Video Ad Serving — One-Page Field & Stack Reference

VMAP lists the ad breaks; VAST delivers each ad; an auction fills the slots; fill rate times CPM is the revenue. Engineering reference; IAB spec versions and CTV vendor coverage evolve in 2026 — confirm live.

1 · THE STANDARDS STACK (who does what)

- ☐ **SCTE-35 (SCTE)** — in-stream cue: where and how long the break is.
- ☐ **VMAP (IAB)** — the playlist of ad breaks around the content.
- ☐ **VAST (IAB)** — delivers one ad: video file, tracking, clickthrough.
- ☐ **OpenRTB 2.6 (IAB Tech Lab)** — the real-time auction + pod bidding.
- ☐ **Rule** — VMAP is the schedule of breaks; VAST is the ad inside one.

2 · VMAP → VAST NESTING

- ☐ **VMAP AdBreak.timeOffset** — start / end / HH:MM:SS.mmm / percent.
- ☐ **AdSource → AdTagURI** — the break points to the ad server (VAST).
- ☐ **VAST InLine** — the real ad: a MediaFile (video) + tracking.
- ☐ **VAST Wrapper** — no video; VASTAdTagURI redirects to next server.
- ☐ **Chain caps at ~5 wrappers** — too deep = timeout = blank slate.

3 · AD POD — FOUR CONTROLS

- ☐ **Deduplication** — the same creative must not repeat in a pod.
- ☐ **Competitive separation** — no two same-category brands in a pod.
- ☐ **Frequency capping** — limit how often a viewer sees an ad.
- ☐ **Latency control** — every slot ready before the break starts.
- ☐ **sequence** attribute (VAST 3.0+) orders the ads in the pod.

4 · DEMAND & VERSIONS (CTV-safe)

- ☐ **Direct-sold** highest price; **programmatic** (PG / PMP / open) fills.
- ☐ **Header bidding (unified auction)** beats the waterfall — all bid at once.
- ☐ **Target VAST 4.x**; use **SIMID**, not the deprecated VPAID.
- ☐ **Implement AdVerifications + OM SDK** — buyers need viewability.
- ☐ **Publish app-ads.txt** — without it, premium buyers will not bid.

THE MONEY MATH & QC — OPTIMIZE REVENUE, NOT FILL RATE

Revenue = impressions × CPM ÷ 1,000, and impressions = ad requests × fill rate. Worked example: 10,000,000 requests × 70% fill = 7,000,000 impressions; × $20 CPM ÷ 1,000 = $140,000 / month. Lift fill to 85% and CPM to $25 and the same traffic earns $212,500 — about 52% more. The trap: fill rate counts whether a slot filled, not what it earned, so a $1 remnant ad and a $30 premium ad both read as 'filled'. Optimize revenue per request — fill rate × eCPM together — and keep a price floor that rejects bids low enough to drag the blend down (60% fill at $30 eCPM beats 100% at $12). QC every break end to end: the SCTE-35 cue opens the avail on a segment boundary; VMAP points to the ad server; VAST resolves InLine within the wrapper cap; the pod is deduped, separated, frequency-capped, and fully filled before it starts; ads are VAST 4.x + SIMID (not VPAID) and measurable via OM SDK; app-ads.txt, sellers.json, and the SupplyChain object verify the inventory. Confirm the current VAST version, OpenRTB pod-bidding, and OM SDK CTV coverage at build time — this area moves in 2026.



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This reference maps SCTE-35, VMAP, VAST and OpenRTB, the ad-pod controls and the revenue math. We wrote seven volumes on the streaming stack those ads ride on. Volume 3 covers players, CDNs and the economics of streaming, Volume 2 ingest, HLS and DASH, and Volume 1 encoding.

WHAT YOU WILL FIND INSIDE

- Players and ad playback across devices
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