GEM

Localization, Accessibility, and Dubbing Branded Delivery Specifications

- GEM partners will find delivery specifications required by GEM, but some may not apply to your production.
- Please refer to your GEM Delivery Requirements List or GEM Representative for asset verification.
- Enforcement of 5.1 specification changes begins January 2nd, 2024.

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General Asset Requirements

- Translations within secondary audio and timed text must avoid introducing slurs or altering language tone unless requested by GEM.

Subtitle as a Separate File

- Subtitles cover spoken dialog differing in language from the subtitle file and translate narrative burned-in text in different languages.
- In overlaps of burned-in text and dialog, prioritize most plot pertinent message.
- Must conform within half a second to Primary Video Mezzanine or GEM-provided Proxy File.
- Raster image subtitles not accepted.

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- Files start at hour 00; hour 01 or 10 unacceptable.
- Positional data included if subtitles obscure burned-in text.
- All subtitles require individual translator credit(s).
- Credits appear only at file end; formatted per legal requirements.
- TTML required for right-to-left languages (Arabic, Hebrew).
- Translator credits not required for marketing assets.
- **Frame rate requirements:**
    - 25 fps to PAL 25 timecode
    - 23.976 to SMPTE 24 or 23.976 Media-Time (specify ttp:timeBase)
    - 59.94/29.97 fps to drop-frame 29.97 with ttp:dropMode (not valid with IMSC1.1 media timeBase).

Forced Narrative Subtitles

- Final AV delivered without burned-in subtitles.
- Forced Narrative list submitted using GEM template.
- Includes alternative language dialog, inaudible dialog, or on-screen text per creative intent.
- Timecodes and on-screen event texts included.
- Uploaded as "Localization Note" in Content Hub.
- Must follow standard subtitle technical format.
- Frame rate requirements same as subtitles.

Accessibility Files (SDH)

- SDH includes all spoken dialogue to be understood, including all spoken languages.
- Formats accepted: TTML1 (.xml, .ttml), IMSC1.1 (.xml) Japanese only.
- Raster image SDH not accepted.
- SDH synced within half a second to Primary Video Mezzanine or Proxy.
- No censorship or advertising; include translator credits but no SDH creator credit.
- Files start at hour 00.
- Include positional data where necessary.
- TTML1 mandatory for right-to-left languages.
- Frame rates follow subtitle standards.

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Alternate Language and Audio Description Delivery to Backlot

- Conform alternate and audio description tracks to primary digital audio/video asset.
- Acceptable formats: Atmos BWAV ADM, stereo or multichannel WAV Extensible (.wav), or QuickTime (see respective specs).
- Channel configs must match original language mix.
- Lectern-style dubbing allowed only for Polish or Vietnamese unless otherwise requested; otherwise lip-sync or voice-over required.

Acceptable Alternate Language and Audio Description Formats (non-QuickTime)

- WAV Specs: uncompressed PCM audio, interleaved WAVE Extensible (.wav), 48kHz sample rate, highest CBR bitrate, 16 or 24 bit depth.
- Channel mappings provided for 5.1+2.0 options, 5.1, and stereo.

Acceptable Alternate Language and Audio Description Formats (QuickTime)

- Uncompressed LPCM audio, 48kHz sample rate, 16 or 24 bit depth.
- Channel mappings detailed for various 5.1+2.0 combined configurations, stereo only, and 5.1 or 2.0 mixes.

Audio Mix Requirements: Alternate Language and Audio Description

- Discrete audio required except muxed audio or interleaved secondary audio WAVs.
- Sync with final picture including standard leaders and quiet areas.
- No additional leaders in Alternate/Dubbed or Audio Description mixes.
- 5.1 required, 2.0 optional.
- Mono accepted if original source is mono with no stereo/5.1; duplicate if mono on channels 1 & 2 for delivery.

Near Field Atmos® Mix - Mastering and Archive - Dubbed Languages and Audio Description

- Mix in minimum 7.1.4 room, no Dolby Certification required.
- Near field monitoring at 79dB or 82dB SPL.

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- Follow GEM loudness spec (-27 LKFS ± 2 LU dialog loudness).
- True Peak limiters at -2.3 dBFS for beds and objects recommended; peaks not exceeding -2 dBFS True Peak.
- 5.1 and 2.0 rerenders must meet GEM loudness and peak specs.
- Beds and objects encoded; printmaster composite or multiple beds.
- For series/doc/comedy, beds/objects labeled Dialog, Music, Effects; maintain DME separation for films.
- Two deliverable sets required if 85 dB SPL theatrical mix exists.
- Dubbed Atmos files match final IMF picture length as longplay; no reels.
- FFOA default; "Add FFOA" unchecked.

Near Field 5.1 Surround Mix - Mastering and Archive - Dubbed Languages and Audio Description

- Mix at 79 or 82 dB SPL reference level.
- -27 LKFS ± 2 LU dialog-gated loudness.
- Peak max +18dBu (-2 dBFS) over -20 dBF reference, achieved by peak limiting.
- Provide 5.1 Dialog, Music, Effects stems for original version; 5.1 Dialog stem for dubbed version.

Near Field 2.0 Stereo Mix - Mastering and Archive - Dubbed Languages and Audio Description

- Same reference level and loudness specs.
- Provide separate Lo/Ro or Lt/Rt mix, mono compatible.
- Peak max +18 dBu (-2 dBFS) with peak limiting, no lowering mix levels.
- Downmix guidelines: center -3 dB folded into L & R, surround -3 dB folded into L & R, LFE folded with LPF ≤ 200 Hz.
- Adjustments applied to individual 5.1 channels before fold down.
- 2.0 mix checked for artifacts before delivery; adjustments made as needed.

Dub Cards/Dub Credits

- Lip sync/voice over dubbing talent data must be entered in GEM Dub Talent List tool when dubs branded and billed to GEM; allows download of dub card deliverables for archive.

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- Non-branded or non-billed dubs require on-screen dub card image upload formatted exactly as to appear on-screen, containing only studio name, cast, key personnel, or required legal info per territory.
- Acceptable Image Formats: TIFF, PNG, BMP, JPG (flat files only).
- Minimum resolution 640x480, pixel aspect 1:1 square pixels.
- Multiple dub cards per language can be grouped in ZIP archives; must use DEFLATE or STORE compression.
- ZIP archive must contain same format/resolution images, single language only, and filenames sorted alphanumerically.

Appendix: Language Codes

- Comprehensive list of supported languages with audio and text capabilities.
- Contact GEM Representative about language code.