Open Measurement Software Development Kit

Show and Tell

5.14.2018

Open Measurement Working Group

Agenda

Open Measurement Working Group (OMWG)

What is Open Measurement Software Development Kit (OM SDK)

Onboarding

Integrating the OM SDK

Executing Campaigns

Adoption: Timeline, MRC Guidance, Integration Validation Compliance

Roadmap

What is Tech Lab?

Mission: The IAB Technology Laboratory ("Tech Lab") is a non-profit research and development consortium that produces and provides standards, software, and services to drive growth of an *effective and sustainable global* digital media ecosystem.

Governing Board – *from sell-side to buy-side:*

AppNexus
ExtremeReach
Google
groupm
HEARST digital media
IAS Integral Ad Science
LinkedIn
MOAT
pandora
PubMatic
sonobi
TREMOR VIDEO
YAHOO! JAPAN

Partners: IAB (US) & affiliates, Ad-ID, CBA, DAA, MRC, TAG, W3C, & more

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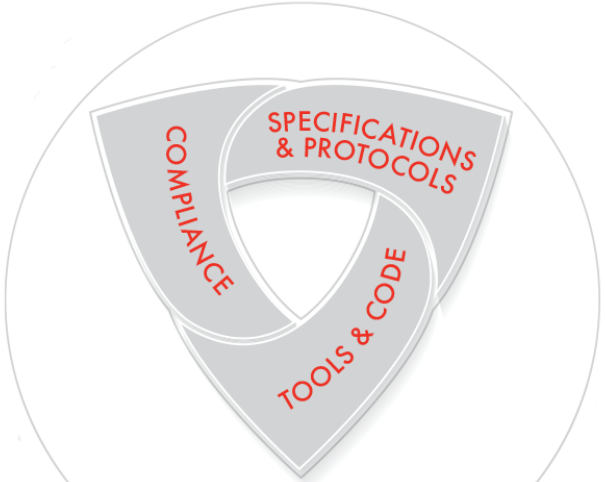
Strategies & Offerings – The "Why" & "How"

We enable brand & media growth via:

- A transparent, safe, effective supply chain
- Simpler & more consistent measurement
- Better advertising/marketing experiences for consumers (esp. video & native)

...with a focus on mobile & "TV" channel enablement



…by providing:

- Standards: Specs, Protocols, Technical Guidelines
- Software: Tools, Code (to support Standards)
- Services: Compliance (for Standards) & Events

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Open Measurement Working Group

45
members

6
Commit Group Members

50 +
Download Requests

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Speakers

Joe Ranzenbach
Director Product
IAS

Alex Chugunov
Sr. Software Engineer
Pandora

Bradford Galiette
Product Manager
Google

Ron Pinelli Jr
VP, Digital Research & Standards
Media Rating Council, Inc.

Saar Paamoni
VP, Product Management
DoubleVerify

Kevin Kenny
Lead Technical Consultant
Comscore

Michael Bishop
Principal Product Manager
Oracle- Moat

Mayank Mishra
Sr. Director, Engineering
IAB Tech Lab

What is OM SDK ?

Joe and Kevin

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🙁 Problem with Mobile Measurement

Limited scale

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🤔 Why no scale for independent verification

- SDK development is a large undertaking
- Black box SDK integrations = troubleshooting challenges
- No SDK= reduced measured rates, accuracy, capabilities and trust
- New SDK adoption = long penetration time through SSPs and Networks
- Multiple vendors competing for supply side roadmaps
- Redundant vendor SDK = increased overhead, maintenance, footprint and risk

Straight from the Prophet

THERE MAY BE VALUE IN THE DEVELOPMENT OF AN OPEN-SOURCE STANDARD SDK BY THE INDUSTRY THAT CAN BE USED BY ALL PARTIES.

WE ENCOURAGE SUCH DEVELOPMENT AND WOULD SUPPORT AN OPEN AND SINGLE SOURCE STANDARD.

