



# OpenDirect version 2.0

**Draft for Public Comment**

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## Executive Summary

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OpenDirect enables publishers to offer premium inventory using a programmatic interface that partners and vendors build according to the OpenDirect specifications.

Every organization in the industry uses some kind of interface (or a combination thereof) to manage inventory throughout the buying and selling of premium, reserved inventory. Each system is different, which means if one partner wants to integrate their system with another system, the integration is customized to that system. Further integrations all require customization, each instance consuming valuable overhead. While the overhead enables more business, cutting down on the cost of these integrations allows resources to be diverted to more important ad operations tasks.

OpenDirect provides a standard way for publishers to make their inventory available in any OpenDirect-compliant interface where agencies and advertisers can reserve premium inventory.

For publishers, this means that in a programmatic marketplace, publishers can make premium guaranteed inventory available to more buyers. Tech providers can offer a greater variety of premium inventory to their customers. For the industry, a marketplace that uses OpenDirect means more fluid movement of inventory while greatly reducing the overhead involved when integrating with partners.

Adoption of OpenDirect also opens the doorway to improved tracking of inventory across systems, providing early visibility reporting and potentially reducing discrepancies down the road. While OpenDirect does not directly enable improved impression counting between parties, it does lay the foundation for opportunities to improve impression reporting between systems.

Publishers can begin using OpenDirect by modifying their systems to log Organizational IDs and accounts consistent with the specs in this document. They also need to be able to respond to API requests for inventory details as well as manage inventory in response to API requests.

Tech providers who want to use OpenDirect need to make use of the API in this spec as they design and build their interfaces for offering automated guaranteed inventory.

As OpenDirect becomes more adopted in the marketplace, the movement of premium inventory becomes more fluid.

## About the IAB Technology Lab

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The IAB Technology Laboratory (IAB Tech Lab) is a nonprofit research and development consortium charged with producing and helping companies implement global industry technical standards and solutions. The goal of the Tech Lab is to reduce friction associated with the digital advertising and marketing supply chain while contributing to the safe growth of an industry.

The IAB Tech Lab spearheads the development of technical standards, creates, and maintains a code library to assist in rapid, cost-effective implementation of IAB standards, and establishes a test platform for companies to evaluate the compatibility of their technology solutions with IAB standards, which for 20 years have been the foundation for interoperability and profitable growth in the digital advertising supply chain.

The OpenDirect Work Group is a working group within the IAB Technology Lab. Further details about the IAB Technology Lab can be found at: [www.iab.com/organizations/iab-tech-lab](http://www.iab.com/organizations/iab-tech-lab)

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## Public Comment Period

OpenDirect version 2.0 has been released for 60 days of public comment, starting on January 10, 2017 and closing on **March 12, 2017**.

Questions and comments about OpenDirect version 2.0 can be sent to [openmedia@iabtechlab.com](mailto:openmedia@iabtechlab.com)

The OpenDirect working group will review public comments together before developing a final document of OpenDirect version 2.0.

## License/Intellectual Property Notice

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## Version information

*Version* : 2.0

## URI scheme

*Host* : opendirect.example.com

*BasePath* : /v2.0

*Schemes* : HTTPS

## Consumes

- application/json

## Produces

- application/json

# OpenDirect Specification Definitions

## OpenDirect.Account

An account defines a buyer-advertiser relationship. A buyer is typically an agency that places orders on behalf of several advertisers. Each account associates a buyer with one advertiser and is used to manage orders for one publisher. An advertiser may also work with several buyers, and therefore, advertisers have a separate account for each buyer they work with. If an advertiser represents itself, the account identifies the advertiser as both the buyer and the advertiser.

Before an agency may create accounts and perform buys on behalf of the advertiser, the advertiser must give permissions to the agency. The process of giving or removing permissions is publisher-defined. Creating an account must fail if the advertiser has not given the agency permissions.

The Account owns the orders and creative.

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>advertiserid</b> <i>required</i>	An Id that identifies the organization that is acting as the advertiser. Advertiser ID may be generated by the buyer (agency) or by the publisher if the advertiser is also the buyer. An advertiser that is representing itself must have an AdvertiserId and BuyerId that match.	<a href="#">id</a>
<b>buyerid</b> <i>required</i>	An Id that identifies the organization that is acting as the buyer. The Publisher generates the BuyerId. If the advertiser is performing their own buys, AdvertiserId and BuyerId must be the same.	<a href="#">id</a>
<b>name</b> <i>required</i>	The name of the account. Used for display purposes. <b>Maximal length</b> : 36	string
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

## OpenDirect.AdUnit

Ad Unit contains exactly one AdCOM Ad Specification

Name	Description	Schema
<b>id</b> <i>required</i>	An Id to uniquely identify this Ad Unit within the product	<a href="#">id</a>
<b>name</b> <i>optional</i>	A name to identify this Ad Unit <b>Maximal length</b> : 255	string
<b>creativespec</b> <i>required</i>	The technical specifications of this Ad Unit	<a href="#">AdCOM.CreativeSpec</a>

## OpenDirect.Address

The address object is used to provide values for the ORGANIZAION resource.

Name	Description	Schema
<b>city</b> <i>required</i>	The city name of an organization or contact for which this address is associated. <b>Maximal length</b> : 35	string
<b>country</b> <i>required</i>		<a href="#">ISO-3166-1-a2</a>
<b>addressline1</b> <i>required</i>	The first line of the address of an organization or contact for which this address is associated. <b>Maximal length</b> : 255	string
<b>addressline2</b> <i>optional</i>	The optional second line of the address. <b>Maximal length</b> : 255	string
<b>postalcode</b> <i>optional</i>	The postal or ZIP code for the address. <b>Maximal length</b> : 15	string

Name	Description	Schema
<b>state</b> <i>optional</i>	The state or province for the address. <b>Maximal length</b> : 35	string

## OpenDirect.Assignment

Defines an Assignment resource. An Assignment associates a creative with a line of the order. A creative may be assigned to one or more lines and a line may be assigned one or more creative.

Notes: The assignment must fail if the following are true. - The language property for the creative does not match any of the languages in the language property for the product (products are defined in the LINE resource for an Order). - The specified maturity level property for the creative does not match the maturity level property for the product specified in the LINE resource.

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>creativeid</b> <i>required</i>	The ID of the creative to display when the line runs.	<a href="#">id</a>
<b>placementid</b> <i>required</i>	The ID of the placement that will display the creative.	<a href="#">id</a>
<b>status</b> <i>required</i> <i>read-only</i>	A value that determines whether the creative serves. The status may not transition from Inactive to Active.	enum (Active, Inactive)
<b>weight</b> <i>optional</i>	Determines how much the creative is displayed relative to the other creative assigned to the same line.  To provide even rotation, do not specify a weight.  If weight is specified, all assignments that specify the same line must specify a weight and the weight of all the assignments must add up to 100. If the weight of all	integer

Name	Description	Schema
	<p>assignments does not add up to 100, even rotation is applied.</p> <p>Assignments with heavier weight get proportionally more rotation compared to those with lesser weight.</p> <p>For example, if the line has 2 creative, A and B, assigned with the same dates, and A has weight 25 and B has weight 75, B will serve three times as often as A.</p> <p><b>Minimum value : 1</b> <b>Maximum value : 100</b></p>	
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

## OpenDirect.ChangeRequest

When an order has already been placed and a change is needed, the ChangeRequest resource can be used to request a change and subsequently modify the order pending the approval of the change request. The OrderSearch object can be used to search for orders that have an order status of “ChangePending.”

