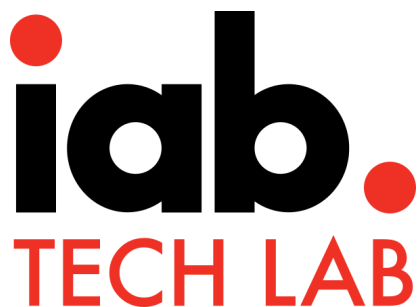




Open Measurement SDK for Web Video

Onboarding Guide for Integration Partners

Version 1.6 | Feb 2025

Onboarding Guide

Executive Summary

The Open Measurement Software Development Kit (OM SDK) is designed to facilitate third party viewability and verification measurement for ads served to web video and mobile app environments.

Ad verification service providers (Measurement Providers) are hired by advertisers to measure and verify whether the ad was displayed with a valid opportunity for a user to engage. Execution of this service usually requires some kind of integration of the Measurement Provider's code with the page where the ad displays.

However, multiple Measurement Providers working with multiple advertisers on multiple pages has proven resource intensive for integration maintenance. In addition, the operations for vetting Measurement Providers' code becomes overwhelming. Placement of each Measurement Provider's code can also lead to breaking changes that requires hours of troubleshooting.

OM SDK offers a scalable solution that eliminates the need for multiple Measurement Providers' proprietary code on a page. With OM SDK, Measurement Providers' code can operate as part of the ad to pull all the data they need as it is surfaced from one API. OM SDK for Web Video is specifically designed to surface measurement data for video ads displayed in HTML5 video supported environments.

Two key components comprise the OM SDK for Web Video solution: a javascript library for measurement event detection and the Open Measurement Interface Definition (OMID) API, which is a JavaScript API that standardizes measurement signal collection. Integration partners can integrate OM SDK as part of their video players, ad SDKs, or in-house ad monetization stacks common with larger video content publishers.

To scale with the OM SDK for Web Video solution, publishers and integration partners should implement the Web Video SDK and undergo compliance certification. They should encourage advertisers to buy ads that use OM SDK viewability measurement signals.

Voluntary adoption of OM SDK for Web Video and other Open Measurement solutions extends the scalability it offers. Widespread adoption is encouraged.

OM SDK is developed and managed by the [Open Measurement Commit Group](#) (OMWG)

Audience

Though this specification offers guidance for Video players, Ad SDK developers, or publishers with in-house stacks (Integration Partners), anyone working in advertising operations for web video ad campaigns should be familiar with this document. For example, professionals working for demand-side platforms (DSP), in ad operations, and as developers for any ad delivery systems will need to understand the OM SDK when interacting with publishers who have implemented Open Measurement solutions.

About IAB Tech Lab

Established in 2014, the IAB Technology Laboratory (Tech Lab) is a non-profit consortium that engages a member community globally to develop foundational technology and standards that enable growth and trust in the digital media ecosystem. Comprised of digital publishers, ad technology firms, agencies, marketers, and other member companies, IAB Tech Lab focuses on solutions for brand safety and ad fraud; identity, data, and consumer privacy; ad experiences and measurement; and programmatic effectiveness. Its work includes the OpenRTB real-time bidding protocol, ads.txt anti-fraud specification, Open Measurement SDK for viewability and verification, VAST video specification, and DigiTrust identity service. Board members/companies are listed at <https://iabtechlab.com/about-the-iab-tech-lab/tech-lab-leadership/>. For more information, please visit <https://iabtechlab.com>

Open Measurement Working Group

Commit Group Members

DoubleVerify	Pandora
Google	HUMAN
Integral Ad Science	IAB Tech Lab

Working Group Members

Learn more about Open Measurement Working Group [here](https://iabtechlab.com/working-groups/open-measurement-working-group/)
(<https://iabtechlab.com/working-groups/open-measurement-working-group/>)

Change Log

Revision	Description	Author	Date
Version 1.0	Document created, for OM SDK for Web Video Release	Jill Wittkopp (jill@iabtechlab.com)	11/05/2020
Version 1.5	Updated for CTV for Web Video	Jill Wittkopp (jill@iabtechlab.com)	07/2024
Version 1.6	Deprecated domain access & domain access validation	Jill Wittkopp (jill@iabtechlab.com)	02/2025

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Introduction

Scope

The Open Measurement Software Development Kit (OM SDK) for Web Video is designed to facilitate third party viewability and verification measurement for ads served in HTML5 web video environments, and native apps. As of June 2024 HTML5 web video support has been extended to the web OS platforms Samsung & LG.