MRC MOBILE VIEWABLE AD IMPRESSION MEASUREMENT GUIDELINES

June 28, 2016

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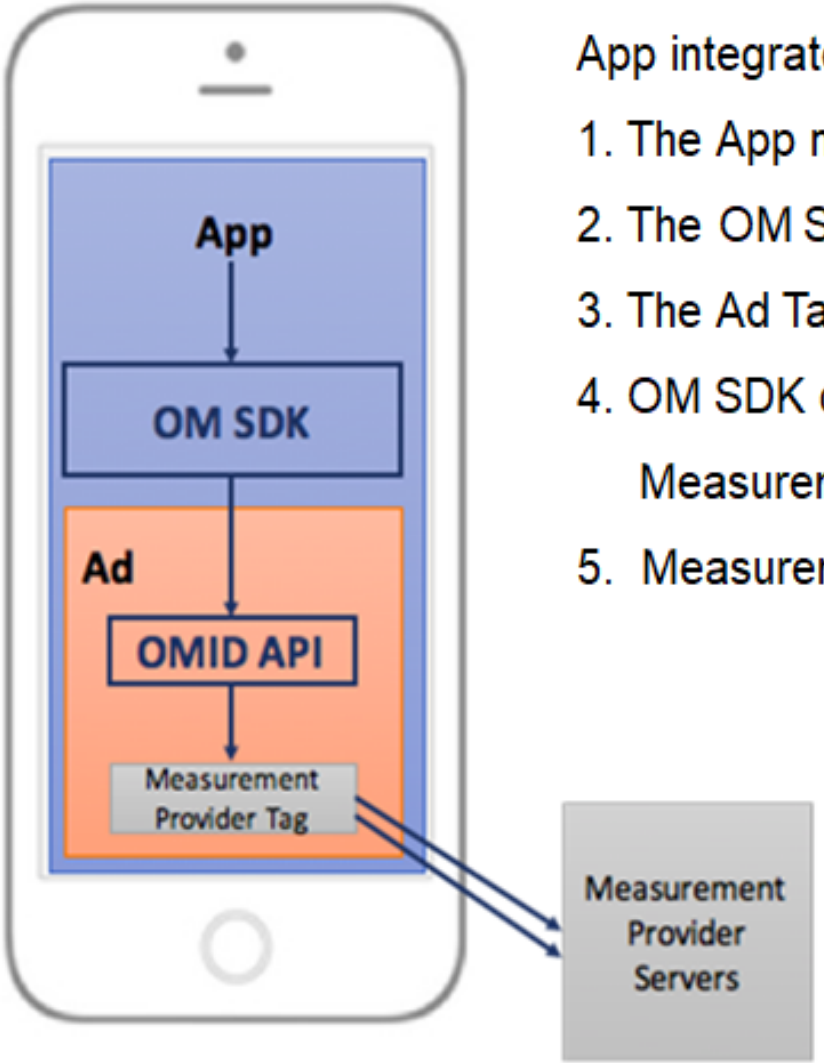
Growing the  vs fighting for 

- **Equal data access to all vendors** (similar to how it works on web)
- **Facilitates adoption, innovation, and troubleshooting** (goodbye black box challenges)
- **Improved accuracy and performance** (~30% higher measured rates than MRAID)
- **Protection of user experience** (reduced native footprint and memory utilization)
- **Protection of developer experience** (reduced integration and maintenance efforts)
- **Allows all sellers to partake** (reduced 3rd party tech risk for walled gardens)
- **Eliminates conflict risk around vendor M&A** (what if vendor x is acquired by company y?)

