



Specific Requirements Digital Delivery – TX Ready Material

1. Delivery of Digital Media

NENTGROUP TV London requires that Digital material will be provided as per the below specification

Delivery of any content in a format other than the below specification shall have to be approved beforehand by NENTGROUP TV London. Any such request shall be submitted at least two weeks before the planned delivery date

2. Delivery Specification – High Definition Files

Files will be delivered to NENTGROUP TV London complying with the Sony XDCam HD422 50Mbs format

Container

Format: QuickTime 7 (Ommedia library version 7.3 or above) **Referenced Files only**

Format Codec: XDCAM HD422

Duration: All material elements must be of exactly the same duration

Timecode: Synchronous to recorded video

Essence allocation: Video must be the first essence

Auxiliary data essences are not permitted

Video Essence

The video information within the file must conform to ITU-R BT.709, at 1125 total lines with active video being 1920 samples horizontally and 1080 lines vertically.

Format: MPEG2 Compression: [4.2.2@high](#)

Scan type: Interlaced only

Frame rate: 25fps

Bitrate: 50Mb/s

Bitrate mode: CBR / Constant Bitrate

Field order: UFF / Upper (Top) Field First Bit depth: 8bit

Chroma subsampling: 4:2:2

GOP structure: longGOP / N=12

The following criteria also apply:

- Luminance level should not exceed 0.70 volts
- Chrominance level should not exceed 0.84 volts in programme
- The video track will start at first frame of video and finish at last frame of video.

Audio Essence

The digital audio contained in the file shall be locked to video, and conform to EBU R128 for loudness and headroom. Reference level should be -18db down from the maximum full-scale digital level (DBFS) allowed by the AES/EBU digital audio standard of the tape machine.



Nentgroup TV London Digital Delivery Specification – TX Ready Short form

Therefore reference = -18DBFS.

Format: PCM

Audio mode: 1 Channel per file

Bitrate mode: CBR / Constant Bitrate

Sampling rate: 48.0 kHz

Bit depth: 24bit

The following criteria also must also be considered:

- All multiple track recordings must be properly phased and separation shall correspond properly with visual separation
- There should be no discernible aberration in the lip sync. Audio sync relative to video frame shall not deviate by more than -1/+1 frame.

Omneon Metadata

The “First frame” value within the MOV header must match the value defined in the SOM (Start TC) field.

Each referenced audio track must be described within the MOV header with the appropriate “ovn_trackmatch” value.

Most common language/format descriptors are defined in the table below (for any additional language codes please contact NENTGROUP TV).

Language	M/S	ovn_trackmatch
Original Language	Left Leg	oriL
Original Language	Right Leg	oriR
Swedish	Left Leg	sweL
Swedish	Right Leg	sweR
Danish	Left Leg	danL
Danish	Right Leg	danR
Finnish	Left Leg	finL
Finnish	Right Leg	finR
Norwegian	Left Leg	norL
Norwegian	Right Leg	norR
Music and FX	Left Leg	mixL
Music and FX	Right Leg	mixR



3. Delivery Specification – *Standard Definition Files*

Files will be delivered to NENTGROUP TV London complying with IMX30 422 30Mbs format

Container

Format: QuickTime 7 (Ommedia library version 7.3 or above) **Referenced Files only**

Format Codec: IMX

Duration: All material elements must be of exactly the same duration

Timecode: Synchronous to recorded video

Essence allocation: Video must be the first essence

Auxiliary data essences are not permitted

Video Essence

The video information within the file must conform to ITU-R BT.601, with active video being 720 samples horizontally and 625 lines vertically.

Format: MPEG2 Compression: 4.2.2@main

Scan type: Interlaced only

Frame rate: 25fps

Bitrate: 30Mb/s

Bitrate mode: CBR / Constant Bitrate

Field order: UFF / Upper (Top) Field First

Bit depth: 8bit

Chroma subsampling: 4:2:2

The following criteria also apply:

- Luminance level should not exceed 0.70volts
- Chrominance level should not exceed 0.84 volts in programme
- The video track will start at first frame of video and finish at last frame of video.