This document explains the onboarding process for integration partners, execution using VAST or other direct (non-VAST) delivery, and guidance for implementation with OpenRTB. It also offers links to additional resources for implementation, compliance, and downloads.

Out of Scope

The specification for OM SDK for Web Video provides details for setup, initiation, functions, properties, events, and expected behaviors in response to the features enabled with proper implementation and are excluded from this document.

In addition, certain operational details are executed under individual company policy and procedures and are also excluded from all documentation supporting OM SDK for Web Video integrations.

Examples of details that are out of scope for this and other Open Measurement document include but are not limited to:

- Retrieving the ad from the ad server, ad network, or local resources
- Reporting collected data
- Logging data
- Billing and payments
- Ad dimensions and ad behavior

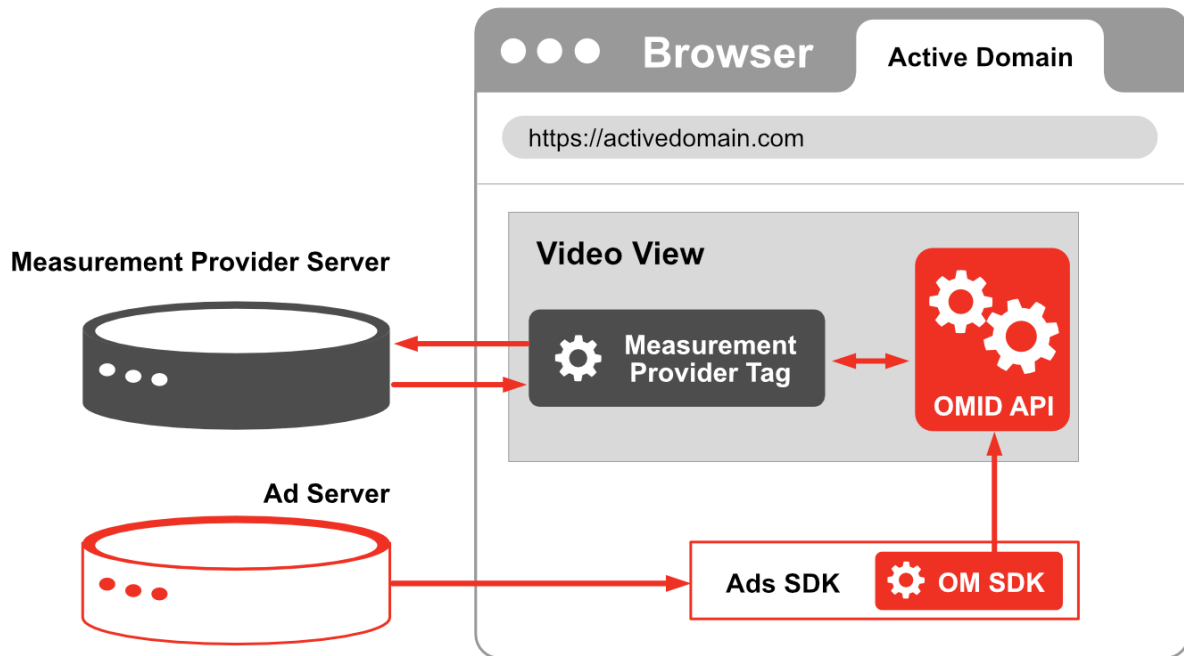
Logic for other types of measurement, such as the assessment of brand safety, IVT, audience, etc. may not be explicitly included within the OM SDK code and may be implemented by Measurement Providers using JavaScript alone when it is possible and applicable to do so. Other resources developed by IAB and IAB Tech Lab may support some of these out of scope details. For more information, visit iabtechlab.com or submit a ticket to support@iabtechlab.com with any questions you have.

How OMID Works

The OM SDK for Web Video consists of a library for web video measurement as well as a JavaScript API named Open Measurement Interface Definition (OMID) that is integrated by the Integration Partners (Video players, Ad SDK developers, or publishers with in-house stacks).

