for any information that should be reviewed or can cause issues during the QC process, including: bright flashes, film artifacts, dropouts, image errors, etc.
- If there is an abundance of issues note that in the summary

Validate digitized information using quality control (QC) tools and technologies discussed during boot camp and AAPB webinars to check the quality of the digitized collection assets. Some tools include MDQC, Mediaconch, sonic visualizer, and QCTools. Many of these tools will allow you to run reports to see that your recording is up to preservation quality. You might do this after your first run to familiarize yourself with the process and check your settings on your software are recording up to AAPB standards.
5.1 MIGRATION OF THE MATERIAL

TRANSCODING PROXY FILES
The transcoding process is started by executing a batch.sh script
./batch.sh

Step 1 Create a Batch Script to use when doing batch converts from master files to proxy files. This has already been done for you but I have included instructions and a great site in case you would like to know how to do this. It is included below the file location information.

This script is already on the laptop desktop for your use. When it comes time to migrate files, you will be able to use this script to drag and drop into your terminal. This script has already been executed using the chmod +x command and is ready for your use. All you have to do is drag and drop! This script is titled:

 create_video_proxy_AAPB.sh and is located on the desktop

How to make a simple bash script

How to make a simple bash script (Mac)

By Joe Cutajar on April 21, 2015

How to make a simple bash script (Mac)

The first step to make a simple bash script is writing the script.
Open Text Edit, found in Applications, once in Text Edit, click “New Document”.

Next, write the Bash Script, as below:

```
#!/bin/bash

echo hello world
```

- `#!/bin/bash` tells the terminal that you are using bash shell `echo`
- `hello world` prints out “hello world” in the terminal

Once you have written the script, you have to convert the document into plain text.

Select “Format” from the Menu and then click “Make Plain Text.”

Next click “File” and then “Save.”

Name it whatever you would like, but remember how you typed the name because we are going to be using that exact name in the terminal.

For the purpose of this tutorial, I am going to name it “FirstScript”, and I am going to save it in my Documents folder.

Also you have to uncheck the box that says “If no extension is provided, use ‘.txt’.”
Next you are going to open the Finder.

Search for the name of the script you just wrote, or navigate to the file.

Once you found it, right click on it (CTRL + click) and click “Get Info”.

Look on the very bottom right of the opened info window, and you will see a Lock icon that should appear locked.

Click it, and if you have a password on your computer it will ask you for your password to unlock it, otherwise it will just unlock.

Once that is done, you have to open Terminal and navigate to the folder you put the document in.

In the terminal, for my case, I am going to type in

cd documents

Now we have to change the file we saved to an executable file. Type in chmod +x (file Name). I’m going to type in

chmod +x []

This will change it into an executable file.

Now type in ./ (File Name). I’m going to type in
You should see “Hello World” printed out.

Follow the instructions for the AAPB Proxy Specifications-

**AAPB PROXY SPECIFICATIONS**
Create video access proxies for all digitized files, to the following specs:
- h.264/AVC (Codec ID avcl), 711 kbpx, 480x360, 4:3 aspect ratio, YUV 4:2:0, 8 bits, audio AAC 48.0 KHz/128 Kbps in an .mp4 wrapper

**The ffmpeg commands used to create these files are:**

1. Individual files:
   a. Open Terminal:
   b. Copy and Paste:
      i. `ffmpeg -i [drag and drop the master file here] -vcodec libx264 -pix_fmt yuv420p -b:v 711k -s 480:360 -acodec aac -b:a 128k [name of the output file] .mp4`
Do not use the libfdk_aac because it does not work with our computer setup. Use only aac - see code above display.

2. To transcode an entire folder using Bash script:
   a. create_video_proxy_AAPB.sh – to transcode a batch of audio files or video files at once.
   b. To run one of these bash scripts:
      i. Make sure the script is installed and executable on your computer by typing the command:
         * chmod +x [drag and drop the script: Create_video_proxy_AAPB.sh]
      ii. In command line:
         * Drag and drop the script into the command line
         * Drag and drop the folder containing the files that you would like to transcode
         * Drag and drop the destination folder.
         a. Before you hit ‘ENTER’, the command should look as below:
            * Hit enter

Create an MD5 manifest for the master files.
Once the files have been updated with the GUIDS, create the MD5 manifests:
• Open Terminal
• Type: find [drag and drop the directory containing the master files] –type f –exec md5 {} \; > [name of md5 manifest]

On a Mac computer, you can use the following command in Terminal: find [drag and drop the directory containing the master files] –type f –exec md5 {} \; > [name of md5 manifest]

• Hit Enter
• Make sure to go back into the ams and upload metadata for each digitized asset. See page 13.

DELIVERABLES

CONFIRM THAT THE FILES/copied exactly onto the external hard drive that you should receive from Rebecca at WGBH. Create a second MD5 manifest for the files on the drive, using the same command 2. Compare the MD5s to make sure that they are identical. Repeat this process and transfer of files to both the host station OETA hard drive and the hard drive for OU.

1. Email the MD5 manifests to Rebecca and Miranda at rebecca_freamow@wgbh.org and miranda_villesvik@wgbh.org

2. Mail the drive containing the files to: MIRANDA VILLESVIK WGBH MEDIA LIBRARY AND ARCHIVES 1 GUEST STREET BRIGHTON, MA 02135

3. Deliver the hard drive and all deliverables to Janette Thornbrue at OETA.

4. Make sure to return the laptop to Cony with the OU Fellowship hard drive and deliverables.