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>accountid</b> <i>required</i>	<p>The ID of the account that identifies the advertiser and buyer that own the Change. This must be the same as the AccountId for the Order.</p> <p><b>Maximal length : 36</b></p>	string
<b>comments</b> <i>optional</i>	<p>Optional comments as to why the Change is being requested/proposed.</p> <p><b>Maximal length : 1000</b></p>	string
<b>contacts</b> <i>optional</i>	<p>The list of contacts to use for this change. This list of contacts is in addition to the buyer’s and advertiser’s list of contacts. The</p>	< <a href="#">OpenDirect.Contact</a> > array

Name	Description	Schema
	list must contain unique contact types (for example, only one billing contact).	
<b>orderid</b> <i>required</i>	The ID of the Order that the Change is Requested for. <b>Maximal length</b> : 36	string
<b>requesterid</b> <i>required</i>	The OrganisationID of the Change Requester usually the AgencyID if the change was requested by an Agency or the PublisherID if the change was requested by the Vendor. <b>Maximal length</b> : 36	string
<b>status</b> <i>required</i> <i>read-only</i>	Specifies the Status of the Change Request. <b>Maximal length</b> : 36	enum (PENDING, APPROVED, REJECTED)
<b>webhook</b> <i>optional</i>	URI which is called when the change is approved, rejected or modified by the Seller.  URI is called with a PUT request containing Change as a JSON object. <b>Maximal length</b> : 1024	string
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

## OpenDirect.Contact

Defines an agency or advertiser contact.

Name	Description	Schema
<b>address</b> <i>optional</i>	Required if TYPE is Billing and the preferred billing method for the organization or order is paper.	<a href="#">OpenDirect.Address</a>
<b>email</b> <i>optional</i>	The contact's email address. Required if TYPE is Billing and the preferred billing method for the organization or order is electronic. <b>Maximal length</b> : 254	string

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>honorific</b> <i>optional</i>	Honorific such as Mr. or Ms. <b>Maximal length</b> : 20	string
<b>fax</b> <i>optional</i>	The contact's fax number. <b>Maximal length</b> : 20	string
<b>firstname</b> <i>required</i>	The contact's first name. <b>Maximal length</b> : 20	string
<b>lastname</b> <i>required</i>	The contact's last name. <b>Maximal length</b> : 20	string
<b>phone</b> <i>optional</i>	The contact's phone number <b>Maximal length</b> : 20	string
<b>title</b> <i>optional</i>	The contact's job title. <b>Maximal length</b> : 30	string
<b>type</b> <i>required</i>	Defines the possible types of Contacts.	<a href="#">type</a>

**type**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>ContactType</b> <i>required</i>	The type's display name.	enum (Billing, Buyer, Creative, Sales)

**OpenDirect.Creative**

Defines a Creative resource. The Creative provides information about the ad to be displayed for a line of the order. Creative are assigned to the LINE resource of an order using the ASSIGNMENT resource.

See Assignment for instructions on updating a creative.

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>accountid</b> <i>required</i>	The ID of the account that owns the creative.	<a href="#">id</a>
<b>name</b> <i>optional</i>	Name used to identify this Creative <b>Maximal length</b> : 255	string
<b>language</b> <i>optional</i>	Language used by this Creative	<a href="#">ISO-639-1</a>
<b>creativeasset</b> <i>required</i>	Contains the creative to be delivered.	<a href="#">AdCOM.CreativeResp</a>
<b>clickurl</b> <i>optional</i>	The URL of a webpage that the user is taken to if they click the ad. The URL may be specified if AdFormatType is set to Flash, FlashExpandable, or Image.	string
<b>iqgmediarating</b> <i>optional</i>	The following table lists the media ratings used in describing content based on the IQG 2.1 categorization. Refer to <a href="http://www.iab.com/guidelines/digital-video-suite">www.iab.com/guidelines/digital-video-suite</a> for more information.	<a href="#">iqgmediarating</a>
<b>creativeapprovals</b> <i>optional</i>	Any array of pairs describing the approval status for each publisher.	< <a href="#">creativeapprovals</a> > array
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

**iqgmediarating**

Name	Description	Schema
<b>Rating</b> <i>required</i>	IQG Media Rating	integer

**creativeapprovals**

Name	Description	Schema
<b>publisherid</b> <i>optional</i>	The ID of the publisher.	<a href="#">id</a>
<b>approvalstatus</b> <i>optional</i>	The approval status of this creative for the publisher.	enum (Pending, Approved, Rejected)

**OpenDirect.Line**

Line resources are included in an order and provide details about the product being booked, status, start and end dates, and other settings for the order item.

Creative are assigned to the LINE resource of an order using the ASSIGNMENT resource. Notes: The user may update a line only if it's in the Draft state. If the line is in the Reserved or Declined state, the user may call Reset to move the line back to the Draft state in order to update the line.

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>name</b> <i>required</i>	The line's display name.  Should be unique. <b>Maximal length</b> : 200	string

Name	Description	Schema
<b>orderid</b> <i>required</i>	The ID of the order that this line belongs to.	<a href="#">id</a>
<b>productid</b> <i>required</i>	The ID of the product where the creatives run.	<a href="#">id</a>
<b>bookingstatus</b> <i>required</i>		<a href="#">bookingstatus</a>
<b>statechangereason</b> <i>optional</i> <i>read-only</i>	The reason why the state was changed by the publisher. The reason must be specified if: - The publisher declined the booking or reservation. - The publisher or user canceled the flight.	string
<b>startdate</b> <i>required</i>	<p>The date and time that the line will start.</p> <p>If the time is missing, 12:00 AM is assumed.</p> <p>The date and time must be greater than or equal to now and should be greater than or equal to the order's start date.</p> <p>If the line start date is earlier than the order's start date, the order's start date should be moved to match the line's start date. Both dates must be later than the present day. Start dates that are in the past may not be updated.</p>	string (date-time)
<b>enddate</b> <i>required</i>	<p>The date and time that the line will stop.</p> <p>If the time is missing, 11:59 PM is assumed.</p> <p>The line end date must be later than the line start date and should be less than or equal to the order's end date.</p> <p>If the line end date is later than the order's end date, the order's end date should be extended to match the line's end date.</p>	string (date-time)

Name	Description	Schema
<b>ratetype</b> <i>required</i>		<a href="#">ratetype</a>
<b>rate</b> <i>required</i> <i>read-only</i>	<p>The price per unit of impressions. For example, \$10 per 1,000 impressions (CPM).</p> <p>The rate is determined each time the line is saved (added, updated, booked, or reserved).</p> <p>Value in currency for the order.</p>	number
<b>quantity</b> <i>required</i>	<p>The quantity requested for the specified date range. This value will differ based on various cost types. For CPM, for examples, the value would be impressions.</p> <p>The line must contain a quantity before the user may reserve or book it. If the requested quantity is not available, reserving or booking the line must fail and bookingStatus must be set to Declined.</p>	integer
<b>cost</b> <i>required</i> <i>read-only</i>	<p>The projected cost of the line is based on the specified quantity, rate and targeting. The actual cost (the amount billed) is based on the actual number of impressions.</p> <p>The cost is specified in the currency for the order. If the order uses a different currency than what the product uses, the cost for the line must be converted to the order's currency.</p> <p>The cost is determined at the time the line is saved with the following statuses: Drafted, Reserved, or Booked.</p>	number
<b>comment</b> <i>optional</i>	<p>User notes related to this line. <b>Maximal length</b> : 255</p>	string

Name	Description	Schema
<b>frequencycount</b> <i>optional</i>	The maximum number of times that a unique user must see ads from this line during the specified interval (see FrequencyInterval).	integer
<b>frequencyinterval</b> <i>optional</i>	Defines the frequency cap intervals that the API supports.  The frequency interval specifies the units in which the frequency count is expressed. For example, if a line's frequency count is 2 and interval is Day, display the ad to the same user a Max 2 times in the same calendar day.	<a href="#">frequencyinterval</a>
<b>reservedexpirydate</b> <i>optional</i> <i>read-only</i>	The date and time that the reserved inventory will expire.  If the line is reserved, the expiry date must be set.	string (date-time)
<b>targeting</b> <i>optional</i>	The creative assigned to the LINE resource is display when the line includes user segments and the delivery engine can determine whether the user matches the specified segments.	<a href="#">AdCOM.Segment</a>
<b>pmp</b> <i>optional</i>		<a href="#">OpenRTB.PMP</a>
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

### bookingstatus

Name	Description	Schema
<b>BookingStatus</b> <i>required</i> <i>read-only</i>	A value that determines whether the line is booked and is capable of delivering ads. If the line is	enum (Draft, PendingReservation, Reserved, PendingBooking, Booked, InFlight, Finished,

Name	Description	Schema
	reset, the StateChangeReason should be cleared.	Stopped, Canceled, Pause, Expired, Declined, ChangePending)

### ratetype

Name	Description	Schema
<b>RateType</b> <i>required</i>	Defines a unit of measure that a cost (i.e. BasePrice) is expressed in. The API may support all or a subset of the specified values.	enum (CPM, CPMV, CPC, CPD, FlatRate)

### frequencyinterval

Name	Description	Schema
<b>Interval</b> <i>required</i>	The name of the interval.	enum (Day, Month, Week, Hour, LineDuration)

## OpenDirect.Message

Messages are used for communication between a buyer and a seller around an Order or Change request

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>sender</b> <i>optional</i>	The sender of the message	<a href="#">OpenDirect.Contact</a>
<b>recipient</b> <i>optional</i>	The intended recipient of the message	<a href="#">OpenDirect.Contact</a>

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>messagedate</b> <i>required</i>	Time and date the message was sent	string (date-time)
<b>status</b> <i>required</i>	The status of the message	enum (New, Read, Deleted)
<b>orderid</b> <i>required</i>	The Id to the Order that this message is in relation to	<a href="#">id</a>
<b>lineids</b> <i>optional</i>	Array of LineIds that this message is in relation to	< <a href="#">id</a> > array
<b>changerequestid</b> <i>optional</i>	The Id to the Change Request that this message is in relation to	<a href="#">id</a>
<b>message</b> <i>optional</i>	The text of the message <b>Maximal length</b> : 1024	string
<b>replytomessageid</b> <i>optional</i>	Id of the message that this message is in reply to	<a href="#">id</a>
<b>replywebhook</b> <i>optional</i>	URI which is called when there is a reply to this message.  URI is called with a PUT request containing the new MessageId in a JSON object. <b>Maximal length</b> : 1024	string

## OpenDirect.Order

The Order resource specifies the plan's start and end dates, estimated budget, currency, and preferred billing method for all line items in the order.

To specify the individual line item details of the order, use the LINE resource.

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>name</b> <i>required</i>	The order's display name.  Must be unique within the account's list of orders. <b>Maximal length : 100</b>	string
<b>accountid</b> <i>required</i>	The ID of the account that identifies the advertiser and buyer that own the order.	<a href="#">id</a>
<b>publisherid</b> <i>required</i>	The Id of the Publisher providing this Order	<a href="#">id</a>
<b>brand</b> <i>optional</i>	A descriptive name for the brand being advertised. <b>Maximal length : 25</b>	string
<b>cat</b> <i>optional</i>	Defines the category the organization belongs to. Uses "IAB Tech Lab Content Taxonomy".	<a href="#">cat</a>
<b>currency</b> <i>required</i>	The publisher may enforce that all lines of the order specify products that use the same currency.	<a href="#">ISO-4217</a>
<b>budget</b> <i>optional</i>	The order's estimated budget. The budget is directional; it is not used to limit the amount of money that the order spends. To determine the projected spend based on quantity, aggregate the Cost property for each line of the order.	number

Name	Description	Schema
<b>orderstatus</b> <i>required</i> <i>read-only</i>	Specifies the Status of the Order.	enum (PENDING, APPROVED, REJECTED)
<b>packageonly</b> <i>optional</i> <i>read-only</i>	Identifies whether the order is only available as a package or if specific items can be separated from the inventory. A value of TRUE means the inventory is only available as a package. A value of FALSE allows the buyer to select specific items from inventory.	boolean
<b>preferredbillingmethod</b> <i>optional</i>	The preferred billing method for this order.  The default is Electronic.  If the billing contact is not specified in the order, the billing contact comes from buyer's list of contacts. <b>Maximal length : 10</b>	enum (Electronic, Postal)
<b>startdate</b> <i>optional</i>	The date and time that the order will start. The start date is directional and may be updated by the publisher to match the earliest start date found in the order's list of lines.  If the time is missing, 12:00 AM is assumed.  When creating the order, the date and time must be greater than or equal to now.  Start dates that have past may not be updated.	string (date-time)

Name	Description	Schema
<b>enddate</b> <i>optional</i>	<p>The date and time that the order will end. The end date is directional and may be updated by the publisher to match the latest end date found in the order's lines.</p> <p>If the time is missing, 11:59 PM is assumed.</p> <p>The end date must be later than the start date.</p> <p>End dates that have past cannot be updated.</p>	string (date-time)
<b>orderexpirydate</b> <i>optional</i> <i>read-only</i>	<p>The date and time for when the order expires. Publisher will only hold inventory up until the date and time indicated.</p>	string (date-time)
<b>contacts</b> <i>optional</i>	<p>The list of contacts to use for this order. This list of contacts is in addition to the buyer's and advertiser's list of contacts.</p> <p>The list must contain unique contact types (for example, only one billing contact).</p>	< <a href="#">OpenDirect.Contact</a> > array

**cat**

Name	Description	Schema
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from "IAB Tech Lab Content Taxonomy".	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

## OpenDirect.Organization

The organization resource may represent an advertiser or agency (buyer). The Account determines the role that the organization plays by using the organization ID in place of the BuyerId or AdvertiserId. The organization's role may vary by account. For example, the organization may be an advertiser in one account and a buyer in another. An advertiser may create one or more organizations to meet their business needs. For example, they may create a single organization and then create accounts for each brand, subsidiary, or division. Or, they may create an organization for each brand. It is up to the advertiser to determine how they use Organization and Account to meet their organizational needs.

A publisher may also create an organization for itself for the purpose of requesting a change to an order. To identify a publisher for a change request, the organization ID is supplied as the RequesterId for the ChangeRequest resource.

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>address</b> <i>optional</i>		<a href="#">OpenDirect.Address</a>
<b>contacts</b> <i>required</i>	A list of one or more contacts within the organization. The list must contain unique contact types (for example, only one billing contact). At least one billing contact is required.	< <a href="#">OpenDirect.Contact</a> > array
<b>disapprovalreason</b> <i>optional</i> <i>read-only</i>	The reason why the organization was not registered. Must be specified if Status is Disapproved. <b>Maximal length</b> : 255	string
<b>fax</b> <i>optional</i>	The organization's fax number. <b>Maximal length</b> : 20	string
<b>cat</b> <i>optional</i>	Defines the category the organization belongs to. Uses "IAB Tech Lab Content Taxonomy".	<a href="#">cat</a>

Name	Description	Schema
<b>name</b> <i>required</i>	The organization's display name. Cannot be an empty string. Must be unique. <b>Maximal length</b> : 128	string
<b>phone</b> <i>optional</i>	The organization's phone number. <b>Maximal length</b> : 20	string
<b>status</b> <i>required</i> <i>read-only</i>	A value that indicates the current state of the approval process. The approval process confirms the organization's identity. <b>Maximal length</b> : 15	enum (Pending, Approved, Disapproved, Limited)
<b>url</b> <i>optional</i>	A URL to the organization's website. <b>Maximal length</b> : 1024	string
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

**cat**

Name	Description	Schema
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from "IAB Tech Lab Content Taxonomy".	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**OpenDirect.Placement**

The Placement resource is used to store the specifications for an individual AdUnit for a Line

Name	Description	Schema
<b>id</b> <i>optional</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>

Name	Description	Schema
<b>lineid</b> <i>required</i>	The Id of the line the placement belongs to	<a href="#">id</a>
<b>adunitid</b> <i>required</i>	The Id of the Ad unit this placement is for	<a href="#">id</a>
<b>creativespec</b> <i>optional</i>	The technical specifications for this line. If empty, the technical specifications for the Ad Unit are used	<a href="#">AdCOM.CreativeSpec</a>

## OpenDirect.Product

A Product resource identifies anything from an ad placement to a Run of Network product in the publisher's product catalog. Values for all supported fields are provided by the publisher.

