NETA PROGRAM SERVICE FILE SUBMISSION

Organizations submitting programs to NETA must have an understanding of the technical specifications set forth in this document and proficiency at using professional digital measurement equipment. It is recommended that first time submitters submit test files for approval. Recommended test file lengths should be no less than 2 minutes and no more than 10 minutes.

Producer Responsibilities |

Evaluate the program to meet these specifications prior to submission and submit 'Broadcast Ready Evalulation Form.' Program submissions not meeting these specifications may be rejected resulting in delay in processing and potential fees for correcting files.

File Delivery |

File Based Media delivered via NETA FTP site. Login credentials will be provided.

- XDCamHD MXF OP1a
- DNxHD 145, 220 or 220x OP1a file
- Quicktime Files

File Nomenclature | Files will be named using the NOLA CODE provided.

Acceptable File Formats |

XDCamHD MXF OP1a

DNx145, DNx220 or DNx220x files must meet file specifications including File Container: MXF OP1a

Video

- 1920x1080i
- 29.97 fps
- 4:2:2
- MPEG-2 Long GOP @ 50 Mbps

Audio

- 8 channels
- 24 Bit
- 48 KHz sampling rate
- 1152 kbps Bitrate

Ancillary Data

- 436M 708 captions with 608 compatibility bytes
- Timecode track
- Drop frame timecode

Timecode Track

- Drop frame timecode on DID 64, SDID 07 and LTC DID 64, SDID 64

MPEG2-Long Gop MXF OP1a/ AS02

File must include File Container: MXF OP1a

Video

- 1920x1080i
- 29.97 fps
- 4:2:2
- MPEG-2 Long GOP @ 50 Mbps
- Field Order: Upper field first (TFF)

Audio

- 8 channels
- 24 Bit
- 48 KHz sampling rate
- 1152 kbps Bitrate

Ancillary Data

- 436M 708 captions with 608 compatibility bytes
- Timecode track
- Drop frame timecode

Timecode Track

- Drop frame timecode on DID 64, SDID 07 and LTC DID 64, SDID 6

Quicktime Files

File Container: Quicktime

Video

- 1920x1080i
- 29.97 fps
- 4:2:2
- XDCAM HD, ProRes SD(145 Mbps), or ProRes HQ (220 Mbps)
- Field Order: Upper field first (TFF)

Audio

- 8 channels
- 24 Bit
- 48 KHz sampling rate
- 1152 kbps Bitrate

Ancillary Data

- 436M 708 captions with 608 compatibility bytes
- Timecode track
- Drop frame timecode

Timecode Track

- Drop frame timecode on DID 64, SDID 07 and LTC DID 64, SDID 6

File Contents |

Files will contain a minimum of 15 seconds at the beginning; 15 seconds of clean black or slate information identifying the included media followed by 2 seconds of clean black and 15 seconds of clean black run-out at the end of the file. Files will contain a time code track that provides continuous, sequential timecode from start to end of file. Timecode should start at 00:59:45;00 with the first active program material starting at 01:00:00;00.

Do not include bars and tone. They are not necessary and increase file size.

See NETA Perfect Program Packaging

Main Service Audio |

Main service audio is defined as the primary service that is intended to serve the majority of the audience. All Main Service Audio shall be stereo or 5.1 surround sound. Legacy material may contain mono audio if it was not originally captured in stereo. Only stereo will be accepted for promos and interstitials.

Secondary Service Audio |

Secondary services include alternate languages and/or Descriptive Video Information (DVI).

- Audio Essence: PCM Uncompressed
- Audio Format: 48 kHz uncompressed WAV or AIFF.
- Reference Tone: -20dBfs
- Peak audio program levels at -12 to -8 dBfs, nominal peak levels –10dBfs, average audio
- levels should be around -20 dBfs.
- Nominal Loudness level: -24 LKFS plus or minus 2 dB.
    - Loudness is measured using ITU BS.1770-3 weighting for the duration of the show.

