NPC Media **GENERAL** File Delivery Specifications:

File delivery of programme material to be via mutual agreement between NPC Media and the Supplier.

The programme shall be supplied in High Definition (HD), as the English TEXTED version, with any Textless material at the tail of the programme, 1 minute after end credits. (See below for examples of Texted & Textless)

The HD file format shall be the 1080/50i Sony XD-CAM 422 50Mbit/sec codec, with 4, 8, 10 or 16 PCM audio tracks, wrapped in the MXF OP1a container. The method of delivery is to be mutually agreed upon, whether via a file delivery service such as Aspera, or a physical Hard Drive. [Hard Drive can be NTFS or exFAT formatted, & USB 3.0 speed is preferable. A USB-powered drive is also preferred]. A Native Frame Rate, HD or UHD ProRes file *may* be requested (or another codec), to service multiple purposes (SVOD etc) but only via prior agreement with NPC.

HD

· XD-CAM HD 422 format
· MPEG2 Long GOP codec, 50 Mbps, CBR, Closed GOP format.
· 422P@HL profile, GOP: M=3, N=12, first GOP must be closed · 1920 x 1080 resolution, 25 fps (50i)
· Interlaced scan, Upper Field First.
· MXF container, OP1a pattern partition status: Closed and Complete.
· 16:9 display aspect ratio, & the aspect ratio must be indicated properly in the MXF metadata.
· 4, 8 or 16 channel audio, 48 KHz, 24 bit [4, 8 or 16 mono audio channels]
· Uncompressed audio, constant bit rate.

Any 24 frame (23.98p) product shall be converted to 25 (50i) by means of a speed change, not a standards conversion using frame interpolation or motion compensation.

Any native 59.94i product shall be converted to 50i by a Ph.C or motion vector compensated standards conversion.

If the 59.94i material essentially contains an embedded 23.98 fps programme via 3:2 pull-down, then that 23.98 frame product must be first extracted from the 59.94i master via 3:2 cadence detection & removal. Then the resulting 23.98 fps programme can be speed changed to 25 (50i) in the normal required method.

Only if HD material is NOT available will NPC accept Standard Definition (SD). The SD file format shall be .mxf 608/50i 50 Mbit/sec, details below:

SD

· MPEG IMX50 codec, [50 Mbps]
· MPEG2 4:2:2@Main video codec profile, GOP: N=1, constant bit rate.
· PAL video standard (625/50). The resolution of the video must be 720 x 608 pixels, which consists of 32 lines of VBI information and 720 x 576 pixels of active image.
· Interlaced scan, Upper Field First.
· MXF container, OP1a pattern, partition status: Closed and Complete.
· 16:9 display aspect ratio (full height anamorphic); the aspect ratio must be indicated properly in the MXF metadata.
(4:3 aspect is acceptable for archival material. Again, aspect ratio must be indicated in metadata)
· 4/8 channel audio, 48 KHz, 16 bit [4/8 x mono audio channels]
· Uncompressed audio, constant bit rate.

AUDIO

A 16-track file shall be provided. The audio configuration should be a Stereo Full Mix on tracks 1 & 2 ($L_t R_t$ or $L_o R_o$), and a 5.1 Surround Sound Full Mix on tracks 3 to 8 inclusive. Audio Description as a *Broadcast Mix* shall be on channels 9 & 10. Audio Description as the isolated VO/Narration component (*Receiver Mix*) shall be on channels 11 & 12. Stereo Music & Effects shall be on channels 13 & 14:

- The track layout for this programme configuration shall be:

    1. Stereo Left
    2. Stereo Right
    3. 5.1 Front Left
    4. 5.1 Front Right
    5. 5.1 Centre
    6. 5.1 LFE

7. 5.1 Left Surround
8. 5.1 Right Surround
9. Audio Description: Broadcast Mix Stereo Left
10. Audio Description: Broadcast Mix Stereo Right
11. Audio Description: Receiver Mix Isolated VO/Narration mono
12. Audio Description: Receiver Mix Isolated VO/Narration mono
13. M+E Stereo Left (or Mix Minus VO Left)
14. M+E Stereo Right (or Mix Minus VO Right)

If Audio Description is unavailable, then channels 9 to 16 may also be populated with useful separate audio stems such as Dialogue, Music, Effects, Voice Over/Narration, 5.1 M+E etc.