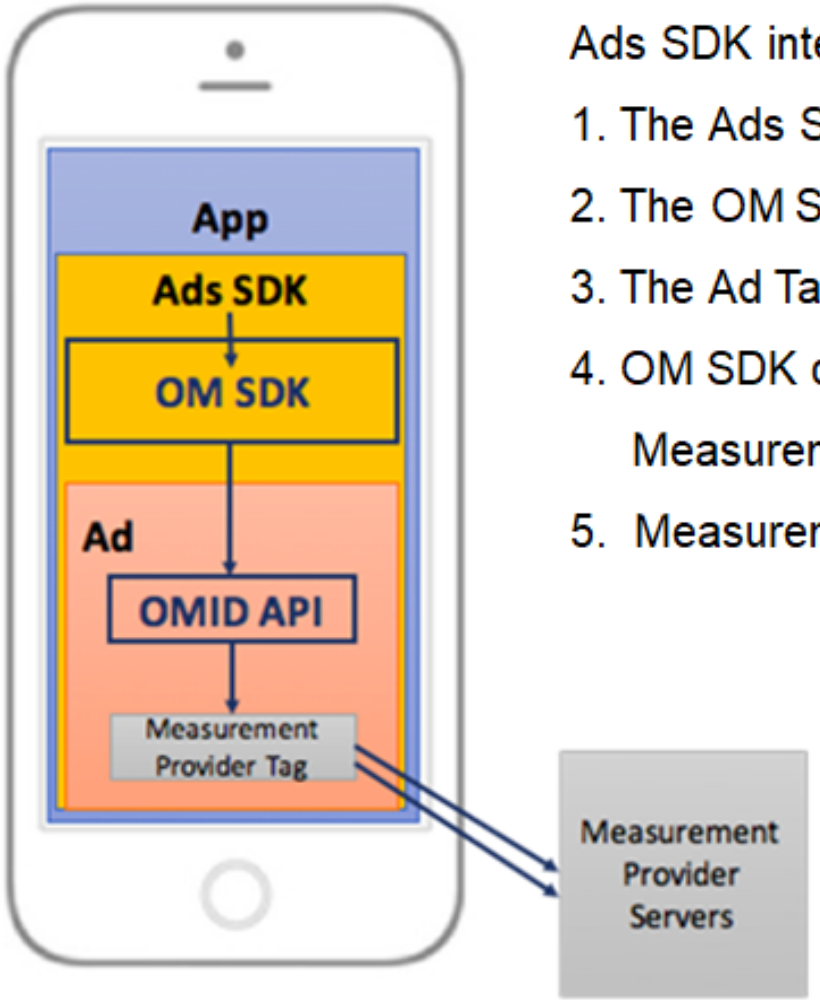
Publisher Implementation



App integrated with OM SDK

1. The App notifies the OM SDK that an Ad session has started.
2. The OM SDK creates an OMID API associated with the ad.
3. The Ad Tag injects the Measurement Provider Tag with the ad.
4. OM SDK communicates through the OMID API to the Measurement Provider tag ad offset and ad session events.
5. Measurement Provider tag reports to Measurement Provider Servers.

Advertising Network Implementation



Ads SDK integrated with OM SDK

1. The Ads SDK notifies the OM SDK that an Ad session has started.
2. The OM SDK creates an OMID API associated with the ad.
3. The Ad Tag injects the Measurement Provider Tag with the ad.
4. OM SDK communicates through the OMID API to the Measurement Provider tag ad offset and ad session events.
5. Measurement Provider tag reports to Measurement Provider Servers.

🤗 What is supported today

Collection and surfacing of impression and raw viewability information for

- 👍 Display banner advertising- webview and native in-app ad units
- 👍 Display Interstitial advertising
- 👍 Video advertising- webview using HTML5 video or native using in-app players
- 👍 Support for VAST 2.0, 3.0, 4.0 and upcoming VAST 4.1 workflows
- 👍 Brand safety is facilitated but logic does not exist within the SDK.
- 👍 Fraud detection (Invalid Traffic) is facilitated but logic does not exist within the SDK
- 👍 Advertising ID retrieval logic does not exist with the SDK
- 👍 VPAID is not supported by SDK