The library collects various signals, such as ad container geometry and playback events via direct communication with the video players, and publishes these signals via the OMID JavaScript API. The OM SDK for Web Video includes support for HTML5 video players.

Included below is a high-level overview of the technical operations for an OMID measurement session. For more detailed documentation, please see the current version of [OMID JS specifications](#). For older API versions, please visit <https://iabtechlab.com/omsdk>

**Key Points:**

- Measurement Provider's tag is trafficked with the ad creative.
- Ad SDK initiates the OM SDK which triggers the OM SDK Javascript or OMID API.
- Measurement Provider tag listens to events in OMID API and sends the data to its servers.

Governance Principles

The long-term goal of the Open Measurement Working Group (OMWG) is to create a standardized technology framework that facilitates measurement of 3MS Solutions without requiring multiple Measurement Provider SDKs. Learn more at <http://measurementnow.net/principles-solutions>.

As new measurement methods evolve, the Commit Group will evaluate, prioritize, and schedule support for them in the OM SDK accordingly.

To ensure that this primary purpose is met, the following governance has been established:

- **Object form Integration:** Integration Partners will integrate and maintain OMWG approved OM SDK versions released through the IAB Tech Lab portal. This will ensure a valid and tested version is being used. An Integration Partner may qualify under Special Build Requirements to distribute their own build of the software. Please see the Open Measurement Working Group Procedures for details: https://compliance.iabtechnologylab.com/docs/OMWG_Procedures.pdf.
- **Integration Validation Compliance Certification:** The IAB Tech Lab has designed integration validation compliance guidance for Integration Partners. The certification is voluntary and serves to ensure that your integration is compatible with Measurement Provider tags. More details are available at compliance@iabtechlab.com.
- **Distribution:** The OMWG will manage the release and distribution of OM SDK versions to ensure Measurement Provider tags and Integration Partner implementations are compatible.
- **Measurement Provider Standardization:** Measurement Providers will migrate Integration Partners from their proprietary SDKs to the OM SDK to eliminate technical redundancies and bolster scale of measurement.

Source Code

Members of the OMWG are able to review the OM SDK source code in private GitHub repositories. At the discretion of the OMWG Commit Group, certain components of the OM SDK source code may remain private to protect the integrity of the project, validate in-market integrations, and prevent leakage of certain collection methodologies. Further, while the repositories are available to the OMWG members for development and testing purposes, Integration Partners are required to integrate the OM SDK using the object form of the code made available through the Tech Lab portal. Using the object form for integration streamlines execution of the testing and certification process by making it consistent. An exception to this requirement is made if an Integration Partner qualifies under Special Build Requirements to

distribute their own build of the software. Please see the Open Measurement Working Group Procedures for details:

https://compliance.iabtechnologylab.com/docs/OMWG_Procedures.pdf.

Versions

Version updates will be made under the following guiding principles:

- OM SDK is designed to ensure interoperability and backwards compatibility
- Semantic versioning will be followed to align JS releases
- All minor versions of a major OM SDK version will be backward compatible
- Major version change may introduce breaking changes

Onboarding Process

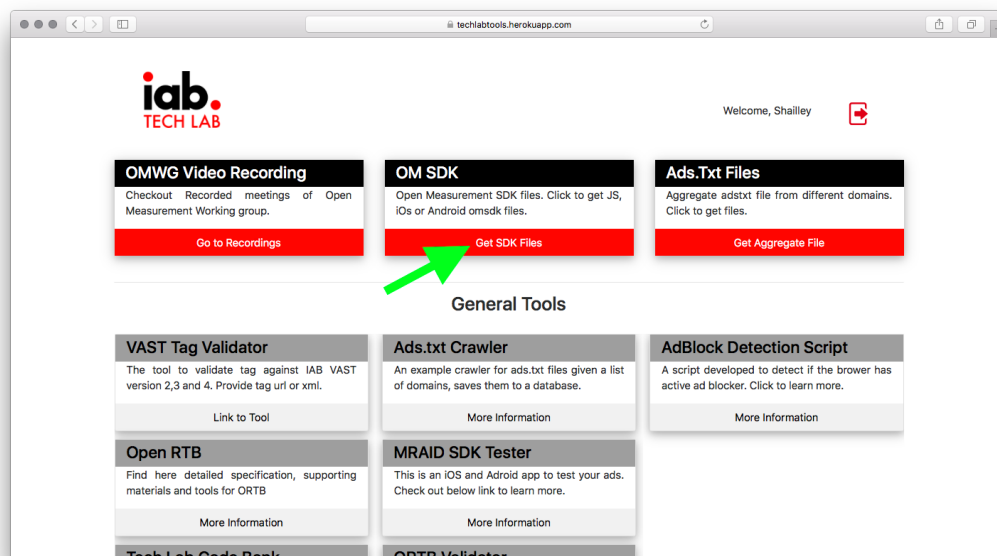
This section outlines the process for how Integration Partners can register to download OM SDK for Web Video and ongoing releases as well as the process for completing the integration and testing it.