Name	Description	Schema
<b>id</b> <i>required</i>	A system-generated opaque ID that uniquely identifies this resource.	<a href="#">id</a>
<b>publisherid</b> <i>required</i>	The Id of the Publisher providing this Product	<a href="#">id</a>
<b>name</b> <i>required</i>	The product's display name. The name must be unique. <b>Maximal length</b> : 38	string
<b>description</b> <i>optional</i>	The product's description. <b>Maximal length</b> : 255	string
<b>activedate</b> <i>optional</i>	The date and time, in UTC, that the product may become part of the bookable inventory.	string (date-time)
<b>allownocreative</b> <i>optional</i>	A Boolean value that indicates whether line items assigned to this order may be booked before creative is assigned. A value of TRUE	boolean

Name	Description	Schema
	allows lines to be booked without creative assigned. Default value is FALSE and prevents lines from being booked when no creative is assigned.	
<b>currency</b> <i>required</i>	Identifies the currency for BasePrice and MinSpend.	<a href="#">ISO-4217</a>
<b>baseprice</b> <i>required</i>	The product's base retail price; this is not the rate card price. The actual price may be more if targeting is specified.	number
<b>deliverytype</b> <i>optional</i>	Defines the possible types of delivery.	<a href="#">deliverytype</a>
<b>estdailyavails</b> <i>optional</i>	An estimated range of available daily impressions. The ranges should be of the form: Thousands, Tens of Thousands, Hundreds of Thousands, and so on.	string
<b>domain</b> <i>optional</i>	Common definition for a domain name.	<a href="#">domain</a>
<b>icon</b> <i>optional</i>	URL to a thumbnail icon of the product. May be used to display next to the product in the product catalog. Publishers should support icons that are 150x150 or less. The maximum size is 10 KB.	string
<b>languages</b> <i>optional</i>	A list of creative languages that the product supports.	< <a href="#">ISO-639-1</a> > array
<b>leadtime</b> <i>optional</i>	The number of days (n) from today that a line that reference this product can begin running; the line's start date must be equal to or later than today + n.	integer

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>minspend</b> <i>optional</i>	The minimum order value of this Product in the specified currency	number
<b>minflight</b> <i>optional</i>	The minimum number of days that the product must be booked for. The line must enforce the duration.	integer
<b>maxflight</b> <i>optional</i>	The maximum number of days that the product may be booked for. The line must enforce the duration.	integer
<b>producttags</b> <i>optional</i>	List of tags used for searching the product catalog.	< string > array
<b>ratetype</b> <i>required</i>		<a href="#">ratetype</a>
<b>adunit</b> <i>required</i>		<a href="#">OpenDirect.AdUnit</a>
<b>alladunits</b> <i>optional</i>	Describes whether all child Ad Units are severed together as a group or just one of the Ad Units is served	integer
<b>retirementaate</b> <i>optional</i>	The date and time, in UTC, that the product may be removed from the bookable inventory.	string (date-time)
<b>tz</b> <i>optional</i>	The time zone that the product runs in.	string
<b>url</b> <i>optional</i>	A URL to the specification that describes the creative requirements.	string
<b>regs</b> <i>optional</i>		<a href="#">OpenRTB.Reg</a> s

Name	Description	Schema
<b>device</b> <i>optional</i>		<a href="#">AdCOM.Device</a>
<b>geo</b> <i>optional</i>		<a href="#">AdCOM.Geo</a>
<b>data</b> <i>optional</i>		<a href="#">AdCOM.Data</a>
<b>source</b> <i>optional</i>		<a href="#">OpenRTB.Source</a>
<b>pmp</b> <i>optional</i>		<a href="#">OpenRTB.PMP</a>
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

### deliverytype

Name	Schema
<b>DeliveryType</b> <i>required</i>	enum (Exclusive, Guaranteed, PMP - Prioritized, PMP - Non-prioritized, PMP - First Look, OpenRTB - Deal, OpenRTB - Guaranteed Deal)

### domain

Name	Description	Schema
<b>domain</b> <i>required</i>	A domain name	string

**ratetype**

Name	Description	Schema
<b>RateType</b> <i>required</i>	Defines a unit of measure that a cost (i.e. BasePrice) is expressed in. The API may support all or a subset of the specified values.	enum (CPM, CPMV, CPC, CPD, FlatRate)

**id**

A system-generated opaque ID that uniquely identifies this resource.

*Type* : string

**ext**

An opaque blob of provider-defined data. Providers may use this field as needed (for example, to store an ID that correlates this object with resources within their system).

Note that any provider that edits this object may override the data in this field. The data should include a marker that you can identify to ensure the data is yours.

*Type* : object

**error**

Name	Schema
<b>ErrorCode</b> <i>required</i>	string
<b>ErrorMessage</b> <i>required</i>	string
<b>Context</b> <i>optional</i>	object
<b>Link</b> <i>optional</i>	string

## errors

Name	Schema
<b>errors</b> <i>optional</i>	< <a href="#">error</a> > array

## Other Referenced Specifications

### AdCOM

Advertising Common Object Model is shared by the two transactional specifications, OpenRTB and OpenDirect. OpenRTB version 3.0 is the first version of OpenRTB to use AdCOM. OpenDirect version 2.0 is the first version of OpenDirect to use AdCOM.

AdCOM defines the domain objects, the specifications of objects used to describe the media offered for sale in an OpenDirect transaction.

AdCOM will be hosted as a separate specification ([available here, and also currently under public comment](#)). For reference during public comment, AdCOM is also listed below:

### AdCOM.AdSpec

The ad specification object and its children describe the desired characteristics of ads; for example, the times of ads allowed to be used in bidding (for a given OpenRTB bid request) or that may be added to an OpenDirect package.

Name	Description	Schema
<b>bcat</b> <i>optional</i>	Blocked advertiser categories using the IAB content categories	< <a href="#">bcat</a> > array
<b>badv</b> <i>optional</i>	Block list of advertisers by their domains (e.g., “ford.com”).	< <a href="#">badv</a> > array
<b>bapp</b> <i>optional</i>	Block list of applications by their platform-specific exchange independent application identifiers. On	< <a href="#">bapp</a> > array

Name	Description	Schema
	Android, these should be bundle or package names (e.g., com.foo.mygame). On iOS, these are numeric IDs.	
<b>creative</b> <i>optional</i>		<a href="#">AdCOM.CreativeSpec</a>
<b>wlang</b> <i>optional</i>	White list of languages for ads. Unless otherwise specified, ISO-639-1-alpha-2 is used, but BCP 47 or others may be used. If not ISO-639-1-alpha-2, this should be communicated in implementation guidelines. Omission implies no specific restrictions.	< <a href="#">ISO-639-1</a> > array
<b>secure</b> <i>optional</i>	Flag to indicate if the impression requires secure HTTPS URL creative assets and markup, where 0 = non-secure, 1 = secure. If omitted, the secure state is unknown, but https is strongly recommended for user privacy.	integer
<b>rewarded</b> <i>optional</i>	Indicates whether the ad is being rendered as part of a rewarded / incentivized user experience, where 0 = nonrewarded, 1 = rewarded. If omitted, non-rewarded can be assumed.	integer
<b>ps</b> <i>optional</i>	Publisher signature - see security spec for details	string

**bcat**

Name	Description	Schema
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**badv**

Name	Description	Schema
<b>domain</b> <i>required</i>	A domain name	string

**bapp**

Name	Schema
<b>appid</b> <i>required</i>	<a href="#">id</a>

**AdCOM.AdResp**

An ad object and its children describe a particular instance of an advertising creative and related metadata. They contain everything necessary to render the ad. This object is defined by the demand partner, with the exception of the “sacid” field which would be set by the supply partner on creation of the object.

Name	Description	Schema
<b>dadid sacid</b> <i>optional</i>	A unique identifier for each ad. When the ID is native to the demand partner, “dadid” is used. “sacid” is used when the ID is native to the supply partner.	string
<b>creative</b> <i>optional</i>	Creative to serve (see creative objective)	<a href="#">AdCOM.CreativeResp</a>
<b>secure</b> <i>optional</i>	Flag to indicate that the creative is fully secure (uses HTTPS for all assets and markup), where 0 = non-secure, 1 = secure.  If omitted, the secure state is unknown, but https is strongly recommended for user privacy.	integer

Name	Description	Schema
<b>audit</b> <i>optional</i>	An audit object	object
<b>events</b> <i>optional</i>	Events to be tracked	< <a href="#">events</a> > array
<b>adomain</b> <i>optional</i>	<p>Advertiser domain for block list checking (e.g., “ford.com”).</p> <p>This can be an array of for the case of rotating creatives.</p> <p>Suppliers can mandate that only one domain is allowed.</p>	< <a href="#">adomain</a> > array
<b>bundle</b> <i>optional</i>	<p>For app ads, a platform-specific application identifier intended to be unique to the app for block list checking. On Android, this should be a bundle or package name (e.g., com.foo.mygame). On iOS, it is a numeric ID. This can be an array of for the case of rotating creatives. Suppliers can mandate that only one bundle is allowed.</p>	< object > array
<b>cat</b> <i>optional</i>	Content categories of the ad, optionally, but typically described using the IAB Content Taxonomy. Refer to list 1.	< <a href="#">cat</a> > array
<b>lang</b> <i>optional</i>	Language of the creative. Unless otherwise specified, ISO-639-1-alpha-2 is used, but BCP 47 or others may be used. If not ISO-639-1-alpha-2, this should be communicated in implementation guidelines. The non-standard code “xx” may also be used if the creative has no linguistic content (e.g., a banner with just a company logo).	<a href="#">ISO-639-1</a>

**events**

Name	Description	Schema
<b>event</b> <i>optional</i>	To be defined	object

**adomain**

Name	Description	Schema
<b>domain</b> <i>required</i>	A domain name	string

**cat**

Name	Description	Schema
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**AdCOM.AMPSpec**

AMP creatives allowed in this impression

Name	Description	Schema
<b>rend</b> <i>optional</i>	AMP ad requirements and rendering behavior.  1 = AMP ad requirements are unknown, 2 = AMP ads are not allowed, 3 = Either AMP ads or non-AMP ads are allowed; AMP ads are not early rendered, 4 = Either AMP ads or non-AMP ads are allowed, and AMP ads are early rendered, 5 = AMP ads are required. Ads that are non-AMP may be rejected by the publisher. 500+ = Exchange-specific values; should be communicated to bidders a priori	integer
<b>ver</b> <i>optional</i>	Version of amp ads that can be rendered [for future use]	string

## AdCOM.App

App object copied over from OpenRTB 2.5

Name	Description	Schema
<b>id</b> <i>optional</i>	Exchange-specific app ID.	string
<b>name</b> <i>optional</i>	App name (may be aliased at the publisher's request).	string
<b>bundle</b> <i>optional</i>	A platform-specific application identifier intended to be unique to the app and independent of the exchange, i.e. a bundle or package name (e.g., com.foo.mygame).	string
<b>storeid</b> <i>optional</i>	An app store ID, for example iTunes store ID.	string
<b>domain</b> <i>optional</i>	Domain of the app (e.g., "mygame.foo.com").	string
<b>storeurl</b> <i>optional</i>	App store URL for an installed app; for IQG 2.1 compliance.	string
<b>cat</b> <i>optional</i>	Array of IAB content categories of the app. Refer to List 5.1.	< <a href="#">cat</a> > array
<b>sectioncat</b> <i>optional</i>	Array of IAB content categories that describe the current section of the app. Refer to List 5.1.	< <a href="#">sectioncat</a> > array
<b>pagecat</b> <i>optional</i>	Array of IAB content categories that describe the current page or view of the app. Refer to List 5.1.	< <a href="#">pagecat</a> > array
<b>ver</b> <i>optional</i>	Application version.	string
<b>privacypolicy</b> <i>optional</i>	Indicates if the app has a privacy policy, where 0 = no, 1 = yes.	integer

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>paid</b> <i>optional</i>	0 = app is free, 1 = the app is a paid version.	integer
<b>publisher</b> <i>optional</i>	Details about the Publisher (Section 3.2.15) of the app.	object
<b>content</b> <i>optional</i>	Details about the Content (Section 3.2.16) within the app.	object
<b>keywords</b> <i>optional</i>	Comma separated list of keywords about the app.	string

**cat**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**sectioncat**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**pagecat**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

## AdCOM.AudioSpec

Audio creatives allowed in this impression

Name	Description	Schema
<b>minduration</b> <i>optional</i>	Minimum audio ad duration in seconds.	integer
<b>maxduration</b> <i>optional</i>	Maximum audio ad duration in seconds.	integer
<b>protocols</b> <i>optional</i>	Array of supported audio protocols. Refer to List 5.8.	< <a href="#">protocols</a> > array
<b>startdelay</b> <i>optional</i>	The following table lists the various options for the video or audio start delay. If the start delay value is greater than 0, then the position is mid-roll and the value indicates the start delay.	<a href="#">startdelay</a>
<b>minbitrate</b> <i>optional</i>	Minimum bitrate in Kbps.	integer
<b>maxbitrate</b> <i>optional</i>	Maximum bitrate in Kbps.	integer
<b>delivery</b> <i>optional</i>	Supported delivery methods (e.g., streaming, progressive). If none specified, assume all are supported. Refer to List 5.15.	< <a href="#">delivery</a> > array
<b>companiontype</b> <i>optional</i>	Supported DAAST companion ad types. Refer to List 5.14. Recommended if companion ads are included via the companionad array.	< <a href="#">companiontype</a> > array
<b>maxseq</b> <i>optional</i>	The maximum number of ads that can be played in an ad pod. feed integer Type of audio feed. Refer to List FIXME. stitched integer Indicates if the ad is stitched with audio content or delivered independently, where 0 = no, 1 = yes.	integer

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>nvol</b> <i>optional</i>	The following table lists the types of volume normalization modes, typically for audio.	<a href="#">nvol</a>
<b>apis</b> <i>optional</i>	APIs permitted to be used in the creative, if applicable. Refer to list 3. mimes string array MIME types permitted, if applicable. For example, “video/mp4”, “application/javascript”.	< <a href="#">apis</a> > array

### protocols

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Protocol</b> <i>required</i>	Protocol	integer

### startdelay

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Delay</b> <i>required</i>	start Delay	integer

### delivery

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Method</b> <i>required</i>	Content Delivery Method	integer

**companiontype**

Name	Description	Schema
<b>Type</b> <i>required</i>	Companion Type	integer

**nvol**

Name	Description	Schema
<b>Modes</b> <i>required</i>	Volume Normalization Mode	integer

**apis**

Name	Description	Schema
<b>Framework</b> <i>required</i>	API Frameworks	integer

**AdCOM.AudioResp**

Name	Description	Schema
<b>subtype</b> <i>optional</i>	List 6 - List of Creative Subtypes	<a href="#">subtype</a>
<b>adm</b> <i>optional</i>	Creative markup (such as a snippet of HTML or AMP HTML).  Normally only one of adm or curl is valid in a given ad.	string

Name	Description	Schema
<b>curl</b> <i>optional</i>	URL at which the creative markup will be found. Applicable to creatives types such as AMP Ads, VAST, and DAAST.  Normally only one of adm or curl is valid in a given ad.	string
<b>companionad</b> <i>optional</i>	Array of Display Specification objects if companion ads are available.	< <a href="#">companionad</a> > array
<b>api</b> <i>optional</i>	List 3 - API Frameworks	<a href="#">api</a>