Onboarding

Shailley and Mayank

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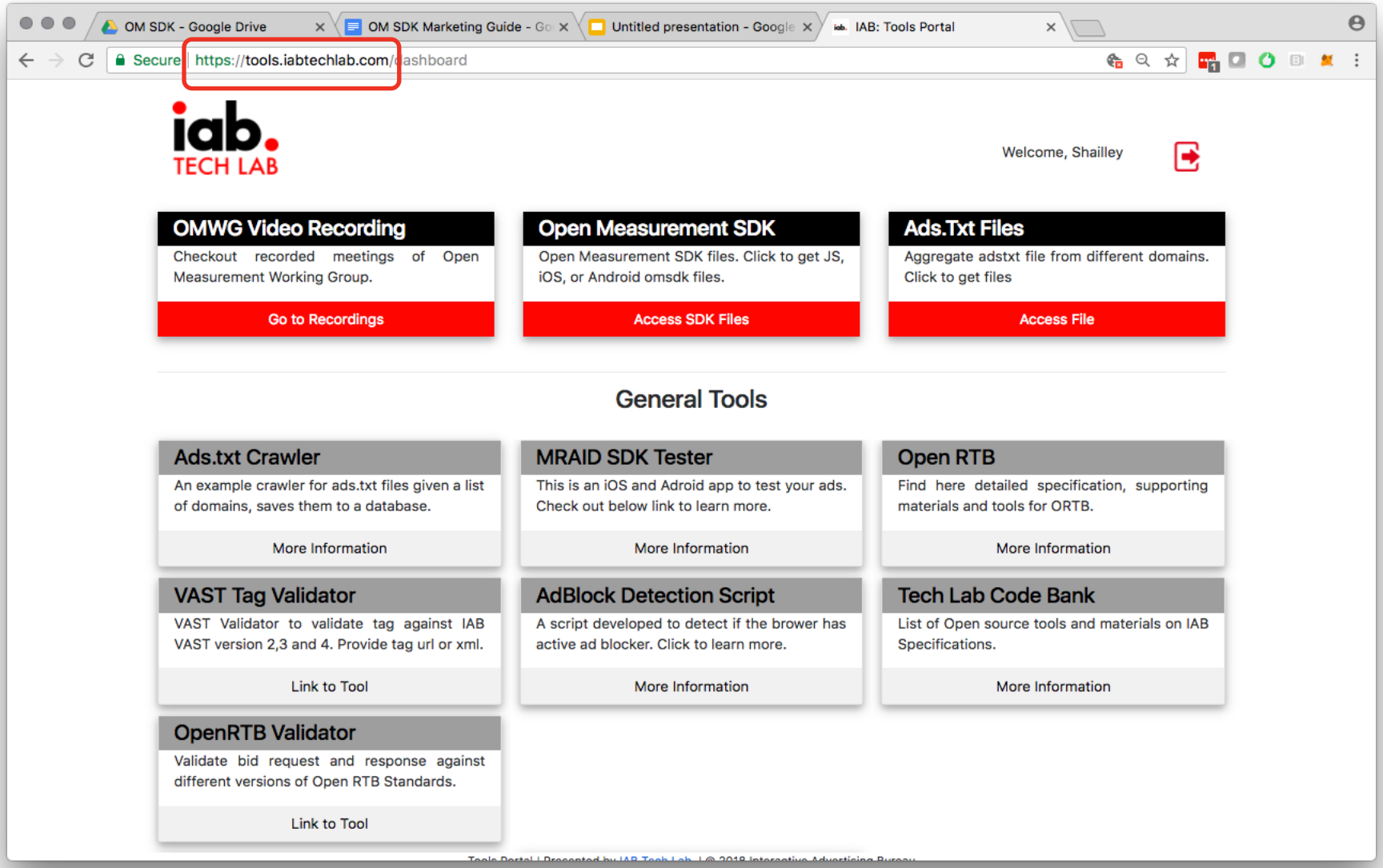
Process

Step	Integration Partner	OMWG Commit Group	Comments/ Milestones
1. Tech Lab Registration	Sign up on IAB Tech Lab tools portal here: https://tools.iabtechlab.com/		User should get their namespace based on company email domain and be able to view links to build their Android and iOS SDK
2. Create your SDK build	Click on “Build” button to generate the SDK with the namespace		User is notified when the build generation is completed
3. Create additional namespace	Create additional namespace by clicking on “Add namespace” button		Namespaces should be created
4. Download SDK	Download SDK libraries and developer integration guide		
5. Integration	Integrate SDKs & Host OM SDK JS	Integration Support	Completed SDK integration
6. Testing	Integration testing with validation tools and any internal processes	Integration Support	Integration Partner signs off on SDK integration
7. Validation of integration	Submit integration build (Ad SDK or Test App) to IAB Tech Lab	Commit Group reviews validation testing results	Commit Group signs off on SDK integration Integration Partner ready to release OM SDK
8. Measurement Provider Testing	Release integration, test with measurement provider(s) of choice if desired		
9. 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 in future	Validates and distributes latest OMID JS	New version of OMID JS released