File Audio |

Files will have audio configured in one of the following:

Surround Sound Track Assignment	
Channel/Track	Assignment
Channel 1	Left Front (L)
Channel 2	Right Front (R)
Channel 3	Center (C)
Channel 4	Low Frequency Effect
Channel 5	Left Surround (Ls)
Channel 6	Right Surround (Rs)
Channel 7	Mono Mix or DVI
Channel 8	Mono Mix or SAP (Secondary language)

Stereo (4 or 8 Channels)	
Channel/Track	Assignment
Channel 1	Left
Channel 2	Right
Channel 3	Silence
Channel 4	Silence
Channel 5	Silence
Channel 6	Silence
Channel 7	Mono Mix or DVI
Channel 8	Mono Mix or SAP (Secondary language)

Video Conversion |

This specification requires Y' Cr' Cb' digital component submissions. Producers should be aware that 75% of Y' Cr' Cb' values do not exist in RGB color space and will be clipped by downstream consumer equipment before display.

Color Gamut |

To ensure the consumer display is faithful to the submission, Y' Cr' Cb' values must fall within the equivalent RGB color-space.

Producers should be aware that the RGB gamut will be hard limited when the final PBS package is created for distribution.

Measurement Method	Valid Y & RGB Range
8 bit Digital	16-235
IRE	0-100
Analog Equivalent	0-700 mV

Black Level |

- Objectionable white or black clipping must not be evident.

- Program black level **MUST** be set to **0v** on the Y' waveform.

Closed Captioning |

- All media must have accompanying captions on SDID 01 for CEA708 and DID 61, SDID 02 for compatibility bytes or a .scc or SMPTE Timed Text xml caption file.

- The caption file should include an EDM (Erase Displayed Memory command), also known as a clear pulse, at the first frame matching video and also at the beginning and end of each container. Captioning must accompany file submissions.

- SMPTE Timed Text Captions ST 2052-1:2010 - Timed Text Format

- The caption file filename must exactly match the video file filename.

- **The timecodes for the video file and the SCC file MUST match**. Please double-check before submitting.

Subtitles |

Subtitles are limited to the Safe Title Area of 16X9 or 90% of the width and height

Questions | Contact Greg Tillou, Senior Operations Director at greg@netaonline.org

NETA PROGRAM SERVICE BROADCAST READY TECH EVALUATION

Series | NOLA Code

Program Title | Feed Date

Episode # | Producer

File Submission ☐ XDCamHD MXF OP1a ☐ MPEG2-Long Gop MXF OP1a/AS02 ☐ Quicktime

AUDIO

☐ Stereo ☐ 5.1 Surround ☐ DVI ☐ SAP

Levels

- ☐ Reference Level -20dB
- ☐ True Peaks less than -2

Loudness (ITU 1770-3)

- ☐ Dialog -24LKFS+/- 2dB
- ☐ Overall Program/Segment -24 LKFS +/- 2dB
- ☐ StereoMixdown -24LKFS+/-2dB

Quality

- ☐ Intelligibility / Presence
- ☐ Distortion
- ☐ Hiss / Hum / Noise
- ☐ Phase Error
- ☐ Lip Sync
- ☐ Track Synchronicity
- ☐ Track Assignment

Caption Quality

- ☐ Clear Pulses at Segment Start
- ☐ Accuracy
- ☐ Completeness
- ☐ Timing
- ☐ Placement
- ☐ CDP Errors

708 Caption Format

☐ SCC (File submission only) ☐ SMPTE Timed Text (File submission only) ☐ VANC (436M)

TIMECODE

START	Hours	Minutes	Seconds	Frames
END	Hours	Minutes	Seconds	Frames
DURATION	Hours	Minutes	Seconds	Frames

VIDEO

☐ 1920x1080 @59.94 ☐ 1920x1080 @29.97

Levels

- ☐ Luminance (Y) Level (0-700 mv)
- ☐ Color Gamut Error

Quality

- ☐ Resolution
- ☐ Noise
- ☐ Color Balance
- ☐ Pixel Errors / Digital Noise
- ☐ Bit Rate Errors
- ☐ Archival Content
- ☐ Head Switching Present
- ☐ Compression / Clipping

Miscellaneous Specifications

Timecode

- ☐ Continuous start to end of media
- ☐ Drop Frame

Aspect Ratio

- ☐ 16 x 9
- ☐ Mixed 16 x 9 and 4 x 3
- ☐ 16 x 9 Safe Title Adherence
- ☐ Slate / Countdown / Runout Present

Comments

Evaluated By: | Date: