



VAST 4 GUIDELINES

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VAST 4 GUIDELINES

BACKGROUND

The VAST (Video Ad Serving Template) 4.0 specification was released in January 2016, but hasn't seen widespread adoption. Some recent updates point to an opportunity for successful pickup of the standard.

In this paper we lay out the reasons for this current state, and call on the industry to adopt the proposed changes.

In VAST 2 and 3, little facility was provided to enable measurement, particularly for viewability/verification. VPAID, originally intended to enable interactivity, was adopted as a way to facilitate this measurement. However, the use of VPAID introduces additional latency, presents risk in the execution of arbitrary code, and isn't supported on mobile nor SSAI inventory. VAST 4 attempts to address these gaps.

OBJECTIVES

VAST 4.0 was developed with certain key objectives in mind. The industry was moving beyond desktop and mobile video delivery, out to a broader range of devices that introduced new concerns. The standard attempted to codify some of the practices that had been adopted by the industry.

In particular, this include some enhancements to better supported big-screen connected-TV viewing, and to guide away from the use of VPAID for measurement. This was partly driven by the use of server-side ad insertion (SSAI) on big-screen devices. For example, the standard includes a mechanism to better identify unique ad creative, and to provide a high-resolution copy of the video creative so it can be ingested by SSAI vendors for big-screen playback.

The key limitation in VAST 4.0 however, was that while it defines a mechanism to deliver verification scripts or interactivity separately to the video creative, it doesn't define how these scripts would interact with players.

The VAST 4.1 spec intends to resolve this limitation. In conjunction, the IAB has developed the Open Measurement SDK, designed to provide a standard way for players to execute measurement scripts.



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VAST 4 GUIDELINES

VAST 4'S CHANGES

The new or updated elements in VAST 4.0 and 4.1 are summarised here.

Mezzanine File Definition

When providing a video creative, advertisers are able to link to the raw asset - a high-quality version of the video asset, which can be used by the publisher to provide best quality where applicable. VAST 4.0 includes a media container for the Mezzanine file. This won't be downloaded and played directly by end users, but is provided so that SSAI vendors can ingest, transcode and scale the creative for delivery, providing a good user experience.

When transcoding from a mezzanine, SSAI allows for ad creatives to be delivered at a range of frame sizes and bitrates that match the accompanying content. This is particularly valuable for big-screen playback, allowing content delivered in HD to transition smoothly into the stitched-in ads.

Universal Ad ID

This new attribute allows a particular ad to be identified regardless of which ad server it is delivered from. This should allow for better frequency capping, and when using SSAI, for ad creatives to be pre-flighted with improved quality control.

Additional VAST Error Codes

Additional error codes have been provided to support troubleshooting and reporting. These added VAST errors mainly focus on handling of Mezzanine files which as forementioned are widely supported by SSAI vendors but may not be surfaced by ad platforms. The other included errors cover off interactive, verification and category specific elements of an ad as well as a error provided to capture when an ad is return that doesn't load within a specified time period.

New error codes:

- 204 - Ad category was required but not provided
- 304 - Inline response returned ad unit that failed to result in ad display within a defined time limit
- 407 - Mezzanine is in the process of being downloaded for the first time. Download may take several hours. Ad will not be served until mezzanine is downloaded and transcoded.
- 409 - Interactive unit in the InteractiveCreativeFile node was not executed.
- 410 - Verification unit in the Verification node was not executed.
- 411 - Mezzanine was provided as required, but file did not meet required specification. Ad not served.

Ad Verification Scripts

VAST 4 separates media resources from the ones that are intended for measurement. The <AdVerifications> element provides a place for verification vendors to specify their executable resources and related metadata.

This new element allows for Verification scripts (in practice, viewability measurement) to be delivered external to the actual ad creative. This allows a video to be stitched in or run in any player, while the JavaScript is separately executed to report viewability back to the advertiser and/or publisher.

The IAB recommends that these scripts follow the new Open Measurement Interface Definition (OMID) rather than depending on VPAID. The use of OMID-based scripts will allow players to execute verification scripts in a broader set of end-user environments.

In market some vendors and publishers have begun running these scripts via VAST Extensions, available in VAST 3. This has allowed for early adoption of SDK-based

VAST 4 GUIDELINES

verification, allowing a jump from 0% measurable viewability to figures over 90%.