Tech Lab Tools Portal



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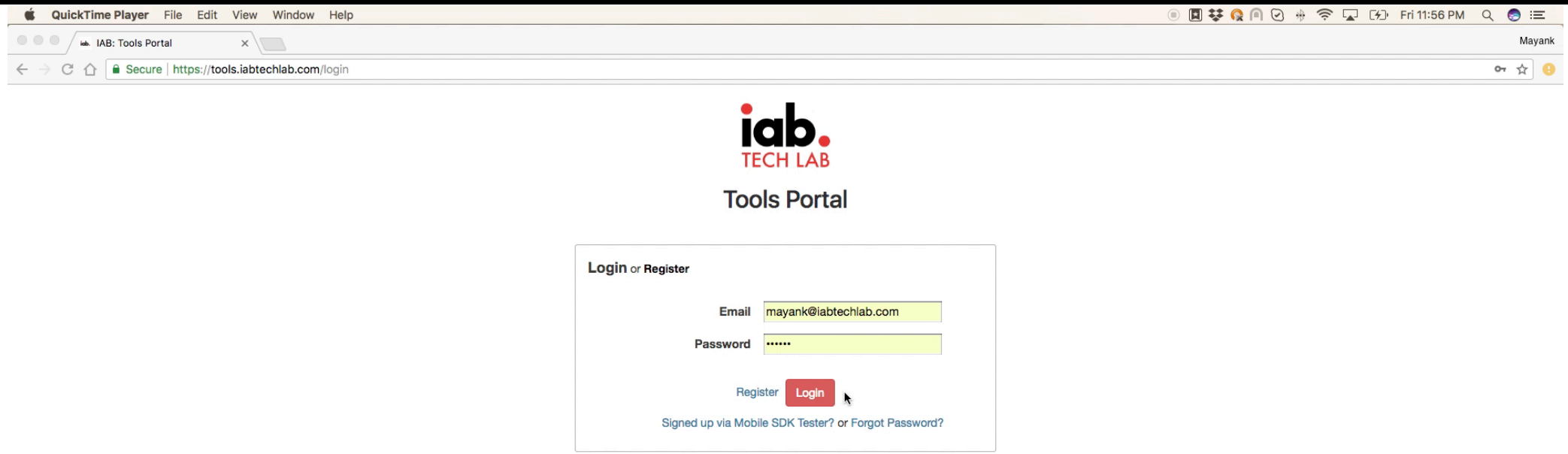
Portal Demo