**subtype**

Name	Description	Schema
<b>Subtype</b> <i>required</i>	Creative Subtype	integer

**companionad**

Name	Description	Schema
<b>Type</b> <i>required</i>	Companion Type	integer

**api**

Name	Description	Schema
<b>Framework</b> <i>required</i>	API Frameworks	integer

## AdCOM.BannerSpec

Banner creatives allowed in this impression

Name	Description	Schema
<b>w</b> <i>optional</i>	Width in device independent pixels (DIPS).	integer
<b>h</b> <i>optional</i>	Height in device independent pixels (DIPS).	integer
<b>wratio</b> <i>optional</i>	Relative width when expressing size as a ratio.	integer
<b>hratio</b> <i>optional</i>	Relative height when expressing size as a ratio.	integer
<b>sized</b> <i>optional</i>	List 8 - List of Ratio-Based Sizes	<a href="#">sized</a>
<b>btype</b> <i>optional</i>	Blocked banner ad types. Refer to List 5.2.	< <a href="#">btype</a> > array
<b>battr</b> <i>optional</i>	Blocked creative attributes.	< <a href="#">battr</a> > array
<b>pos</b> <i>optional</i>	The following table specifies the position of the ad as a relative measure of visibility or prominence. This OpenRTB table has values derived from the Inventory Quality Guidelines (IQG). Practitioners should keep in sync with updates to the IQG values as published on IAB.com. Values “4” - “7” apply to apps per the mobile addendum to IQG version 2.1.	<a href="#">pos</a>
<b>opframe</b> <i>optional</i>	Indicates if the banner is in the top frame as opposed to an iframe, where 0 = no, 1 = yes.	integer

Name	Description	Schema
<b>expdir</b> <i>optional</i>	Directions in which the banner may expand. Refer to List 5.5.	< <a href="#">expdir</a> > array
<b>iframebuster</b> <i>optional</i>	Array of supported IFRAME busters. The meaning of strings in this field must be coordinated a priori between partners.	< <a href="#">iframebuster</a> > array

**sized**

Name	Description	Schema
<b>Size</b> <i>required</i>	Size	integer

**btype**

Name	Description	Schema
<b>AdType</b> <i>required</i>	Banner Ad Types	integer

**battr**

Name	Description	Schema
<b>Attribute</b> <i>required</i>	List of Creative Attributes	integer

**pos**

Name	Description	Schema
<b>AdPosition</b> <i>required</i>	Ad Position	integer

**expdir**

Name	Description	Schema
<b>Direction</b> <i>required</i>	Expandable Direction	integer

**iframebuster**

Name	Schema
<b>buster</b> <i>required</i>	string

**AdCOM.Content**

Content object copied over from OpenRTB 2.5

Name	Description	Schema
<b>id</b> <i>optional</i>	ID uniquely identifying the content.	string
<b>episode</b> <i>optional</i>	Episode number.	integer
<b>title</b> <i>optional</i>	Content title.	string

Name	Description	Schema
	<p>Video Examples: “Search Committee” (television), “A New Hope” (movie), or “Endgame” (made for web).</p> <p>Non-Video Example: “Why an Antarctic Glacier Is Melting So Quickly” (Time magazine article).</p>	
<b>series</b> <i>optional</i>	<p>Content series.</p> <p>Video Examples: “The Office” (television), “Star Wars” (movie), or “Arby ‘N’ The Chief” (made for web).</p> <p>Non-Video Example: “Ecocentric” (Time Magazine blog).</p>	string
<b>season</b> <i>optional</i>	Content season (e.g., “Season 3”).	string
<b>artist</b> <i>optional</i>	Artist credited with the content.	string
<b>genre</b> <i>optional</i>	Genre that best describes the content (e.g., rock, pop, etc).	string
<b>album</b> <i>optional</i>	Album to which the content belongs; typically for audio.	string
<b>isrc</b> <i>optional</i>	International Standard Recording Code conforming to ISO-3901.	string
<b>producer</b> <i>optional</i>	Details about the content Producer (Section 3.2.17).	object
<b>url</b> <i>optional</i>	URL of the content, for buy-side contextualization or review.	string

Name	Description	Schema
<b>cat</b> <i>optional</i>	Array of IAB content categories that describe the contentproducer. Refer to List 5.1.	< <a href="#">cat</a> > array
<b>prodq</b> <i>optional</i>	The following table lists the options for content quality. These values are defined by the IAB; refer to <a href="http://www.iab.com/wp-content/uploads/2015/03/long-form-video-final.pdf">www.iab.com/wp-content/uploads/2015/03/long-form-video-final.pdf</a> for more information.	<a href="#">prodq</a>
<b>context</b> <i>optional</i>	The following table lists the various options for indicating the type of content being used or consumed by the user in which the impression will appear. This OpenRTB table has values derived from the Inventory Quality Guidelines (IQG). Practitioners should keep in sync with updates to the IQG values.	<a href="#">context</a>
<b>contentrating</b> <i>optional</i>	Content rating (e.g., MPAA).	string
<b>userrating</b> <i>optional</i>	User rating of the content (e.g., number of stars, likes, etc.).	string
<b>qagmediarating</b> <i>optional</i>	The following table lists the media ratings used in describing content based on the IQG 2.1 categorization. Refer to <a href="http://www.iab.com/guidelines/digital-video-suite">www.iab.com/guidelines/digital-video-suite</a> for more information.	<a href="#">qagmediarating</a>
<b>keywords</b> <i>optional</i>	Comma separated list of keywords describing the content.	string
<b>livestream</b> <i>optional</i>	0 = not live, 1 = content is live (e.g., stream, live blog).	integer
<b>sourcerelationship</b> <i>optional</i>	0 = indirect, 1 = direct.	integer

Name	Description	Schema
<b>len</b> <i>optional</i>	Length of content in seconds; appropriate for video or audio.	integer
<b>language</b> <i>optional</i>	Content language using ISO-639-1-alpha-2.	<a href="#">ISO-639-1</a>
<b>embeddable</b> <i>optional</i>	Indicator of whether or not the content is embeddable (e.g., an embeddable video player), where 0 = no, 1 = yes.	integer
<b>data</b> <i>optional</i>	Additional content data. Each Data object (Section 3.2.21) represents a different data source.	< <a href="#">AdCOM.Data</a> > array

**cat**

Name	Description	Schema
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**prodq**

Name	Description	Schema
<b>Quality</b> <i>required</i>	Production Quality	integer

**context**

Name	Description	Schema
<b>Context</b> <i>required</i>	Content Context	integer

**qagmediarating**

Name	Description	Schema
<b>Rating</b> <i>required</i>	IQG Media Rating	integer

**AdCOM.CreativeSpec**

A creative characteristics object describes the desired technical characteristics of creatives. An object array of creative characteristics objects is found as a child of the ad characteristics object.

Name	Description	Schema
<b>battr</b> <i>optional</i>	Blocked creative attributes.	<a href="#">battr</a> array
<b>video</b> <i>optional</i>	Video creatives allowed in this impression	<a href="#">AdCOM.VideoSpec</a>
<b>display</b> <i>optional</i>	Display creatives allowed in this impression	<a href="#">AdCOM.DisplaySpec</a>
<b>audio</b> <i>optional</i>		<a href="#">AdCOM.AudioSpec</a>
<b>dspmgr</b> <i>optional</i>	Name of ad mediation partner, SDK technology, or player responsible for rendering ad (typically video or mobile). Used by some ad servers to customize ad code by partner.  Recommended for video and/or apps.	string
<b>dspmgrver</b> <i>optional</i>	Version of ad mediation partner, SDK technology, or player responsible for rendering ad (typically video or mobile). Used by some ad servers to customize ad code by partner.	string

Name	Description	Schema
	Recommended for video and/or apps.	
<b>clktype</b> <i>optional</i>	Indicates the click type of the creative. In the absence of a value, the creative can be assumed to be clickable with unknown details. See list 7. Subsumes previous clickbrowser field.	integer

**battr**

Name	Description	Schema
<b>Attribute</b> <i>required</i>	List of Creative Attributes	integer

**AdCOM.CreativeResp**

Name	Description	Schema
<b>display</b> <i>optional</i>	Display creative object to serve, corresponding to allowed specifications from request.	<a href="#">AdCOM.DisplayResp</a>
<b>video</b> <i>optional</i>	Video creative object to serve, corresponding to allowed specifications from request.	<a href="#">AdCOM.VideoResp</a>
<b>audio</b> <i>optional</i>	Audio creative object to serve, corresponding to allowed specifications from request.	<a href="#">AdCOM.AudioResp</a>
<b>iurl</b> <i>optional</i>	URL without cache-busting to an image that is representative of the content of the campaign for ad quality / safety checking	string
<b>attr</b> <i>optional</i>	Set of attributes describing the creative. Refer to list 5.	< <a href="#">attr</a> > array

**attr**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Attribute</b> <i>required</i>	List of Creative Attributes	integer

**AdCOM.Data**

App object copied over from OpenRTB 2.5

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>id</b> <i>optional</i>	Supply partner-specific ID for the data provider.	string
<b>name</b> <i>optional</i>	Supply partner-specific name for the data provider.	string
<b>segment</b> <i>optional</i>	Array of Segment (Section 3.2.22) objects that contain the actual data values.	< <a href="#">AdCOM.Segment</a> > array

**AdCOM.Device**

Device object copied over from OpenRTB 2.5

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>ua</b> <i>optional</i>	Browser user agent string.	string
<b>geo</b> <i>optional</i>	Location of the device assumed to be the user's current location defined by a Geo object (Section 3.2.19).	<a href="#">AdCOM.Geo</a>
<b>dnt</b> <i>optional</i>	Standard "Do Not Track" flag as set in the header by the browser, where 0 = tracking is unrestricted, 1 = do not track.	integer

Name	Description	Schema
<b>lmt</b> <i>optional</i>	“Limit Ad Tracking” signal commercially endorsed (e.g., iOS, Android), where 0 = tracking is unrestricted, 1 = tracking must be limited per commercial guidelines.	integer
<b>ip</b> <i>optional</i>	IPv4 address closest to device.	string
<b>ipv6</b> <i>optional</i>	IP address closest to device as IPv6.	string
<b>devicetype</b> <i>optional</i>	<p>The following table lists the type of device from which the impression originated.</p> <p>OpenRTB version 2.2 of the specification added distinct values for Mobile and Tablet. It is recommended that any bidder adding support for 2.2 treat a value of 1 as an acceptable alias of 4 &amp; 5.</p> <p>This OpenRTB table has values derived from the Inventory Quality Guidelines (IQG). Practitioners should keep in sync with updates to the IQG values.</p>	<a href="#">devicetype</a>
<b>make</b> <i>optional</i>	Device make (e.g., “Apple”).	string
<b>model</b> <i>optional</i>	Device model (e.g., “iPhone”).	string
<b>os</b> <i>optional</i>	Device operating system (e.g., “iOS”).	string
<b>osv</b> <i>optional</i>	Device operating system version (e.g., “3.1.2”).	string
<b>hwv</b> <i>optional</i>	Hardware version of the device (e.g., “5S” for iPhone 5S).	string

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>h</b> <i>optional</i>	Physical height of the screen in pixels.	integer
<b>w</b> <i>optional</i>	Physical width of the screen in pixels.	integer
<b>ppi</b> <i>optional</i>	Screen size as pixels per linear inch.	integer
<b>pxratio</b> <i>optional</i>	The ratio of physical pixels to device independent pixels.	number
<b>js</b> <i>optional</i>	Support for JavaScript, where 0 = no, 1 = yes.	integer
<b>geofetch</b> <i>optional</i>	Indicates if the geolocation API will be available to JavaScript code running in the banner, where 0 = no, 1 = yes.	integer
<b>flashver</b> <i>optional</i>	Version of Flash supported by the browser.	string
<b>language</b> <i>optional</i>	Browser language using ISO-639-1-alpha-2.	<a href="#">ISO-639-1</a>
<b>carrier</b> <i>optional</i>	Carrier or ISP (e.g., “VERIZON”) using exchange curated string names which should be published to bidders a priori.	string
<b>mccmnc</b> <i>optional</i>	Mobile carrier as the concatenated MCC-MNC code (e.g., “310- 005” identifies Verizon Wireless CDMA in the USA). Refer to <a href="https://en.wikipedia.org/wiki/Mobile_country_code">https://en.wikipedia.org/wiki/Mobile_country_code</a> for further examples. Note that the dash between the MCC and MNC parts is required to remove parsing ambiguity.	string

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>conntype</b> <i>optional</i>	The following table lists the various options for the type of device connectivity.	<a href="#">conntype</a>
<b>ifa</b> <i>optional</i>	ID sanctioned for advertiser use in the clear (i.e., not hashed).	string
<b>didsha1</b> <i>optional</i>	Hardware device ID (e.g., IMEI); hashed via SHA1.	string
<b>didmd5</b> <i>optional</i>	Hardware device ID (e.g., IMEI); hashed via MD5.	string
<b>dpidsha1</b> <i>optional</i>	Platform device ID (e.g., Android ID); hashed via SHA1.	string
<b>dpidmd5</b> <i>optional</i>	Platform device ID (e.g., Android ID); hashed via MD5.	string
<b>macsha1</b> <i>optional</i>	MAC address of the device; hashed via SHA1.	string
<b>macmd5</b> <i>optional</i>	MAC address of the device; hashed via MD5.	string

### devicetype

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Device</b> <i>required</i>	Device Type	integer

**conntype**

Name	Description	Schema
<b>Connection</b> <i>required</i>	Connection Type	integer

**AdCOM.DisplaySpec**

display creatives allowed in this impression

Name	Description	Schema
<b>subtype</b> <i>optional</i>	The subtype(s) of permitted creatives, if applicable. Refer to list 6.	< <a href="#">subtype</a> > array
<b>bannerformat</b> <i>optional</i>	Array of banner specifications describing permitted formats (i.e. banner sizes). Multi-member arrays are common.	<a href="#">AdCOM.BannerSpec</a>
<b>nativeformat</b> <i>optional</i>	Array of native specifications describing the native fields and options that can run in this impression. Most implementations are a single-member arrays.	<a href="#">AdCOM.NativeSpec</a>
<b>ampformat</b> <i>optional</i>	Array of amp specifications describing the type of amp page and ads available for this impression. Most implementations are single-member arrays.	<a href="#">AdCOM.AMPSpec</a>
<b>dcformat</b> <i>optional</i>	Array of dc specifications describing the type of dynamic creatives that can run in this impression. It is expected most implementations will be single-member arrays. See discussion.	<a href="#">AdCOM.DCSpec</a>
<b>instl</b> <i>optional</i>	1 = the ad is interstitial or full screen, 0 = not interstitial.	integer

Name	Description	Schema
<b>apis</b> <i>optional</i>	APIs permitted to be used in the creative, if applicable. Refer to list 3. mimes string array MIME types permitted, if applicable. For example, “video/mp4”, “application/javascript”.	< <a href="#">apis</a> > array

### subtype

Name	Description	Schema
<b>subtype</b> <i>required</i>	Creative Subtype	integer

### apis

Name	Description	Schema
<b>framework</b> <i>required</i>	API Frameworks	integer

## AdCOM.DisplayResp

Name	Description	Schema
<b>subtype</b> <i>optional</i>	List 6 - List of Creative Subtypes	<a href="#">subtype</a>
<b>adm</b> <i>optional</i>	Creative markup (such as a snippet of HTML or AMP HTML). Normally only one of adm or curl is valid in a given ad.	string
<b>curl</b> <i>optional</i>	URL at which the creative markup will be found. Applicable to creatives types such as AMP Ads, VAST, and DAAST.	string