- If a 5.1 audio mix is not available, then the audio track layout shall be:

  1. Stereo Left
  2. Stereo Right
  3. M+E Left (or Mix Minus VO Left)
  4. M+E Right (or Mix Minus VO Right)

  9. Audio Description: Broadcast Mix Stereo Left
  10. Audio Description: Broadcast Mix Stereo Right
  11. Audio Description: Receiver Mix Isolated VO/Narration mono
  12. Audio Description: Receiver Mix Isolated VO/Narration mono

If Audio Description, a 5.1 mix or other audio elements are unavailable, then an .mxf file with fewer audio channels is acceptable, i.e., **2**, **4** or **8** channels.
- Note the channel layout above where Audio Description is available on programmes with only a stereo soundtrack.
- Audio Loudness on the Stereo soundtrack shall measure -24 LKFS. True Peak (TP) not to exceed -2dB TP.
- Audio Loudness on the 5.1 soundtrack shall measure -24 LKFS. True Peak (TP) not to exceed -2dB TP.
- Audio Loudness on the AD Broadcast Mix soundtrack shall measures -24 LKFS. TP not to exceed -2dB TP.
- Audio Loudness on the AD Receiver Mix soundtrack (isolated VO component) shall measure -24 LKFS.

To this aim, a suitable BS.1770-4 compliant loudness meter will be used as the measuring instrument. Using the dialogue element in the audio mix to normalise to -24 LKFS is encouraged. See OP59 for more detail. http://www.freetv.com.au/

Correct audio sync is to be maintained between all soundtracks and with the video.

EXTRAS

An ID/Clapper Board shall be present at the head of the file for identification purposes, with the title of the programme/episode number, *exactly as it appears on-screen*. In addition, the Clapper Board should include:

- Duration of Programme (Total as well as independent segments)
- Audio Status and Channel Layout
- Catalogue Code (if known from Programming)
- Presence of Textless Material at the tail

Required Layout/Timecode:

00:58:00:00 – Start of file: [Black Video / Mute Audio]
00:58:30:00 – Colour Bars (75%) & 1 kHz Audio Tone (All relevant tracks which contain audio, -20dB)
00:59:30:00 – ID/Clapper Board
00:59:50:00 – Black (or Countdown)
01:00:00:00 – Start of Programme

If the programme is already compiled into segments, then the head of each segment shall have a 10 second countdown. Each segment shall start on an even timecode number (i.e., Segment two might start at T/C 01:09:00:00). There should be a minimum 20 seconds of black between segments, not including countdown. There shall be at least 10 seconds of black after the end of programme, at tail of file.

Graphic Elements / Cue Sheets / Audio WAVs:
If available, graphic elements contained within the programme should be supplied as separate .mov ProRes4444 files with embedded alpha channel.

A cue sheet (pdf) with segment timings is to be supplied.
Extras such as still images, EPKs, Audio WAV isolated stems are also appreciated, if available.

<u>File Naming Convention:</u>

The Filename should appear as below, with audio channel configuration indicated at the end of the filename:

EXAMPLE_PROGRAMME_s01e01_Domestic_1080-50i XD-CAM HD_St_M+E
EXAMPLE_PROGRAMME_s01e02_Domestic_1080-50i XD-CAM HD_St_51
EXAMPLE_PROGRAMME_s01e03_Seamless_1080-50i XD-CAM HD_St_51_MMN_Dial_Mus_VO
EXAMPLE_PROGRAMME_s01e04_Domestic_1080-50i XD-CAM HD_St_51_ADB_ADR

Where:
St = Stereo Full Mix
M+E = Music & Effects
51 = 5.1 Audio Full Mix
MMN = Mix Minus Narration
Dial = Dialogue Stems
Mus = Music Stems
VO = Voice Over Stems
FX = Effects Stems
51M+E = 5.1 Audio Music & Effects
ADB = Audio Description; Broadcast Mix
ADR = Audio Description; Receiver Mix (i.e., isolated Audio Description: *Voice Over only*)
Domestic = Domestic/Local version with breaks.
Seamless = International or Seamless version (no breaks).