Downloading OM SDK for Web Video

The OM SDK for Web Video javascript, which includes support for Samsung & LG, can be downloaded from the IAB Tech Lab tools portal. Please follow the below steps to download:

1. Register on IAB Tech Lab tools portal: <https://tools.iabtechlab.com/>. Use your company email domain. *Emails from free email services like google, yahoo, hotmail or others will not be accepted.*
2. Request access to OM SDK by clicking on “OM SDK” option on the tools dashboard

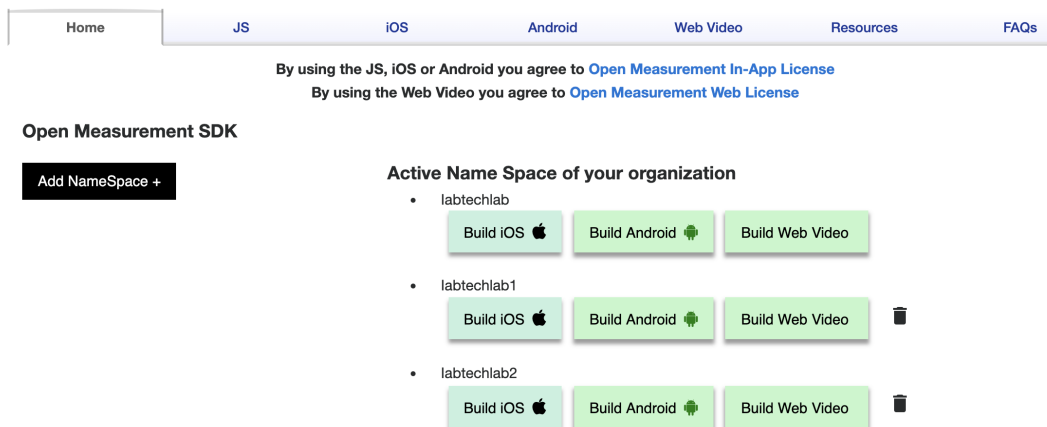
Dashboard → Get OM SDK



Dashboard → Get OM SDK → OM SDK Home



OM SDK



- For an OM SDK for Web Video Integration, click the Build for Web button on the homepage and navigate to the Web Video tab.

OM SDK Web

OM SDK

[Home](#)[JS](#)[iOS](#)[Android](#)[Web Video](#)[Resources](#)[FAQs](#)

[Refresh Files](#)[View ChangeLogs ↓](#)

- 1.1.1
 - [omloader-js-1.1.1.zip](#)
- 1.1.0
 - [omloader-js-1.1.0.zip](#)

11/11/2020 07:31:18 AM

11/11/2020 07:29:38 AM

4. Download the zip file.
5. Other documentation and guidance for integration is available under the Resources tab.

Integrating and testing the SDK

After downloading the SDK, follow the Developer Integration Guide to integrate the SDK:

- Web Guide: <https://interactiveadvertisingbureau.github.io/Open-Measurement-SDKJS/>

Integration Validation Compliance

Tech Lab provides a voluntary service for Integration Partners to certify their OM SDK integrations. With certification, IAB Tech Lab tests measurement provider tag integration with an OM SDK implementation to check that it's working as expected. Any video player, Ads SDK, or a publisher directly integrating OM SDK is eligible for validation compliance. More details available here: <https://iabtechlab.com/omsdk/docs/compliance>

