OpenData 1.0: Standard Nomenclature for Campaign Performance Data

Draft for public comment

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About OpenData Task Force
The IAB Tech Lab's OpenData Task Force was formed in partnership with the IAB Data Center of Excellence. The primary focus of the OpenData task force has been to alleviate issues that have challenged marketers in the data report merging process, due to lack of standard nomenclature. This document is the result of the work of the OpenData Task Force.

About OpenMedia Specification Stack
OpenMedia is the perspective and methodology for the specification landscape within which the IAB Tech Lab programmatic standards live. It is the new common framework for Tech Lab technical specifications and protocols (e.g. OpenRTB, OpenDirect). The approach is both conceptual (improving understanding of the specification landscape) and pragmatic (functioning as a tool to indicate where new standards will be most effective). OpenMedia describes a layered approach (similar to Open Systems Interconnection network model) to organizing transactional specifications and domain specifications – or simply; a layer for how to transact, and a layer to describe what is transacted.

Using OpenMedia as the baseline for all programmatic standards, unifies object models (saving bandwidth costs for technology partners), creates functionality between transactional specifications (unlocking sales opportunities to be built between RTB pipes and automated guaranteed pipes), and allows for rapid scalability of inclusion of new media objects (like broadcast video, etc.). Learn more here: https://iabtechlab.com/specifications-guidelines/openmedia/.

About IAB Tech Lab
The IAB Technology Laboratory is an independent, international, nonprofit research and development consortium charged with producing and helping companies implement global industry technical standards. Comprised of digital publishers and ad technology firms, as well as marketers, agencies, and other companies with interests in the interactive marketing arena, the IAB Tech Lab's goal is to reduce friction associated with the digital advertising and marketing supply chain, while contributing to the safe and secure growth of the industry. Established in 2014, the IAB Tech Lab is headquartered in New York City with an office in San Francisco.

Introduction
The new OpenData standard impacts companies who receive data reports from sources such as ad tech vendors, data management platforms, and other partners. For example, an agency or a publisher may receive reports (delivered in excel format or via API connections) from partners that have varied header field names. The process of merging these reports may be manual and tedious, due to the lack of common field names.

OpenData's first product is a standard nomenclature for campaign performance data. The task force has relied heavily on current existing specification terminology from the OpenMedia specification landscape (including reliance on OpenRTB and OpenDirect definitions where possible).

Members of the OpenData task force contribute to this standard, so that the standard is commonly owned, and not proprietary to one company.

Intended benefits of OpenData are at least threefold:
- Near-term, data analysts can use OpenData 1.0 as a pivot point to map their incoming reports to a central standard nomenclature.
- Near-term, operations and traffickers can use OpenData 1.0 to inform how they label reports or use reporting fields to share information about campaigns. (Ideally, the industry can move away from excessively concatenated ad placement names that try to convey too much information, but the name loses meaning when delivered in a report to another company.)
- Longer-term, companies may converge on a central standard for nomenclature, thereby increasing clarity of reporting and supporting agency and publisher needs. Data management platforms could also use this standard nomenclature to output common standard field names in reports.

OpenData version 1.0 is in public comment period from January 12, 2018 through March 13, 2018. Comments and questions can be sent to opendata@iabtechlab.com.

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Working Group Members
List of OpenData Task Force Members

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- Agency data management teams can use the standard nomenclature to merge reports to a central standard.
- Agency analysts can use the standard nomenclature to request and create standardized reports.
- Publishers can use the standard nomenclature to create standardized campaign performance reports when communicating with buyers.
- Data management vendors and ad tech partners can use OpenData standard nomenclature when generating standardized reports, or managing Extract, Transform, Load report merging processes.

How to use standard nomenclature

Reports are delivered from a company that is generating information (e.g. a DSP is recording results of real time bidding auctions and impression delivery), to a company that is receiving information (e.g. an agency that uses the aforementioned DSP).

Reports have fields to describe **dimensions** and **metrics.** Each dimension and metric will have a field header in a report. Now, with OpenData, these field headers are standardized. The name used for each field header is important -- it allows machines and humans to merge reports.

The standard nomenclature listed below is the first of its kind industry-owned standard for these field headers. For the first iteration of this work, the scope for this standard nomenclature is limited to aggregate campaign performance.

When relevant or applicable, **mapped nomenclature** is listed. This can help OpenData users understand what other field header names may be used in reports that don't adhere to the standardized nomenclature.

Scope: Campaign Performance Data

OpenData Version 1.0 standardizes nomenclature for aggregated campaign performance data, not audience data.