<u>SVOD / International / Seamless Versions:</u>
If SVOD rights are granted or an International or Seamless version is commissioned (in addition to the Domestic), then the video format shall be the native production framerate (i.e., 23.98p, 24p, 25p, 50i, 50p, 59.94i or 59.94p etc) and resolution (HD or UHD) and be supplied in .mov ProRes422 HQ.

Additional items required for SVOD may include, where available:

- Closed captions
- Images (hi-res layered key art and selection of image stills)
- HD trailer (texted/textless with split audio preferred)
- Metadata (inc. short logline/description - less than 250 characters)
- Audio description (if available)
- Dolby Atmos (if available)

<u>Minimum Text Size:</u>

All text contained within the programme, legal disclaimers or not, must be readable, especially considering that the video may be subject to down conversion to SD, and/or viewers may be viewing on a small screen.

NPC recommends the minimum text height in HD of 28 lines.

This example features the commonly used Arial font:

HD 1920 x 1080

Guide To Minimum Text Size Below

This text is 28 lines high. THIS TEXT IS 28 LINES HIGH.
This is the minimum height required for text.

Playoffs / Playons:

Compiled programmes (Domestic/Breaks Versions) are required to contain a 3-5 second texted playoff, which can consist of a still or moving graphic, listing the title of the programme, or title & episode of the programme if appropriate.

'C' classified programmes must also contain 5 sec. playons at the start of segments as well as playoffs.