Publisher Website Implementation & Access Modes

Subsequent to testing and obtaining integration validation compliance, publishers can onboard the Video Player or Ads SDK with certified OM SDK into their websites, which includes selecting an access mode as described in the next section. For detailed onboarding instructions for

publishers, please see our Publisher Quick Start Guide:

<https://compliance.iabtechnologylab.com/docs/WebVideo/Publisher%2BQuick%2BStart%2BGuide.pdf>

We'll provide an overview below so that the integrator is aware of the publisher options and requirements. Publishers are required to apply additional steps:

1. Load the OM SDK for Web Video Service Script into a same-origin iframe
2. Select access modes for each verification script resource

Access Modes

Access mode is a choice made by publishers when implementing a Video Player or Ads SDK with certified OM SDK into their website. Please talk to your measurement provider directly regarding the necessary support given your chosen access mode.

Two access modes are available to publishers:

1. **Creative Access** - Creative access mode is when a verification script can access the creative element (either in the same iframe or from a friendly iframe). This mode enables the measurement tags to directly measure and verify ad creatives. The OM JavaScript also functions as a conduit to deliver the Measurement Provider script to the video player.
2. **Limited Access** - In this mode, the Measurement Provider JavaScript tags load into a sandboxed IFrame. Measurement scripts that load into any such sandboxed IFrame cannot measure the ad creative directly and, as a result, require the SDK JavaScript to pass measurement events to the measurement scripts via the API for OMID Client Libraries. Due to the inability of measurement scripts to measure the creative directly or verify the domain, a measurement provider *may not* consider impressions valid from this access mode.

Domain Access is deprecated as of February 2025 as well as Domain Access Validation.

Measurement Provider Testing

Integration Partners can test Measurement Provider tags by completing the following steps:

1. Request Measurement Providers test tags.
2. Serve creatives with Measurement Provider tags.
3. Execute the Integration Validation Test Cases.
4. Compare the data from Measurement Provider portal with measurement provider's data.

OM SDK JS Weekly Updates

OM SDK JS is a critical component of the OM SDK for Web Video download that enables communication between the OMID APIs and the cross platform. OM SDK JS files are included in the OM SDK for Web Video download.

1. The OMWG releases new versions, keeping OM SDK JS updated on a regular basis .
2. OM SDK JS should be updated from the Tech Lab portal at least once every week and preferably more frequently.

Onboarding Workflow and Checklist

Step	Integration Partner/ Publisher	OMWG Commit Group	Comments/ Milestones
1. Tech Lab Registration	Sign up on IAB Tech Lab tools portal here: https://tools.iabtechlab.com/		
2. Download OM SDK for Web Video	Download SDK libraries and developer integration guide		
3. Integration	Integrate SDKs & Host OM	Integration Support	Completed SDK integration

	SDK JS		
4. Testing	Integration testing with validation tools and any internal processes	Integration Support	Integration Partner signs off on SDK integration.
5. Validation of integration	Submit integration build (Ads SDK, Video Player or website) to IAB Tech Lab		
6. Publisher website onboarding	Publisher select an access mode for OM SDK for Web Video (Creative & Limited)		This step is for publishers onboarding an OM SDK certified ads SDK or Video player in their website
7. Measurement Provider Testing	Release integration, certify with Measurement Provider(s) of choice if desired	Update certification collateral to include Integration Partner	GA release of SDK integration.
8. OM SDK JS updates	Checks and updates for latest OMID JS at least once a week and preferably more frequently. The latest JS files will be available through the portal login for manual download as well as a URL with API key for automated download	Validates and distributes latest OMID JS	New version of OMID JS released

Campaign Execution

Advertisers contract third party Measurement Providers to provide independent measurement and verification services on their campaigns. Advertisers use this viewability and verification measurement to optimize their campaigns and monitor whether ads are delivered to valid environments where consumers have valid opportunities to interact with them.

In order to provide these measurement services, Measurement Providers operate proprietary JavaScript tag solutions that are trafficked with the ad creative. These JavaScript tags interact

with website and app environments at the time of ad delivery, enabling the collection of signals surfaced by the OM SDK, as well as other signals available in the ad environment.

Please note that campaign execution for OM SDK for Web Video is supported the same as OM SDK for Apps. This includes using the same VAST nodes, VAST macros, and OpenRTB values, the details of which are listed below.

Video Creatives

VAST

For VAST video, OMWG recommends using 'AdVerifications' node as described in VAST 4.1.

Vendors that work with OM SDK to measure video ads can provide their code using VAST or directly when VAST is not an option. Some vendors may look to use VPAID to provide their code, but VPAID facilitates ad-video interaction and is not recommended as a delivery mechanism for measurement code.

Vendors that provide their code using VAST may use the current version (VAST 4.2) or any earlier version. The mechanism is different for each version and each is described in the following two examples. Guidance for providing code without VAST follows the two VAST examples.

To provide a vendor's measurement code using VAST 4.1, use the AdVerifications node described in VAST version 4.1 guidance. Values in bold must be replaced with vendor-specific values. See VAST 4.1 documentation for more details.

Verification node Example in VAST 4.1

```
<AdVerifications>
  <Verification vendor="company.com-omid">
    <JavaScriptResource apiFramework="omid" browserOptional="true">
      <![CDATA[https://verification.com/omid_verification.js]]>
    </JavaScriptResource>
  </Verification>
</AdVerifications>
```

```
<Tracking event="verificationNotExecuted">
  <![CDATA[https://verification.com/trackingurl/[REASON]1]]>
</Tracking>
</TrackingEvents>
<VerificationParameters>
  <![CDATA[verification params key value pairs]]>
</VerificationParameters>
</Verification>
</AdVerifications>
```

For older (e.g. 2.0, 3.0, 4.0) version VAST documents, verification code should be loaded via Extension node (extension type as 'AdVerifications') where the root is an AdVerifications node with the same schema as the VAST 4.1 element. Values in bold must be replaced with vendor-specific values. See relevant VAST version documentation for more details.

Verification node example in VAST pre-Version 4.1

```
...
<Extensions>
  <Extension type="AdVerifications">
    <AdVerifications>
      <Verification vendor="company.com-omid">
        <JavaScriptResource apiFramework="omid" browserOptional="true">
          <![CDATA[https://verification.com/omid_verification.js]]>
        </JavaScriptResource>
        <TrackingEvents>
          <Tracking event="verificationNotExecuted">
            <![CDATA[https://verification.com/trackingurl]]>
          </Tracking>
        </TrackingEvents>
        <VerificationParameters>
          <![CDATA[verification params key value pairs]]>
        </VerificationParameters>
      </Verification>
    </AdVerifications>
  </Extension>
</Extensions>
...
```

For pre VAST 4.1 versions, please follow the same rules as VAST 4.1 for handling the parameters in the 'AdVerifications' node.

VAST example is available here:
https://github.com/InteractiveAdvertisingBureau/VAST_Samples/blob/master/VAST%201-2.0%20Samples/Inline_NonLinear_Verification_VAST2.0.xml

Non VAST Video

Although IAB Tech Lab recommends using VAST for Video ad serving, an ad server might accept video files or video ad assets directly and serve them without the use of VAST. In such cases the ad server using OM SDK for verification purpose must request the following details from the advertiser that need to be passed to the OM SDK on initiation:

1. Measurement Provider vendor key to identify the vendor
2. Measurement Provider verification resource URL for the verification tag
3. Verification parameters

The Integration Partner must then provide the above details to OMID after starting the ad session. These can be communicated to Integration Partner in standard JSON format as below or a predetermined method between Integration Partner and advertiser.

Suggested JSON format for communicating OM SDK verification details

```
[
  {
    "vendorKey": "company.com-omid",
    "javascriptResourceUrl": "https://verification.com/omid_verification.js",
    "verificationParameters": "[parameters string]"
  },
]
```

OpenRTB Guidance

The following guidance is the OpenRTB working group advisory on supporting OM SDK to indicate availability of OM SDK for ad verification.

Also check the following advisory for updates

<https://github.com/InteractiveAdvertisingBureau/AdCOM/blob/master/OpenRTB%20support%20for%20OMSDK.md>

OpenRTB 2.0 through 2.5 can be easily extended to support OM SDK by communicating:

1. If OMID is available for a given impression in a bid request
2. If the ad being used in the bid response requires OMID
3. The "partner name" assigned to OM SDK integration

To support this communication, OpenRTB's list of API Frameworks should be extended with a value for OMID. Extend List 5.6 API Frameworks as follows:

List 5.6 API Frameworks

Value	Description
1	VPAID 1.0
2	VPAID 2.0
3	MRAID-1
4	ORMMA
5	MRAID-2
6	MRAID-3
7	OMID-1

In OpenRTB 2.0 and 2.1, value 6 is not present. If extending an existing OpenRTB 2.0 or 2.1 implementation, value 6 should be blank or not provided so that value 7 is consistently used to indicate OMID support while preserving an upgrade path.