About the scope of the standardized nomenclature:
- The format of this document uses two sections to define standard Dimensions and Metrics used in campaign performance reporting.
- Where necessary, definitions and properties of business objects are reflected in hyperlinks to other OpenMedia specifications.
- Future versions of OpenData may expand the scope of standardized nomenclature.

Additional IAB Tech Lab Standards

OpenData Standard Nomenclature defines business objects that are not already defined by supply chain industry standards.

The following standards from the IAB Tech Lab OpenMedia specification stack should be used in addition to adherence to the OpenData standard nomenclature;
- OpenRTB
- OpenRTB Native
- OpenDirect
- Advertising Common Object Model (AdCOM)

These standards will update at a different cadence than OpenData standard. For optimal integrations, partners should confirm which version of each specification is implemented.

OpenData Dimensions

Flight

Flight is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Flight			A unit of media trafficking that most closely corresponds to a traditional I/O line item. Flights have a predicted number of impressions as well as an impression goal, and start and end dates, additional trafficking settings, and ad tags	Maps to OpenDirect 1.5 "Line" object
	Name	string	Name of trafficking flight	
	ID	string, no special characters	ID of flight	
	Start Date	epoch ms	Start date of the flight	
	End Date	epoch ms	End date of the flight	
	CreativeID	arrray	Creative associated with the flight (there may be multiple creatives within the flight)	

Site

Site is a business object defined by OpenRTB. Site does NOT map to "Organization" object. Site and App may be used interchangeably in reports, but are separate objects.

Business Object	Properties	Definition	Mapped Nomenclature
Site		Explicit domain or application.	App
	All properties defined in OpenRTB		

App

App is a business object defined by OpenRTB.

Business Object	Properties	Definition	Mapped Nomenclature
App		Explicit application.	
	All properties defined in OpenRTB		

Publisher

Publisher is a business object defined by OpenRTB.
Property name representing all those Domains, Full Domains (i.e. finance.felmont.com), Pages (i.e. sports.felmont.com/baseball), Applications or Online Services under common ownership or majority ownership for a single legal entity. Publisher is an organization.

Business Object	Properties	Definition	Mapped Nomenclature
Publisher		This object describes the publisher of the media in which the ad will be displayed. The publisher is typically the seller in an OpenRTB transaction.	May map to OpenDirect 1.5 "organization object"
	All properties defined in OpenRTB		

Placement

Placement is a business object defined by OpenData standards. The "Placement" object may have mapped nomenclature or some overlap such as "Ad Slot", OpenDirect's "Product" object, OpenRTB's "Impression" object.

Business Object	Properties	Data type	Definition	Example	Mapped Nomenclature
Placement			Corresponds to the actual placement on a publisher site or app		Ad Slot, OpenDirect "Product" Object, OpenRTB "Impression" Object
	Name	string		Banner_300x60_Artist_DS_N_In-Stream_VAST	
	ID	String, no special characters	Unique integer ID for the placement/slot identifier	139684193	
	Position	string	Describes position type for the placement	Values may include; ATF, BTF, Premium, Sidebar	
	Size	string	Size of the placement, either described as a pixel size or as an aspect ratio	Values may include; 1x1, 200x350, 1:1	
	Content category	string	Use IAB Tech Lab's Content Taxonomy: https://www.iab.com/guidelines/taxonomy/		
	Compatibility	string	Describes which formats can be supported in the placement	Values may include: Adhesion, Interstitial…	

Producer

Producer is a business object defined in OpenRTB.

Business Object	Properties	Definition	Mapped Nomenclature
Producer		This object defines the producer of the content in which the ad will be shown. This is particularly useful when the content is syndicated and may be distributed through different publishers and thus when the producer and publisher are not necessarily the same entity.	OpenRTB
	All properties defined in OpenRTB		

Purchase Order

Purchase order is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Purchase Order			PO could be parent to multiple authorizations.	Maps to OpenDirect 1.5.1 "Order Object" and may map to "Insertion Order"
	Name	string	Name of the purchase order	
	ID	string, no special characters	ID of the purchase order	
	Authorization	alphanumeric	Contractually accepted spend reference number.	Estimate, Reference Number
	Authorization Amount	number	Contractually accepted spend amount.	Could be shown as $$$, $$$(000), Cost, Cost (000)

Campaign

Campaign is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Example	Mapped Nomenclature
Campaign			Campaign maps to Advertiser, There will be different campaigns under one strategy.		Maps to Insertion Order, Order. Maps to cid (campaign id) field in OpenRTB "Bid" Object, May map to OpenDirect "Order" Object
	Name	string	Name of the campaign	2016 Q4 Ford Fusion Music From the Heart	Insertion Order Name, Order Name
	ID	string, no special characters	Unique alphanumeric ID for the campaign identifier	10463950	Insertion Order ID, Order ID
	Start Date	epoch ms, optional	Start date of the campaign		
	End Date	epoch ms, optional	End date of the campaign		

Advertiser

Advertiser is a business object defined by OpenData standards, and may map to other specifications.