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OM SDK Integration

Alex Chugunov

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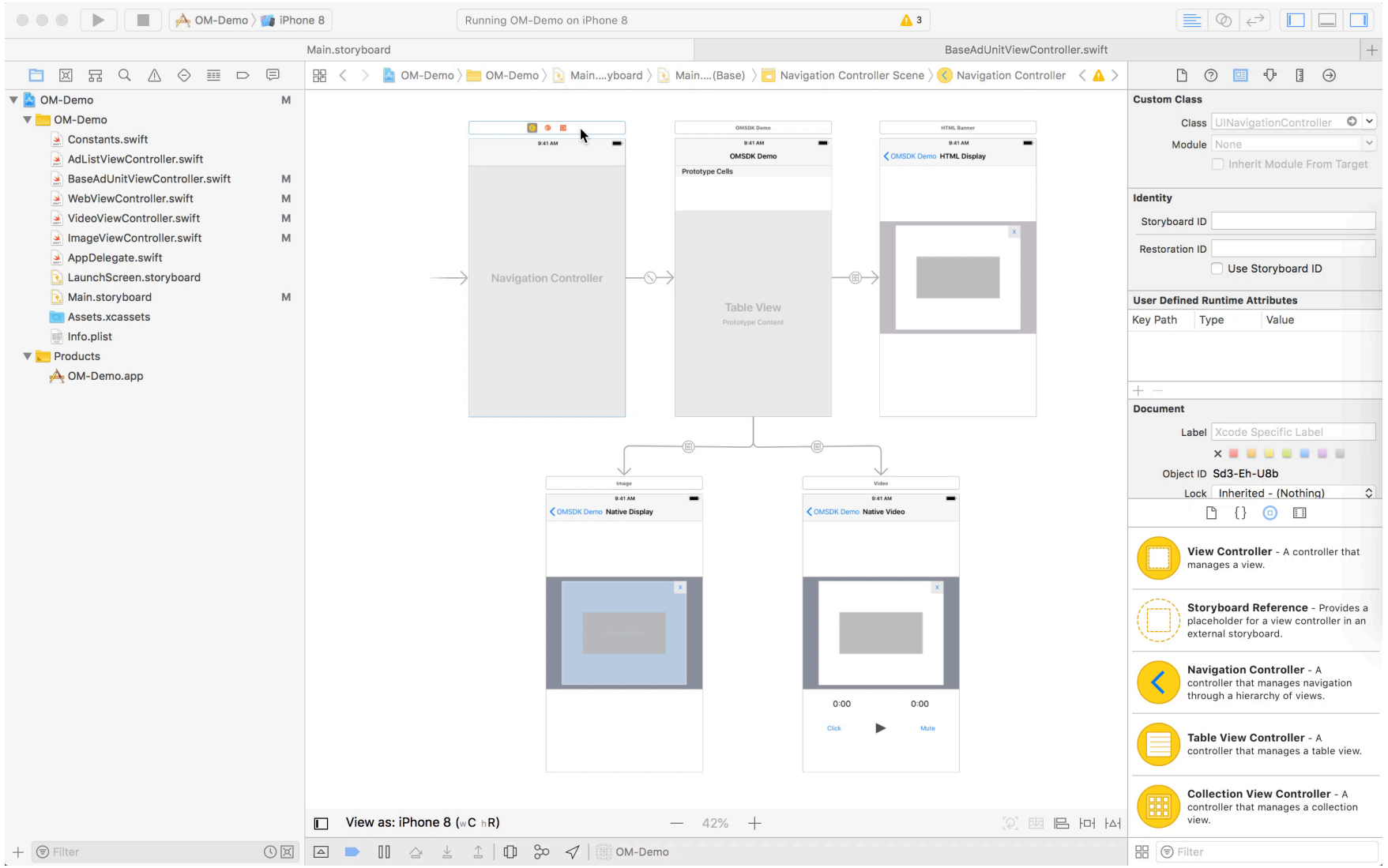
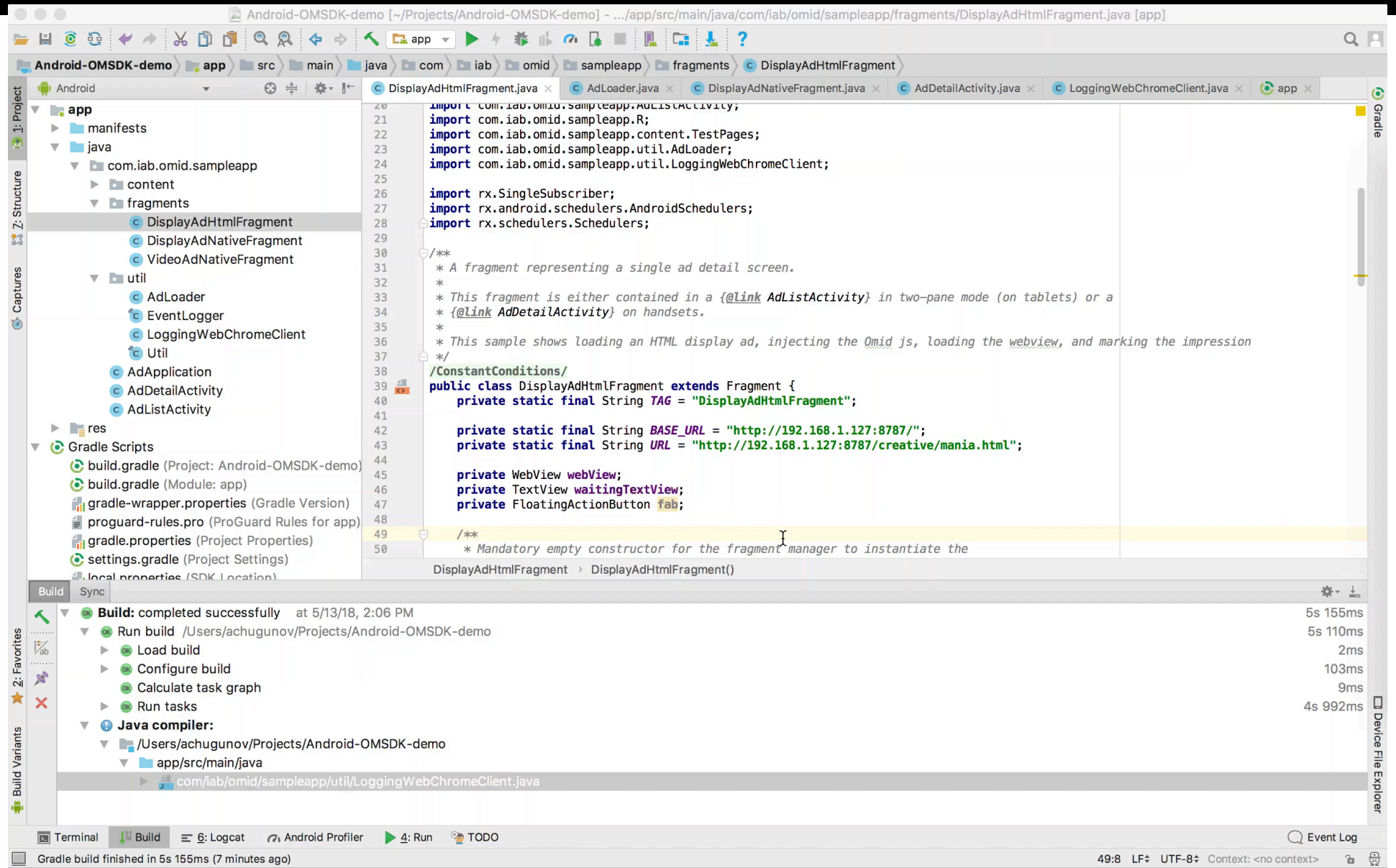
iOS


