Local Access Channel (LAC) User Procedures

A new Digital TV System was purchased by the City of Orange City. It supersedes the old, DVD-based system, and eliminates the need to bring DVD copies to the NWC campus for the airing on the Local Access Channel (Long Lines Channel 3, and Premier Communications Channel 12). The new system is scheduled and managed by the NWC Audiovisual (AV) Department. It enables the use of High Definition (HD) video files and will handle all Local Access programming as well as the local Public Service Announcements.

This document lists procedures, hints, and tips for entities who will be creating video program files for broadcast on the LAC. Instructions will be given on creating and converting the files, and uploading them to the LAC system device located on the NWC campus.

Please consult with the NWC AV Department to discuss your current setup, and to help determine if you need additional hardware or software. (Contact information is located in Section 4 of this document.)

STEP-BY-STEP
In order to utilize the new digital LAC TV system, all entities airing program materials will have to do the following 4-steps. (All of the steps are explained in detail in the subsequent sections of this document.)

1) Capture your video (DVD or Video File)
2) Convert your video (if necessary) *
3) Upload your file to NWC *

Note: Users without computer access, or who have slow internet speeds may wish to use the computer in VPH-113 on the NWC campus to convert and/or upload their video files. This computer will be maintained with the necessary conversion software and a shortcut folder to save your video file. (User training, along with building, room, and computer access will be provided as needed by the NWC AV Department.)

If you're bringing your DVD to VPH-113 for file extraction and upload, simple instructions are taped to the computer monitor on the desk.

1. CAPTURING VIDEO FILES

Your program may be captured however you wish. Use a DVD recorder, a properly configured computer, or a digital video camera or other digital video capture device. (If you need help with equipment, configuring your system, or determining best practices, please contact NWC AV.)

DVD Capture

Although DVD discs are no longer acceptable for playback, entities currently using a Standard Definition DVD recorder to capture their videos may continue to do so. The video file on the DVD will just have to be digitally extracted into a compatible file format for uploading to the LAC system. This process can be accomplished with most any Mac or PC that has a disc drive, and by using the software that is explained in the next section called, *"Converting Video Files."*

Note: Keep in mind that a DVD does not capture HD video. However, most programs captured with a DVD Recorder will still look acceptable on the new system. Although HD is not necessary, a widescreen 16x9 image ratio is highly recommended.

File Capture

Ideally, video hardware and/or software can be used to capture a compatible HD video file directly. Some entities already capturing a digital video file in addition to, or instead of, a DVD Recording just need to make sure their file meets the LAC file requirements specified in the section called, *"Video File Specs."* Capturing a video file with the proper parameters may require changing some settings on your capture equipment.

Tip: If a higher quality video file is desired for your archives or internal purposes, you can capture it as needed, and then use a Conversion Software, like Handbrake or Adobe Media Encoder to create a compatible LAC file.

2. CONVERTING VIDEO FILES

Programs submitted for playback on the LAC system must be submitted to NWC in a digital video file format. DVD discs are no longer acceptable for playback. NWC AV recommends two free Apps for converting your files to LAC compatible files – **Total Import** and **HandBrake**.

Hint: If your file already meets the required parameters, there is no need to convert it. You may skip this section and go right to Section 3. (To see if your file parameters meet the LAC file requirements, see the section called, "Video File Specs.")

If you are using a **PC** to extract the video file from a DVD, use ***Total Import*** to convert the DVD video object file to an MPEG-2 file.

If you are using a **Mac** to extract the video file from a DVD, use *HandBrake* to convert the DVD video object file to an MP4 file.

If you need to make an LAC compatible file from an existing video file, you can use *HandBrake* on a Mac or a PC to create a compatible MP4 file.

Using Total Import

This PC-only software from Leightronix can be used to extract a video file from DVD to an MPEG-2 Standard Definition video file. (Ask NWC AV for a copy of the install file.)

Here's a video that explains the Total Import install, setup, and use: https://www.youtube.com/watch?v=mQBey_LLe28

On the initial setup, once Total Import is installed and opened, do the following:
- Use the Destination/Browse buttons to perform a one-time operation that makes the following 2 folders on the local C:Drive:
  - Local Storage: C:\LAC
  - Temporary Storage: C:\LAC\Temps

To convert a file using Total Import, do the following:
- Insert the DVD into the disc drive
- Use the Source Section to Browse (navigate) to the DVD (Drive D:) and hit OK
- Once displayed, select (check) "Title 1"
- Make sure *"Stream copy video (do not encode)"* is selected in the top right Settings area
- Insert the appropriate Filename in the Destination/Filename field (see the *"Naming Files"* section below)
- Hit Start in the bottom right corner - You will see a couple passes of the status bar at the bottom, and then it will say, "Finished"
- When done, the converted video file(s) will be in the C:\LAC folder

Using HandBrake

HandBrake can be used to convert a DVD video file on a Mac, or an existing video file on a Mac or PC to a compatible MP4 video file.