Business Object	Properties	Data type	Definition	Example	Mapped Nomenclature
Advertiser			Campaign Parent, May function as unique billing bucket		

	Name	string	Name of the advertiser	Ford Motor Company	
	ID	string, no special characters	Unique alphanumeric ID for the advertiser identifier	68342	Maps to OpenDirect "Account Object" Advertiser ID field

Company

Company is a business object defined by OpenData Standards.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Company			Company object may have parent relationship with "Advertiser" OR Any 3rd party that may own a relationship with Advertiser	May map to OpenRTB "seat"
	Name	string	Name of the Company	
	ID	string, no special characters	Unique alphanumeric ID for the company identifier	

Organization

Organization is a business object defined by OpenData. There are some mappings for the Organization object within the OpenDirect specification.

Business Object	Properties	Data type	Definition	Examples	Mapped Nomenclature
Organization			Attribution object; Organization owns information coming through a field. (Use case of audience data id associated with the DMP organization type). The organization must have at least one associated business object (agency, brand, division, advertiser, publisher, user, etc). *Alternate nomenclature: "Data type." Implementation notes: This object is expected to be used internally within each proprietary system, and only optionally shared externally.		
	Type	string	Type of organization	Potential Values= Ad Server, Exchange, DSP, Brand, Agency, Division, 3PAS, 3PVV, 3PVSV, Tracking, Viewability	
	Name	string	Name of organization		
	ID	integer	ID of organization		

User

User is a business object defined by [OpenRTB](#), with additional fields defined by OpenData standards. OpenData also offers usersource and an array of IDs.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
User			The human user of a device. Defined in OpenRTB.	Maps to OpenRTB "User" object, maps to nomenclature consumer/ customer
	All properties defined in OpenRTB			
	UserSource	array	OpenData Definition: Array of Advertising system or data management platform system that is the source of the user ID	
	ID	array	OpenData Definition: Array of Unique alphanumeric ID for the user identifier	

Ad Tag

Ad Tag is a business object defined by OpenData standards. There is some mapping with [OpenDirect](#)'s Product Tag object.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Ad Tag			The code that renders the creative within the publisher placement	Maps to OpenDirect Product Tag
	Name	string	Name of the ad tag	
	ID	string, no special characters	Unique alphanumeric ID for the ad tag identifier	

Creative

Creative is an object that is defined in OpenMedia AdCOM (Advertising Common Object Model shared with OpenRTB and OpenDirect).

Business Object	Properties	Data type	Definition	Example	Mapped Nomenclature
Creative			The creative ad in a different size or ad unit		
	Name		Name of Creative *Recommended simplifying names of creatives, using additional data elements. May use concatenated names for ease of use.	Ford_Fusion_M FTH_15sec_TR AILER_1 VEVO_w/300x6 0	
	ID	integer	Unique alphanumeric ID for the creative identifier	75264877	
	Status	string	Active or inactive. Inactive ads aren't delivered.		
	Type	string	The type of ad, which can include: Standard, Interstitial, Static Click Tracker, Dynamic Click Tracker, Tracking, In-Stream Video, DoubleClick Search, DoubleClick Search affiliate, DoubleClick Search paid inclusion, DoubleClick Search product feeds, Natural Search, Default, Interstitial default, In-Stream default		
	Size	string	The pixel size (NxN) or aspect ratio (width:height), in accordance with IAB New Ad Portfolio.	300x60	

	Universal AdID Registry	string	Name of AdID registry		
	Universal AdID	string	AdID value		
	ClickURLs	array	Click through URL for the creative. There may be multiple click through URLs		
	Product Name	array	Product for the creative. There may be more than one product for the Creative.		
	Product ID	array	Product ID for the creative.		

Landing Page URL

Landing Page URL is a business object defined by OpenData.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Landing Page URL		URL	Click through URL, associated with other data to give context. Could be a URL or an entity in a system.	Maps to "click through URL", or "landing page"
	Name	string, optional	Optional, name for landing page URL	
	ID	string, optional	Optional, ID for landing page URL	

Strategy

Strategy is a business object defined by OpenData standards. This business object is typically used in concert with Campaign, Flight, and Target objects.