OM-Demo
iPhone 8
Running OM-Demo on iPhone 8
Main.storyboard
BaseAdUnitViewController.swift
OM-Demo
Constants.swift
AdListViewController.swift
BaseAdUnitViewController.swift
WebViewController.swift
VideoViewController.swift
ImageViewController.swift
AppDelegate.swift
LaunchScreen.storyboard
Main.storyboard
Assets.xcassets
Info.plist
Products
OM-Demo.app
Navigation Controller
Table View
Prototype Content
OMSDK Demo
Prototype Cells
HTML Display
Native Display
Native Video
Custom Class
Class
UINavigationController
Module
None
Inherit Module From Target
Identity
Storyboard ID
Restoration ID
Use Storyboard ID
User Defined Runtime Attributes
Key Path
Type
Value
Document
Label
Xcode Specific Label
Object ID
Sd3-Eh-U8b
Lock
Inherited - (Nothing)
View Controller - A controller that manages a view.
Storyboard Reference - Provides a placeholder for a view controller in an external storyboard.
Navigation Controller - A controller that manages navigation through a hierarchy of views.
Table View Controller - A controller that manages a table view.
Collection View Controller - A controller that manages a collection view.
View as: iPhone 8
42%

Android



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Campaign Execution

Saar Paamoni

Open RTB

OpenRTB Version 2.0 to 2.5

OpenRTB 2.0 through 2.5 can be easily extended to support OMSDK 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

To support this, OpenRTB will extend the list of API Frameworks with value for OMID.

In **OpenRTB 2.0 and 2.1, value 6 is not present. If extending an existing OpenRTB 2.0 or 2.1 implementation, is is suggested that value 6 is skipped and 7** is used to indicate OMID support to preserve an upgrade path.

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**

HTML Display/ Webview Ads

Publisher Initiated

- Measurement Provider tag is injected into the webview by the Integration Partner's SDK
- Publishers who have their own ad server or custom ad units

Advertiser Initiated

- App-served by Ad SDK : Measurement Provider tag is trafficked in publisher side ad server within the creative HTML and executed in the webview
- Third Party : Measurement Provider tag is trafficked in third party ad server's creative HTML and executed in the webview

Native Display

Required Parameters

- Vendor Key
- Verification Resource URL
- Verification Parameters

Event Tracker object:

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

Event Trackers Request Object (section 4.7 of OpenRTB Dynamic Native Ads API Specification Version 1.2: https://www.iab.com/wp-content/uploads/2018/03/OpenRTB-Native-Ads-Specification-Final-1.2.pdf) in “ext” field as custom JSON.