16:9 programmes should preferably be 16:9 graphic/action safe, but 14:9 graphic/action safe, or 4:3 graphic/action safe is also acceptable. Below is the 16:9 HD graphic/action safe area chart.
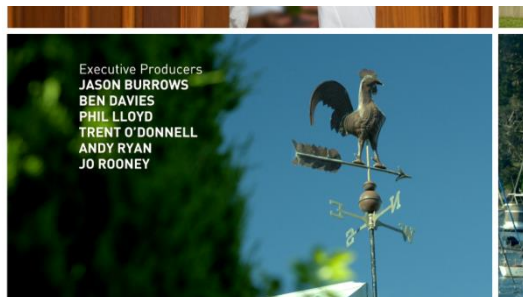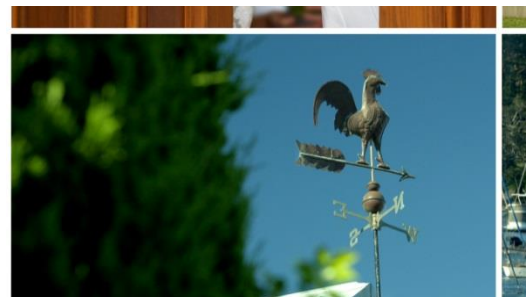
16:9 Graphic / Action Safe Area Chart:
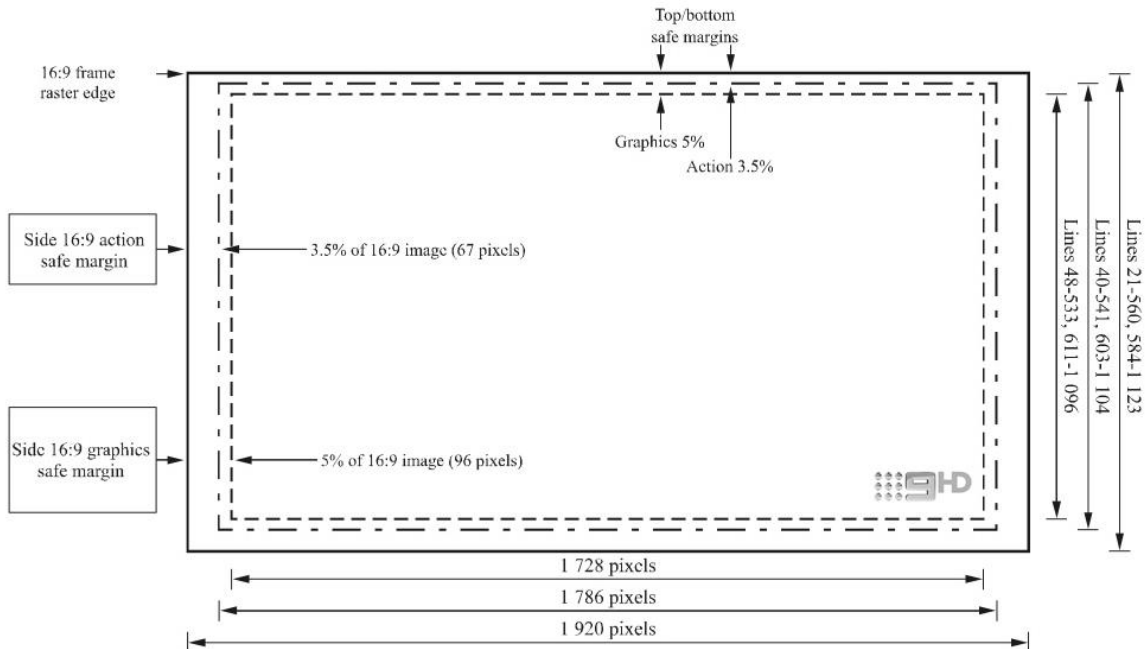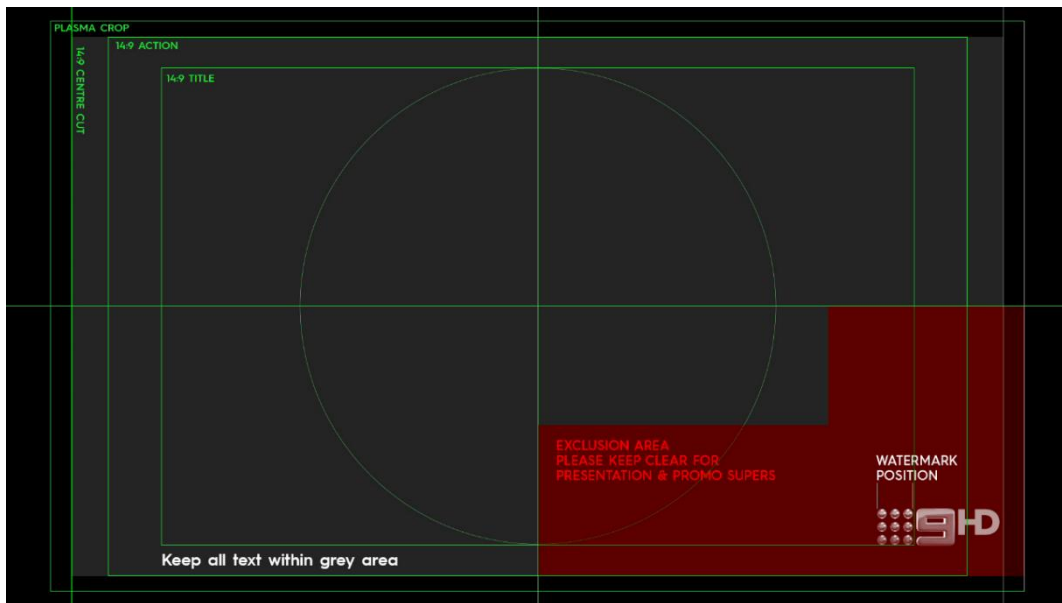
Please note the position of the Channel ID Watermark in the lower right corner of the above images and avoid placing text supers in that position.

Texted/Textless example frames:

TEXTED   **TEXTLESS**

Texted Playoff examples:

Animated Texted Playoff example:

If you have any further queries on the technical delivery specifications, please contact:

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