Business Object	Properties	Data type	Definition	Example	Mapped Nomenclature
Strategy			Business object where all creative targeting is applied		Target, or Target Audience. Maps to OpenRTB "Segment" and/or OpenDirect "Target"
	Name	string	Name of strategy	Values may include; Online Trial; Online Site Action; Online New Product Sale; Online Existing Product Sale; Online CRM Data Acquisition; Offline Trial; Offline New Product Sale; Offline Existing Product Sale; Corporate Image Campaign	
	ID	integer	Unique alphanumeric ID for the strategy identifier		

Target

Target is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Examples	Mapped Nomenclature
Target			Target that includes audience and other tactics, e.g. weather, dayparts, day of week, etc.		Tactic, Audience
	Target Provider Type	string	Type of targeting data, i.e first party or third party	values = first party, third party	
	Target Source	string	Name of the source of targeting data, e.g. the name of the data provider company. There may be multiple sources and targeting segment attributes applied	Bluekai, Experian, et	
	AttributeType	string	Category type of targeting segment	weather, geo, demographic, behavioral	
	AttributeName	sting	Name of the targeting segment applied. There may be multiple sources and targeting segment attributes applied to a campaign.	sample values = USA, sunny	Property
	AttributeID	string, no special characters	ID of the targeting segment applied		

Concept

Concept is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Concept			The collection of identically themed creatives in the different ad units/sizes	
	Name	string	Name of concept	
	ID	string, no special characters	Unique alphanumeric ID for the concept identifier	
	Group	string	Concept group name	
	Group ID	string, no special characters	Concept group ID	

Bid

Bid is a business object defined by OpenRTB transaction specification.

Business Object	Properties	Definition	Mapped Nomenclature
Bid		Bid Request Object	Maps to OpenRTB "BidRequest" Object
	All properties defined in OpenRTB		

Assets

Assets is a business object defined by [OpenRTB Native](#) specification.

Business Object	Properties	Definition	Mapped Nomenclature
Assets			Also used: "Components", "Elements." Maps to Asset Request/Response object in OpenRTB Native
	Category	Assets category name	
	ID	Assets ID	
	All properties defined in OpenRTB Native		

Rotation

Rotation is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Rotation			The set of creatives all of the same size and format that can be weighted or optimized for the same ad tag	
	Name	string	Descriptive name of the rotation set. May include percentage of rotation allocation.	
	ID	string, no special characters	ID of the rotation set	

Browser

Browser is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Mapped Nomenclature
Browser			Browser information may be associated with targeting or with impression	
	Name	string	Browser name	
	ID	string, no special characters	Browser ID	
	Language	string	Language present in browser	
	Version	string	Browser version	
	Platform	string	Platform where browser is present	

Geo

Geo is a business object defined by OpenMedia AdCOM (Advertising Common Object Model shared with OpenRTB and OpenDirect).

Business Object	Properties	Definition
Geo		Geo to describe inventory information. Defined in OpenRTB 2.5 and/or AdCOM
	All properties defined in OpenRTB 2.5 and/or AdCOM	

Anonymized ID

Anonymized ID is a business object defined by OpenData standards.

Business Object	Properties	Data type	Definition	Examples	Mapped Nomenclature
Anonymized ID			A privacy-encoded identifier associated with an end consumer, the viewer of the content. Electronic client IDs. May be used in conjunction with "Target" business object for targeting purposes. Expectation is that this ID is anonymized. Businesses should have their own policy contracts in place to be certain of PII-related policy adherence.		"Consumer", "Customer", "Client ID", or "User"
	Anonymized ID Source	string	Which party is assigning Anonymized IDs.	Examples may include; agency for proprietary data, or DMP for cookie matching	
	Anonymized ID	string	ID of the consumer		
	Device ID		*Defined in OpenRTB*		
	Audience / Demographic		*Defined in Target Object*		

Floating Properties

The following standard nomenclatures are independent of any specific business objects defined in OpenData. These properties may be associated with different business objects specified previously.

Where possible, Lists should follow the values expressed in section 5 of OpenRTB 2.5.

Custom extensions to all these value lists may exist, see examples. The goal is to unify these expected values within the OpenData standard.

Channel

Property	Data Type	Definition	Example	Mapped Nomenclature
Channel	string	Channel follows the AdCOM media channel list, which is the media channel objects specified within the "creative Object" (also available in OpenRTB).

