

Fulldome Content Delivery Specifications: (from IMERSA / AFDI industry specifications)



DOME MASTER WORKING SPECIFICATION

The "Dome Master" refers to the individual images that are sliced, encoded, or otherwise processed to make playable files for use in the host facility's fulldome system.

Only circular dome masters (i.e., a square source frame) are accepted. The circle contains the projected image.

Exterior to active pixel area:

The region not covered by the image circle should be colored black, except for user-defined show name, timecode, frame number text and copyright, displayed in upper left-hand corner, with show name in an opposite corner.

GEOMETRY – The Dome Master is an equidistant azimuthal "fisheye" render representing a hemisphere, with bottom of the frame representing the front bottom of the dome screen, and the right and left hand sides of the dome master corresponding with the respective right and left sides of the dome to a viewer sitting at dome center within the theater. Top and sides of polar image are tangent to edges of image frame.

DESIGN CONSIDERATIONS:

Unidirectional "Safe Action" area approx. ±50° longitude (measured from dome front/center), and ranging from 10–60° latitude (altitude)

Nominal camera tilt of 15° great circle (cf. reference frame)

FILE FORMATS: sequentially numbered lossless files — e.g., PNG, TARGA with RLE compression other sequentially numbered files — e.g., JPEG at highest-quality setting Recommended file name format — e.g., "Name_000001_jpg" Recommended folder name format "filename_000001_010,000" Color Bit Depth — e.g., 8, 10, or 12 bits/color Frame Size, frame must be square, with standard diameter resolutions of 720x720, 1024x1024, 1536x1536, 2048x2048, 3200x3200, 3600x3600, 4096x4096.

FRAME RATES — 30 fps or 60 fps, other frame rates — 24 fps, 25 fps, 29.97 fps, 30 fps, 48 fps, 59.94 fps, 60 fps

Please clearly indicate the frame rate on the file name and drive if it is not 30 FPS! We do not have time to do extra work if this information is not given.

AUDIO FORMAT

Surround Format - we accept stereo files, or 5.1, or 7.1 files

File Format - e.g., mono channels; WAV, AIFF

Sampling Frequency and bit depth — e.g., 48-kHz 16-bit

Frame rate for video sync — e.g., 25, or 30 fps

Start frame 00:00:00:01

The first second of audio **must** match the first frame of video. No audio pip or black tails in or out, please. If you are supplying an excerpt clip from a longer piece of content, please supply ONLY the frames and audio needed for the clip. We cannot do edits for entries. Frame numbers must be sequential. NO mix and match. Please edit your frames together sequentially and renumber them from 00:00:00:01 before sending them to us.

All files need to be appropriately labeled via basic audio file naming convention for discrete channels: Front Left: filename_L.wav Front Right: filename_R.wav Rear Left Surround: filename_Ls.wav Rear Right Surround: filename_Rs.wav Center Front: filename_C.wav Low-frequency channel (Sub-bass): filename_LFE.wav

PHYSICAL MEDIA:

USB Hard Drive or Flash Drive, NTFS format ONLY. Volume label should be the Producer's or show Name, e.g. "My Show Drive"(G:)

Please label your drive with your contact information, producer name, address, and name of show. Drives will be available for you to pick up during the Summit. Please include return instructions and return airbills if you will NOT be attending the Summit.

Please include an HD resolution .mov or QT preview of your film so we can verify proper playback after encoding.

Please include a .jpg poster image frame that is representative of your film at least 400 pixels wide by 600 pixels tall for our event promotion materials.

FILE PREPARATION and FILE STRUCTURE on YOUR DRIVE

Prepare the files with a sub folder for each piece of content: frames, audio, etc. Also include a readme.txt with any special instructions or comments that we will need in order to encode your content properly. The title of the show should be in the readme.txt name, e.g. "STARSHOW_README.txt"

PRODUCERNAME or SHOWNAME (G:) FOLDER: Title of Show

SHOW_TITLE_README.txt Subfolder: frames, (Start frame 00:00:00:01) Subfolder: video

Title_show.mov

Subfolder: Audio

filename_L.wav filename_R.wav R filename_Ls.wav filename_Rs.wav filename_C.wav filename_LFE.wav

Subfolder: poster

Title_show_.tif (or other graphics format)