Web link for HandBrake downloads: https://handbrake.fr/downloads.php

On the initial setup, once HandBrake is installed and opened, make sure the extension of the file to be created defaults to ".mp4" instead of ".m4v" by doing the following:
- PC - Go to Tools/Preferences/Output File: and select "Always use MP4"
- Mac - Go to HandBrake/Preferences/General/Output Files: and select "Default MP4 Extension: .mp4"

To convert a file using HandBrake, do the following:

- Using the Source Selection window that opens when you open the App, navigate to the file (or the DVD) and hit "Open." (Hint: If the App is already open, you can drag-and-drop the video file or DVD from the Windows Explorer (or Mac Finder) onto the open HandBrake App.)
- Make sure the following Output Settings are specified:
  - Format: MP4 File
  - Quality: Constant Quality - RF 20
  - Encode Profile: Main
- Specify a Destination path and filename (see the *"Naming Files"* section below)
- Hit "Start Encode"

3. UPLOADING VIDEO FILES (File Transfer)

Once you've got a digital video file in the right format with the proper file parameters, you must get the file into the LAC System at NWC.

There are a couple ways to get your file into the LAC System:

a) Upload (transfer) the file over the internet by using FTP Software from your computer, or

b) Bring your file to VPH-113 on the NWC campus and simply drag it into the shortcut folder on the computer desktop called, "LAC Video Dropbox."

Although most any FTP software should work, the following instructions are specific to the free software called, FileZilla.

FileZilla

Here's a nice video explaining the FTP process:
https://www.youtube.com/watch?v=C5_XNHAdOwE

- Go to this web link for the FileZilla downloads: https://filezilla-project.org/ and select, "Download FileZilla Client (All platforms)"
- The next page will open and show you the version that's applicable to your computer system. Click again on "Download FileZilla Client" to start the download
- Once it's downloaded, open the file and follow the install instructions
  - Be sure to decline the optional offers they try to sell you, and hit Next
  - (PC) Select to install All Components and hit Next with the default values until you get to "Install"
- Hit "Install"
- Once FileZilla is installed, open it and use "File/Import…" to import the configuration file called, "tv.nwciowa.edu.xml." (The file should have been attached to the email you received from the NWC AV Department. If not, please ask us for another copy.) This

will create a Site Manager entry in FileZilla with all of the proper connection parameters needed for connecting to the actual LAC hardware at NWC.
• Use "File/Site Manager…" (or click on the Site Manager icon) to select the "NWC TV3" entry. This will navigate to the folder on the LAC system called, "/Vol1/mpeg" and open it in the right column (Remote site:).
• Use the left column (Local site:) to navigate to, or specify, the folder on your computer containing the video file to transfer
• Locate the video file you want to transfer in the appropriate left, Local site: folder, and drag-and-drop it onto the right, Remote site: /Vol1/mpeg window.
• When transferring (uploading) the files via FTP, you will be notified that the target file already exists and will be prompted to select an Action. Please select the action, **"Overwrite"** and hit OK.
• You will see the status of the transfer in the bottom window

Note: It is very important that you access only the "/Vol1/mpeg" folder on the LAC System! Please do not try to move, rename, or delete any files but your own.

Hint: Once both locations have been specified in the "Local site:" and "Remote site:" columns, you may want to memorize the connection and path information by using the pulldown menu item, "Bookmarks/Add bookmark…" to create a bookmark called something like, "NWC TV." (From then on, you can simply use the Bookmark pulldown menu to select "NWC TV" and to locate the proper folders.)

Note: If you want to use a different FTP App to upload files, please contact NWC AV for specific connection parameters and passwords.

Note: You may leave old video files on the LAC system, but the NWC AV Administrator will periodically purge files to make room for new ones. NWC AV and Orange City will not be responsible for archiving your programming.

VIDEO FILE SPECS
Video files to be played on the LAC system must be created or converted in compliance with the specific file parameters listed below. Use these guidelines to make the applicable settings on your video hardware or software.

Tip: The software and settings prescribed by the NWC AV Department in Section 2 above called, "Converting Video Files" will create files within the specified parameters.

Video Size and Frame Rate (one of the following):
1920 x 1080i (29.97 or 59.97fps)
1280 x 720p (29.97 or 59.97 fps)
720 x 480i (29.97 fps)

Video Container Formats (file extensions):
MP4, MOV, MPG, or M2T

Video CODECs:
H.264, AVC, or MPEG

Audio CODECs:
AAC-LC or Layer-2
Use Stereo, or left channel only for mono (Dolby is not allowed)

Maximum Bit Rate (Data Rate):
10 Mbps (10,000 Kbps) or less

NAMING FILES

For the auto scheduling process to work properly, **uploaded files must be named the same way every week!** There are file naming restrictions on the videos being transferred to the LAC system. All filenames have a 27-character maximum (including the 4-digit file extension). Underscores are acceptable, but filenames cannot contain any other spaces or special characters. For consistency and clarity, and to accommodate an automated, controllable scheduling process, each user should utilize the following naming conventions, where .xxx is the appropriate file extension automatically applied by the hardware or software being used to create or convert the file (.mp4, .mov, .mpg, or .m2t):

User	Filename
Alton Reformed	ALTON
American Reformed	AMERICAN
Amistad Cristiana	AMISTAD
Calvary CRC	CALVARY
First CRC (Morning)	FCRC_AM
First CRC (Evening)	FCRC_PM
Newkirk Reformed	NEWKIRK
Orange City Council	COUNCIL
Redeemer United (Morning)	REDEEMER_AM
Redeemer United (Evening)	REDEEMER_PM
Trinity Reformed	TRINITY

CONTACTING NWC AV

If you have any questions, please contact the NWC AV Department.

Mike Stokes, NWC AV Director
Office: 712-707-7252
Cell: 712-441-6583
Email: mstokes@nwciowa.edu

Isaac Clausen, NWC AV Technician
Office: 712-707-7251
Cell: 402-889-7558
Email: isaac.clausen@nwciowa.edu