IOT and autonomous vehicle (AV) are placeholder nomenclatures. | Values = Display Video Mobile Web Mobile In-app, Audio Native, IOT, OOH, AV, Search, Social. Digital Signage | Format, Media type, or media channel may be commonly used to describe "Channel" |

Format

Property	Data Type	Definition	Example	Mapped Nomenclature
Format	string	Describes the format of the ad.	Values= Expandable, Animated, Flat, Video, Outstream, Instream, Interstital, Native placement	

Device Type

Property	Data Type	Definition	Example	Mapped Nomenclature
Device type	string	Values as specified in OpenRTB version 2.5 list 5.21		Alternative values = Mobile/Tablet Personal Computer Connected TV Phone Tablet Connected Device Set Top Box

Day

Property	Data Type	Definition	Example	Mapped Nomenclature
Day	string	Dimension - day of week	Monday, Tuesday, etc	

Week Part

Property	Data Type	Definition	Example	Mapped Nomenclature
Week Part	string	Targeting dimension - targeting/scheduling in programmatic	weekend, weekday	

Day Hour

Property	Data Type	Definition	Example	Mapped Nomenclature
Day Hour	string	Targeting dimension: hour of day		

Day Part

Property	Data Type	Definition	Example	Mapped Nomenclature
Day Part	string	Targeting dimension: section of day	commute, evening, morning	

Date

Property	Data Type	Definition	Example	Mapped Nomenclature
Date	string	Calendar date		

Time

Property	Data Type	Definition	Example	Mapped Nomenclature
Time	epoch ms	Time for targeting, may also be used as a metric		

Time Zone

Property	Data Type	Definition	Example	Mapped Nomenclature
Time Zone	string	Time Zone for targeting, may also be used as a metric GMT time zone may be preferred, does differ for platforms		

Search Keyword

Property	Data Type	Definition	Example	Mapped Nomenclature
Search Keyword	string	Words or Phrases which represent concepts of interest in the campaign	example: "Paid Search Keyword"	

Metrics

Metrics (measurements of campaign performance) may be filtered by dimensions in reports.
Reports exchanged between partners should contain metrics and dimensions.
Some reports may contain calculated or combined metrics. This is currently out of scope for
OpenData. In future standards development work, these combinatorial metrics may be defined.

Metric Header	Properties of metrics	Data Types	Definition	Mapped / Alternative Nomenclature
Server Requests		count	Count of server requests	ad request
Impressions		count	Media Rating Council (MRC) definition - fully loaded, counted on render	imps
Clicks		count	Count of clicks on an impression. See MRC click guidelines	
Conversions		count	Count of conversions on an impression.	
Viewability		count	MRC definition of viewability is the industry standard. This field is a metric, not a property of the placement object.	
	Partial in-view	count	*Beta field.* MRC's definition means that 50% of pixels are in-view. Partial in-view would be Boolean or value to measure if creative is fully viewable or not.	
	Required time in-view	count	Trigger to activate viewability metric. MRC viewability standard is 2 seconds time in view for video creative or 1 second for non-video creative.	
Bid Requests		count	Bid requests	
	Won Bid	count	"Win notification" defined in OpenRTB bid objects.	
	Lost Bid	count	"Loss notification" defined in OpenRTB bid objects.	

Time in View		count	Value of milliseconds	
Time Spent		count	Value of milliseconds	
% View (video)		count	Counts by quartile. A completed video view is 100% quartile viewed.	
Video starts		count	Count of video starts.	
Engagement		count	Derived metric. May include factors like session depth, bounce rate, time spent etc for an "Engagement" metric. Typically composite, has proprietary definitions. No current industry-wide standard for calculation, companies use their own definitions.	
Interaction		count	May refer to clicks or expand or other user action. No current industry-wide standard for calculation.	
Brand safety		count	Third party brand safety derived metric.	
Dynamic item view		count	For dynamic ads, when the collection has been viewed	"dynamic item impression"
Fraud		count	Typically a metric delivered from an anti-fraud vendor. May be a metric or a score that determines if an impression was fraudulent. May be composite/multi-dimensional.	
Whitelist		count	Count of impressions from whitelist. May be a component of Brand Safety or Fraud composite metrics.	
Blacklist		count	Count of impressions from blacklist. May be a component of Brand Safety or Fraud composite metrics.	

Appendix A: Resources

- About IAB Tech Lab
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- About OpenMedia
  - https://iabtechlab.com/specifications-guidelines/openmedia/
- OpenRTB
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- Advertising Common Object Model (AdCOM)
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- Content Taxonomy
  - https://www.iab.com/guidelines/taxonomy/