Audio Essence

The digital audio contained in the file shall be locked to video, and conform to EBU R128 for loudness and headroom. Reference level should be -18db down from the maximum full-scale digital level (DBFS) allowed by the AES/EBU digital audio standard of the tape machine.

Therefore reference = -18DBFS.

Format: PCM

Audio mode: 1 Channel per file

Bitrate mode: CBR / Constant Bitrate

Sampling rate: 48.0 kHz

Bit depth: 24bit



Nentgroup TV London Digital Delivery Specification – TX Ready Short form

The following criteria also must also be considered:

- All multiple track recordings must be properly phased and separation shall correspond properly with visual separation
- There should be no discernible aberration in the lip sync. Audio sync relative to video frame shall not deviate by more than -1/+1 frame.

Omneon Metadata

The “First frame” value within the MOV header must match the value defined in the SOM (Start TC) field.

Each referenced audio track must be described within the MOV header with the appropriate “ovn_trackmatch” value.

Most common language/format descriptors defined in the table below (for any additional language codes please contact NENTGROUP TV).

Language	M/S	ovn_trackmatch
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Danish	Left Leg	danL
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Finnish	Right Leg	finR
Norwegian	Left Leg	norL
Norwegian	Right Leg	norR
Music and FX	Left Leg	mixL
Music and FX	Right Leg	mixR



4. Audio Configuration

High Definition files

Track one: Stereo mix left

Track two: Stereo mix right

Standard Definition files

Track one: Stereo mix left

Track two: Stereo mix right

5. Order of Recording (HD and SD)

Short form material must conform to the specification below:

Timecode	Duration	Video	Audio 1	Audio 2	Audio 3	Audio 4
04:59:50:00	7"	Clock or Ident	Silence	Silence	Silence	Silence
05:59:57:00	3"	Black	Silence	Silence	Silence	Silence
05:00:00:00	Programme	Programme	Refer to point 4	Refer to point 4	Refer to point 4	Refer to point 4
Ten Seconds minus end of file	10"	Black	Silence	Silence	Silence	Silence

6. Labelling

High definition files:

Files should be named as per the NENTGROUP TV house number provided

Standard definition files:

Files should be named as per the NENTGROUP TV house number provided

7. Flashing Images / Visual Patterns - Photosensitive Epilepsy (PSE)

Flickering or intermittent lights and certain types of repetitive visual patterns can cause serious problems for some viewers who are prone to photosensitive epilepsy and should therefore be avoided.

The Ofcom guidelines can be found at:-

<http://stakeholders.ofcom.org.uk/binaries/broadcast/guidance/812612/section2.pdf> pgs 14-17



8. Metadata

Each file should be delivered with an accompanying xml file and this file should carry the same name as the MOV header (i.e. named as “example.mov” and “example.xml”).

The file must be formatted as below and contain the fields defined. Other fields will be ignored.

```
<?xml version="1.0"?>
<Pharos xmlns:fo="http://www.w3.org/1999/XSL/Format">
  <Material>
    <MatID> FILENAME_GOES_HERE </MatID>
    <Title>COMMERCIAL_CODE /PRODUCTION NUMBER GOES HERE</Title>
<Duration>TOTAL_DURATION_OF_MEDIA_INCLUDING_BLACK_SLUG_AT_END_OF_FILE</Duration>
    <AspectRatio>ASPECT_RATIO_EITHER_16:9_OR_4:3</AspectRatio>
    <MaterialType> SHOULD_BE_DEFINED_AS Commercial or Promotion</MaterialType>
    <Track>
      <FileID>FILENAME_GOES_HERE</FileID>
      <Incode>04:59:50:00 – MEDIA_SOM_GOES_HERE</Incode>
      <Outcode>05:00:40 OUT_POINT_OF_MEDIA_GOES_HERE </Outcode>
    </Track>
  </Material>
<Request>
  <MatID> FILENAME_GOES_HERE </MatID>
  <Status>Submitted</Status>
</Request>
</Pharos>
```



Nentgroup TV London Digital Delivery Specification – TX Ready Short form

9. Contact details

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