Interactive Call Separation

The complexity of digital video has given rise to the need to separate the linear video file from any creative interactive API files. While the VAST media file has accepted a variety of media files in the past, interactive APIs cannot always be executed. A VAST tag that provides the video file separate from APIs can display more successfully across platforms and devices.

This brings interactivity and real-time dynamic capabilities to VAST mobile in-app, by making alternate uses of the companion a standard. This execution is common in-market for app download clients, but relatively new for brand advertisers.

Timeout Support

VPAID 4.0 offers timeout settings to prevent an ad from taking too long to load. When an inline response fails to produce an ad within the timeframe identified in VPAID or other ad framework, the player may reject the ad, send error code 304 to indicate that no ad was produced in the given timeframe, and move on to the next option for an ad. Error codes should also be sent to any wrappers preceding the inline response.

VAST 4.1 & OPEN MEASUREMENT

VAST 4.1 is expected to be released officially in June 2018, and with vendors across the supply chain involved in its definition should see broad adoption.

A new Open Measurement standard (OMID / OM SDK <https://iabtechlab.com/standards/open-measurement-sdk/>) has already been released. It is intended to close the gap for verification, while a renamed successor to VPAID, temporarily referred to as “VPAID-I” will be revised to close the gap for interactive, explicitly omit unintended use cases and detail necessary changes for compatibility with VAST 4 and the new separate verification call. The standards revision has been intended with mobile and

SSAI models in mind. In some cases it makes sense to shift the verification and/or interactive code to be resident on the device rather than delivered alongside the assets. The OM SDK is an SDK-resident version of the core verification code, and the “VAST interactive templates” mentioned by the IAB would presume device resident code capable of executing interactivity from an predetermined set of assets.

At this stage reference implementations have been made available for iOS and Android, enabling improved verification measurement for mobile apps. The specification allows for measurement on other devices, including Connected TV, but it is yet unclear how broadly this will be adopted. We encourage agencies and publishers to push vendors for the relevant support.

DRIVING VAST 4.1 ADOPTION

We know from historical precedent that while a new standard brings new features and promises, the reality of utilising that in a working environment does not always match. It is important to appreciate the process and evolution that needs to take place post publication of a new standard and understand what needs to be aligned to utilise that. Vendors are urged to adopt and implement this standard across their tech stack as it will progress measurement unification across devices and channels, and will help introduce a technical solution to business transparency and measurement requirements.

For VAST 4.1 to be a reality there are a number of pieces which need to align to make this possible. Recommendations for what you can do to determine readiness:

Agencies

- Understand where the inventory you will be buying is running; VAST 4.1 in particular should provide immediate value on iOS and Android, while in the longer term should also improve reporting for Connected TV
- Proactively approach the VAST 4.1 conversation within your business; draw

VAST 4 GUIDELINES

focus towards all players within the supply chain needing to be compliant

- Determine who your partners are including demand and supply side technologies and confirm where their compliance sits in relation to VAST 4.1

Measurement providers

- Be ready to provide VAST 4.1 tags for use where applicable; take advantage of the specifications allowance for differing levels of JavaScript support; in particular, consider support for Connected TV where a full browser-equivalent JavaScript environment is not available
- Work with agencies and publishers to enable measurement for all parties
- Where possible, provide a consistent view of VAST 4.1-enabled inventory alongside VAST 2 and 3

Ad server(s)

- Be prepared to support the additional XML elements in the VAST 4.1 specification, including when those elements are provided by upstream partners
- Modify SDKs to expose these elements to Players
- Provide reporting of VAST 4-enabled inventory, taking advantage of new error codes to improve fill- and error-rate reporting

Players

- Expose the new VAST 4 elements for execution
- Work with upstream partners to prove the execution of OMID-compatible measurement scripts, and of side-loaded interactivity
- Work with partners to certify support for Open Measurement

Publishers

- Prioritise the adoption of VAST 4.1, particularly to enable reach across a broader set of your inventory
- Work with your partners and vendors to demonstrate support for VAST 4.1
- Work with your advertisers and partners to clarify the benefits of VAST 4.1 to them

The adoption of VAST 4.1 requires a range of independent parties working together, each with control over their own technology but limited control over others. We encourage the industry to work together to enable an improved user experience and greater transparency across the supply chain for all.

FURTHER REFERENCES

Digital Video Ad Serving Template (VAST)
Open Measurement SDK

Notes from IAB Tech Lab VAST 4 Webinar
Open Measurement SDK v.1 API