

# DIGITAL SOURCE CONTENT

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## Digital Projection Only

Screenvision specifies videotape sources for SD and HD rolling stock content submission. High Definition content is preferred for image quality. Tapes provided should meet the following specifications:

### High Definition Content

Tape Format: Panasonic HD D5

Recording Format: 1280 X 720P/59.94 FPS

Image Format: 16:9 (figure 1)

Audio: Stereo – CH1=LT, CH2=RT

Dolby 5.1 – CH1=L, CH2=R, CH3=C, CH4=Sub, CH5=LS, CH6=RS, CH7=LT, CH8=RT

IMPORTANT – 5.1 audio mix must include LT/RT on CH7 and CH8

Audio Levels: -20dbfs reference level

Title Safe & Image Safe Area: Image Safe Area 5% from edges of image, Title Safe Area 10% from edges of image

Figure 1 – true 16:9 image



# DIGITAL SOURCE CONTENT

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## Standard Definition Content

Tape Format: NTSC DigiBeta, NTSC BetaSP

Image Format: 4:3 letter-box (16:9 image letter-boxed into a 4:3 image area) (figure 2)

16:9 anamorphic squeeze (16:9 image squeezed into a 4:3 image area) (figure 3)

Note - Standard 4:3 (figure 4a) material is not preferred, as it will be improperly stretched (figure 4b) or side matted (figure 4c)

Audio: Stereo – CH1=LT, CH2=RT

Audio Levels: -20dbfs reference level

Title Safe & Image Safe Area: Image Safe Area 5% from edges of image, Title Safe Area 10% from edges of image.

Figure 2 – 16:9 image with letterbox in a 4:3 screen area



Figure 3 – 16:9 image anamorphic squeezed into a 4:3 screen area



# DIGITAL SOURCE CONTENT

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Figure 4a – Standard 4:3 image



Figure 4b – Standard 4:3 image stretched to a 16:9 screen area



Figure 2 – 4:3 image with side mattes in a 16:9 screen area



# DIGITAL SOURCE CONTENT

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## File Delivery

### I) Image and audio:

- Uncompressed QuickTime or AVI files – 1280 X 720/59.94 FPS with 48khz embedded audio. Audio must conform to the audio channel config outlined in High Definition content.

### II) Image files:

- Targa file sequence – 1280 X 720, 59.94 FPS, uncompressed, bit depth – 16-bit minimum. Sequence must include 2-pop AND tail pop for audio synchronization.
- TIF file sequence – 1280 X 720, 59.94 FPS, uncompressed, bit depth – 16-bit minimum. Sequence must include 2-pop AND tail pop for audio synchronization.

### III) Audio files:

- Multi-channel WAV or stereo WAV files – 48khz, synchronized to the image (59.94 FPS/29.97 FPS), must include 2-pop AND tail pop for audio synchronization. Audio must conform to the audio channel config outlined in High Definition content:

# DIGITAL SOURCE CONTENT

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## MPEG Encoded Content

### Video Format:

Video shall be encoded to the MPEG II specification with the following constraints.

Resolution – 1280x720p (progressive scan)

Bitrate – Video encode bit rate to be 18,200,000 bits per second.

Frame rate – 59.94 frames per second.

The encoded file must be based on a full frame 16 X 9 image that fills the entire 1280 X 720 frame. Ensure that the image safe margin of 5% from edge of frame and title safe margin of 10% from edge of frame are maintained.

\* 2 frames of black should be placed at head & tail of MPEG

### Audio Format:

Audio will be encoded to the AC3 standard.

Bitrate – 384 kbps.

Sample rate – 48000 kHz.

Channel count can be any of the AC3 standards, ranging from left and right, up to full 5.1.

Audio channel assignment – Ch1 = L, Ch2 = R, Ch3 = C, Ch4 = LFE, Ch5 = LS, Ch6 = RS

Audio levels must be adjusted as follows:

Movie Tunes – 67 db LEQ

Audio overlay for slide content – 74 db LEQ

Hosted content – 79 db LEQ

Rolling stock – 82 db LEQ

## Production Guidelines

Maintaining at least the HD 720P/59.94FPS image format throughout the entire production process, up to and including delivery of source material to Screenvision will achieve the highest quality presentation. A true high definition presentation cannot be attained once the resolution has been reduced to an NTSC or PAL image.

Screenvision will up convert Standard Definition content to High Definition format prior to encoding. This up conversion will not result in an increase in detail; rather, it will convert the content to an image compatible with the cinema play out server. Content should be delivered in the specified High Definition format for best results.

Audio should be mixed for an average sound level of 75db in the theatre at standard reference levels. An increase of 4 – 8 dbfs for the surround channels is suggested.

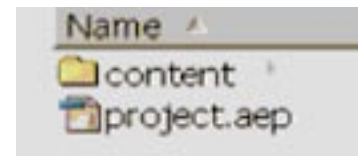
# DIGITAL SOURCE CONTENT

## Digital Animation

Screenvision specifies the following animation file delivery formats for slide replacement content:

### After Effects Animations Guidelines

- Animation must be created in Adobe After Effects 6.5 or lower.
- MUST be source project file (.aep)
- Dimensions: 1280x720
- Color: 24-32 bit RGB
- One (1) BLANK (black) frame at start and end of animation.
- Content
  - After Effects:
    - 24, 29.97, or 59.94 fps
    - Aspect ratio: Square Pixels
    - Resolution: Full
    - All source content used must be placed in a separate folder called "content" in the same folder as the project file, as example to the right.
    - Video: UNCOMPRESSED QuickTime or AVI, at same resolution as project.
    - Audio: WAV or AIFF - 48 kHz, Any Channel Count up to 5.1
    - If effects are used, use only After Effects based ones - NO 3rd party plug-ins and/or filters.
    - All fonts used must be included in separate zip file.
  - Source Files:
    - Still images: TIF, TGA, or PSD images - at least 300dpi, UNCOMPRESSED at 24 or 32-bit RGB color.
    - All fonts used must be included in separate zip file.



# DIGITAL SOURCE CONTENT

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## Content Delivery

Source master and VHS should be sent to: Heather Lewis Jolley, Creative Services Department, Screenvision  
1411 Broadway 33rd floor, New York, NY 10018

Content materials are due no later than 4 weeks prior to your flight's start date.

Advertising materials are due no later than 4 weeks prior to your flight's start date.

## Contacts

Technical – Mike Henry, Screenvision, 1411 Broadway, 33rd Floor, New York, NY 10018 (212-497-0474)

Creative – Heather Lewis Jolley, Screenvision, 1411 Broadway, 33rd Floor, New York, NY 10018 (212-497-0491)