Bid Request

The "api" field of the Video should be used to indicate availability of OMID. This is supported in OpenRTB 2.0+.

Video Object

Attribute	Type	Description
api	integer array	List of supported API Frameworks for this impression. Refer to List 5.6. If an API is not explicitly listed, it is assumed not to be supported.

Bid Response

The "api" field of the Bid Object should be used to indicate that the ad being used in the bid requires use of OMID. This field is supported in OpenRTB 2.4+, though consistent with the design principles of OpenRTB, it should be possible to retrofit this field into OpenRTB 2.3 and earlier versions as SSPs and DSPs should gracefully ignore fields they do not understand.

Since OpenRTB 2.x versions only support an integer (not an array) for the api field in the response, an extension field should be used to convey if more than one API type is to be used (e.g. MRAID 2.0 and OMID-1). It is recommended that SSP and DSPs who support an extension in earlier versions to indicate multiple APIs should be indifferent to the plural "s" absent in the seatbid.bid.api field for older versions vs. the use of "s" in the seatbid.bid.ext.apis field in version 2.4+, listening for OMID-1 listed in either field.

Possible ext field in the Bid Object of the response in OpenRTB 2.x: seatbid.bid.ext.apis

Attribute	Type	Description
-----------	------	-------------

apis	integer array	(optional) APIs required by the markup, if applicable. Refer to List 5.6. Should be used if the markup requires more than one API, in place of the current “api” field.
------	------------------	---

Bid Object

Attribute	Type	Description
api	integer	API required by the markup if applicable. Refer to List 5.6.

OpenRTB and AdCOM

Bid requests will include two new fields to identify the partner integration. OpenRTB 2.x and 3.0 will carry these fields in different objects, but the field names and types are the same in both protocols.

Attribute	Type	Description
omidpn	string	Identifier of the OM SDK integration. This is the same as the "name" parameter of the OMID Partner object.
omidpv	string	(optional) Version of the OM SDK integration. This is the same as the "versionString" parameter of the OMID Partner object.

Note that these fields are in addition to the API frameworks array, which is carried in an "api" field in OpenRTB 2.x and an 'apis' field in AdCOM. The API frameworks array must include the value 7 to indicate OMID 1.0 support.

OpenRTB 2.x

The two fields needed to identify partner integration will be added to an extension object within the bid request. Several options for the extension object are available to use. This section lists three possibilities.

BidRequest.Source.Ext

The object BidRequest.Source describes the source of the OpenRTB 2.x bid request. Adding "omidpn" and 'omidpv' to Source.Ext is appropriate if certification applies to all placements in the bid request.

BidRequest.Source.Ext example

```
"source" {  
  "ext": {  
    "omidpn": "MyIntegrationPartner",  
    "omidpv": "7.1"  
  }  
},  
"imp" [{  
  "banner": {  
    "api": [7]  
  }  
}]
```

OpenRTB 3.0 and AdCOM 1.0 (in Beta)

The new AdCOM spec represents ad request data in OpenRTB 3.0. Unlike OpenRTB 2.x, the "omidpn" and 'omidpv' fields are extensions in the 'events' object defined in the protocol (AdCOM 1.0 is currently in Beta).

Event Trackers

The OMID capability of a bid request is encoded in an "events" object, making it a logical place for the partner information.

BidRequest.Source.Ext example

```
"events" {  
  "apis": [7]  
  "ext": {  
    "omidpn": "MyIntegrationPartner",  
    "omidpv": "7.1"  
  }  
}
```

Resources

All resources can be found here:

<https://iabtechlab.com/standards/open-measurement-sdk/>

Support

If you need support to integrate OM SDK for web video or have any questions about how to use

OM SDK, please send an email to omsdksupport@iabtechlab.com.

We will respond within 24-72 hours of receiving the request.