Renditions-per-Device Planning Worksheet

Set the rendition subset for each device class before you commit a transcode pipeline.

1 · Screen ceiling

The pixels the panel can show. Above it you pay for invisible detail (a 4K rung on a phone).

2 · Decoder ceiling

The codec, profile, and level the chip decodes. Above it playback fails, not just softens.

3 · License ceiling

The max resolution the DRM license releases (e.g. Widevine L3 capped to SD). Can be the lowest.

Top rung you ship = the LOWEST of the three ceilings. Floor rung = set by the worst network you serve.

Set the three ceilings per device class → take the minimum as the top rung

Device class	Screen ceiling	Decoder ceiling (codec / level)	DRM license ceiling	Top rung = min
Phone	~1080p	H.264 always; HEVC/AV1 HW on recent flagships	L1 → HD/UHD; L3 → SD	_____
Tablet	~1080–1440p	HEVC/AV1 hardware common	L1 → HD; L3 → SD	_____
Web (browser)	window-size; **no default cap**	H.264 universal; AV1/HEVC vary	software path often L3 → SD	_____
Smart TV	1080p–4K	HEVC near-universal; AV1 2022+	L1 → HD/UHD typical	_____
Stick / set-top	1080p–4K	varies sharply by model/year	L1 → HD/UHD on certified	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Pre-flight checklist before you ship the ladder

- ☐ **Floor rung present.** A sub-192 kbps variant exists for cellular (mandatory for Apple HLS) so weak networks start instead of stalling.
- ☐ **No oversized rungs per class.** Phones and tablets cap near 1080p; no 4K rung is encoded or served to a phone-only audience segment.
- ☐ **Web player capped.** hls.js / Shaka are configured with a max height (or restrict-to-element-size) — they do NOT cap by screen by default.
- ☐ **Native players trusted.** ExoPlayer / AVPlayer left to restrict to display size; overrides only where intentional.
- ☐ **DRM ceiling respected.** The player detects the device security level (EME) and the license server enforces per-resolution keys.
- ☐ **Per-device manifest filtering.** For premium / high-volume catalogs, the edge returns a manifest listing only that device's rungs.
- ☐ **Every rung earns its place.** Each rendition is requested by some device class; none is encoded and stored to be served zero times.

Companion to: 'Renditions per Device: Phone, Tablet, Web, TV, Set-Top'
www.forasoft.com/learn/ott/articles-ott/renditions-per-device



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This worksheet sets the top rung per device class from screen, decoder and DRM ceilings. We wrote seven volumes on the video stack. Volume 3 covers ABR ladders, players and DRM, Volume 1 covers codecs, profiles and levels, and Volume 2 covers HLS and DASH packaging.

WHAT YOU WILL FIND INSIDE

- ABR ladders and rung selection
- Codec profiles and levels per device
- DRM security levels and resolution caps
- HLS and DASH manifest filtering

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