Publisher Initiated

Measurement Provider tag is generated and directly injected into the JS Core/Verification Webview by the app using OMSDK

Advertiser Initiated

Measurement Provider tag is passed to the app using jstracker in Open RTB Native Ads 1.1 and injected into the JS Core/Verification Webview by the ad server

Suggested “Event Trackers Request Object” values

Object	Value	Name
event	555	OMID
methods	555	OMID

VAST Video

AdVerifications node in VAST 4.1 (upcoming)

- Vendor Key
- Verification Resource URL
- Verification Parameters

```
<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/trackingur/[REASON]l]]>
              </Tracking>
       </TrackingEvents>
       <VerificationParameters>
            <![CDATA[verification params key value pairs]]>
       </VerificationParameters>
      </Verification>
  </AdVerifications>
```

Extensions node in VAST 2.0/3.0/4.0

- Vendor Key
- Verification Resource URL
- Verification Parameters

```
...
<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>
...
```


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Video Serving Scenarios

Video Webview

Publisher Initiated

Measurement Provider tag is inserted into the Webview by the Integrating Partner SDK

Advertiser Initiated

The VAST 4.1 AdVerifications or 2.0/3.0/4.0 Extensions nodes are parsed by video player to obtain Measurement Provider tag that is to be injected into the webview

Video Native

Publisher Initiated

Measurement Provider tag is generated and directly injected into the JS Core/Verification Webview by the app using OMSDK

Advertiser Initiated

- App-served by Integration Partner's SDK : Advertiser provides Measurement Provider tag to the Integration Partner's SDK
- Measurement Provider tag is passed to the app using jstracker in Open RTB Native Ads 1.1

Adoption

Timeline
MRC Guidance
Integration Validation Compliance

Timeline

Adoption is voluntary

- ✓ **Helps streamline data and reduce discrepancies**
- ✓ **Makes Measurement provider services more efficient**
- ✓ **Improves buyer confidence**
- ✓ **Helps industry reap the benefits of collaborative effort**

Buyers and sellers looking to leverage viewable impression measurement in Q4 2018 should require that their partners integrate and support OM SDK by September 30, 2018

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MRC Guidance

- ✓ MRC fully supports OM SDK; suggested an industry initiative in mobile viewability guidelines (6/16)
- ✓ Mobile Viewability guidelines stipulate required QC and testing for APIs and SDKs
- ✓ Currently unaccredited vendors should undergo successful accreditation audit of use of OM SDK
- ✓ Currently accredited vendors must disclaim use as unaccredited until successfully audited by MRC:
  - ✓ Need to discuss specific use cases with vendor as this may vary to determine level of testing
  - ✓ Need to assess initial and ongoing QC over use at third party pubs and developers
    - ✓ MRC and our auditors are interacting with IAB Tech Lab to get comfort with certification process
  - ✓ Need to ensure data collection, processing, editing (IVT) & reporting consistently use audited systems
  - ✓ Need to determine appropriate measured rate/coverage
- ✓ Auditing as part of next recurring audit (disclaimed until then) or accelerated one-off
  - ✓ Believe this can be done efficiently and quickly

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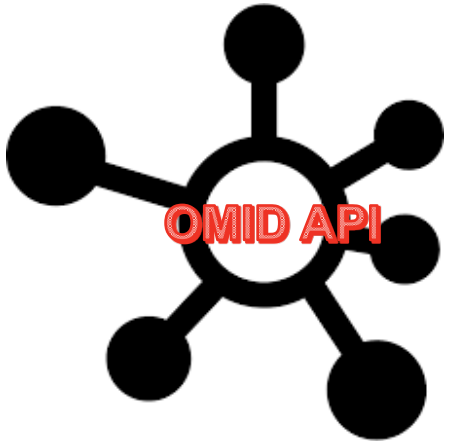
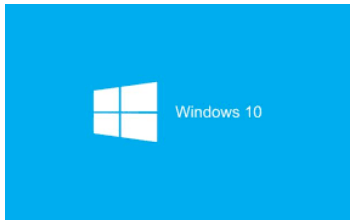
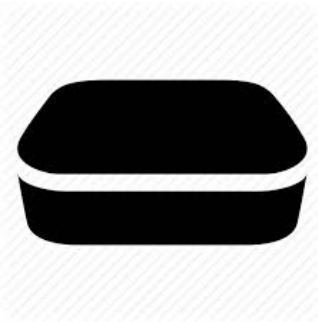
Platforms

Q1 2018 | Q2 2018 | Q3 2018 | Future







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Features

OMWG working on prioritization: will be available in Q2

- 👍 Invalid Traffic
- 👍 Performance
- 👍 Viewability features beyond geometry
- 👍 Encryption/ Trust
- 👍 Continuous View
- 👍 Brand Safe actions enablement
- 👍 Audience
- 👍 Other Measurement

Thank You

https://iabtechlab.com/omsdk