<b>Name</b>	<b>Description</b>	<b>Schema</b>
	Normally only one of adm or curl is valid in a given ad.	
<b>w</b> <i>optional</i>	The width of the creative expressed in pixels. Either w + h OR wratio + hratio may be used but not both.	integer
<b>h</b> <i>optional</i>	The width of the creative expressed in pixels.	integer
<b>wratio</b> <i>optional</i>	The width of the creative expressed as a ratio.	integer
<b>hratio</b> <i>optional</i>	The width of the creative expressed as a ratio.	integer
<b>api</b> <i>optional</i>	List 3 - API Frameworks	<a href="#">api</a>
<b>mimes</b> <i>optional</i>	Ad MIME types. For example, “video/mp4”, “application/javascript”.	< <a href="#">mimes</a> > array

### subtype

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Subtype</b> <i>required</i>	Creative Subtype	integer

### api

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Framework</b> <i>required</i>	API Frameworks	integer

**mimes**

Name	Schema
<b>mimetype</b> <i>optional</i>	string

**AdCOM.Geo**

Geo object copied over from OpenRTB 2.5

Name	Description	Schema
<b>lat</b> <i>optional</i>	Latitude from -90.0 to +90.0, where negative is south.	number
<b>lon</b> <i>optional</i>	Longitude from -180.0 to +180.0, where negative is west.	number
<b>type</b> <i>optional</i>	The following table lists the options to indicate how the geographic information was determined.	<a href="#">type</a>
<b>accuracy</b> <i>optional</i>	Estimated location accuracy in meters; recommended when lat/lon are specified and derived from a device's location services (i.e., type = 1). Note that this is the accuracy as reported from the device. Consult OS specific documentation (e.g., Android, iOS) for exact interpretation.	integer
<b>lastfix</b> <i>optional</i>	Number of seconds since this geolocation fix was established. Note that devices may cache location data across multiple fetches. Ideally, this value should be from the time the actual fix was taken.	integer
<b>ipservice</b> <i>optional</i>	The following table lists the services and/or vendors used for resolving IP addresses to geolocations.	<a href="#">ipservice</a>

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>country</b> <i>optional</i>	Country code using ISO-3166-1-alpha-3.	<a href="#">ISO-3166-1-a3</a>
<b>region</b> <i>optional</i>	Region code using ISO-3166-2; 2-letter state code if USA.	<a href="#">ISO-3166-2</a>
<b>regionfips104</b> <i>optional</i>	Region of a country using FIPS 10-4 notation. While OpenRTB supports this attribute, it has been withdrawn by NIST in 2008.	string
<b>metro</b> <i>optional</i>	Google metro code; similar to but not exactly Nielsen DMAs. See Appendix A for a link to the codes.	string
<b>city</b> <i>optional</i>	City using United Nations Code for Trade & Transport Locations. See Appendix A for a link to the codes.	string
<b>zip</b> <i>optional</i>	Zip or postal code.	string
<b>utcoffset</b> <i>optional</i>	Local time as the number +/- of minutes from UTC.	integer

## type

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Type</b> <i>required</i>	Location Type	integer

**ipservice**

Name	Description	Schema
<b>Service</b> <i>required</i>	IP Location Service	integer

**AdCOM.NativeSpec**

Native creatives allowed in this impression

Name	Description	Schema
<b>request</b> <i>required</i>	Request payload complying with the Native Ad Specification.	string
<b>ver</b> <i>optional</i>	Version of the Dynamic Native Ads API to which request complies; highly recommended for efficient parsing.	string

**AdCOM.Producer**

Producer object copied over from OpenRTB 2.5

Name	Description	Schema
<b>id</b> <i>optional</i>	Content producer or originator ID. Useful if content is syndicated and may be posted on a site using embed tags.	string
<b>name</b> <i>optional</i>	Content producer or originator name (e.g., “Warner Bros”).	string
<b>cat</b> <i>optional</i>	Array of IAB content categories that describe the content producer. Refer to List 5.1.	< <a href="#">cat</a> > array
<b>domain</b> <i>optional</i>	Highest level domain of the content producer (e.g., “producer.com”).	string

**cat**

Name	Description	Schema
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**AdCOM.Publisher**

Publisher object copied over from OpenRTB 2.5

Name	Description	Schema
<b>id</b> <i>optional</i>	Exchange-specific publisher ID. (This is the publisher ID listed in ads.txt files.)  <i>OpenDirect:</i> Publisher Id is the Organization Id	string
<b>name</b> <i>optional</i>	Publisher name (may be aliased at the publisher’s request).	string
<b>cat</b> <i>optional</i>	Array of IAB content categories of the site. Refer to List 5.1.	< <a href="#">cat</a> > array
<b>domain</b> <i>optional</i>	Highest level domain of the publisher (e.g., “publisher.com”).	string

**cat**

Name	Description	Schema
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**AdCOM.Segment**

Segment object copied over from OpenRTB 2.5

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>id</b> <i>optional</i>	ID of the data segment specific to the data provider.	string
<b>name</b> <i>optional</i>	Name of the data segment specific to the data provider.	string
<b>value</b> <i>optional</i>	String representation of the data segment value.	string

## AdCOM.Site

Site object copied over from OpenRTB 2.5

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>id</b> <i>optional</i>	Exchange-specific site ID.	string
<b>name</b> <i>optional</i>	Site name (may be aliased at the publisher's request).	string
<b>domain</b> <i>optional</i>	Domain of the site (e.g., "mysite.foo.com").	string
<b>cat</b> <i>optional</i>	Array of IAB content categories of the site. Refer to List 5.1.	< <a href="#">cat</a> > array
<b>sectioncat</b> <i>optional</i>	Array of IAB content categories that describe the current section of the site. Refer to List 5.1.	< <a href="#">sectioncat</a> > array
<b>pagecat</b> <i>optional</i>	Array of IAB content categories that describe the current page or view of the site. Refer to List 5.1.	< <a href="#">pagecat</a> > array
<b>page</b> <i>optional</i>	URL of the page where the impression will be shown.	string

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>ref</b> <i>optional</i>	Referrer URL that caused navigation to the current page.	string
<b>search</b> <i>optional</i>	Search string that caused navigation to the current page.	string
<b>mobile</b> <i>optional</i>	Indicates if the site has been programmed to optimize layout when viewed on mobile devices, where 0 = no, 1 = yes.	integer
<b>amp</b> <i>optional</i>	Indicates if the page is rendered in AMP. 0 = page is non-AMP, 1 = page is built with AMP HTML. AMP status unknown if omitted.	integer
<b>privacypolicy</b> <i>optional</i>	Indicates if the site has a privacy policy, where 0 = no, 1 = yes.	integer
<b>publisher</b> <i>optional</i>	Details about the Publisher (Section 3.2.15) of the site.	<a href="#">AdCOM.Publisher</a>
<b>content</b> <i>optional</i>	Details about the Content (Section 3.2.16) within the site.	<a href="#">AdCOM.Content</a>
<b>keywords</b> <i>optional</i>	Comma separated list of keywords about the site.	string

**cat**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**sectioncat**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**pagecat**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>IABCategoryCode</b> <i>required</i>	IAB Codes from “IAB Tech Lab Content Taxonomy”.	enum (IAB1, IAB1-1, IAB1-2, ..., IAB12-6)

**AdCOM.User**

User object copied over from OpenRTB 2.5

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>id</b> <i>optional</i>	Supply partner-specific ID for the user. At least one of id or buyeruid is recommended.	string
<b>buyeruid</b> <i>optional</i>	Demand partner-specific ID for the user as mapped by the exchange for the buyer. At least one of buyeruid or id is recommended.	string
<b>yob</b> <i>optional</i>	Year of birth as a 4-digit integer.	integer
<b>gender</b> <i>optional</i>	Gender, where “M” = male, “F” = female, “O” = known to be other (i.e., omitted is unknown).	string
<b>keywords</b> <i>optional</i>	Comma separated list of keywords, interests, or intent.	string

Name	Description	Schema
<b>customdata</b> <i>optional</i>	Optional feature to pass bidder data that was set in the exchange's cookie. The string must be in base85 cookie safe characters and be in any format. Proper JSON encoding must be used to include "escaped" quotation marks.	string
<b>geo</b> <i>optional</i>	Location of the user's home base defined by a Geo object (Section 3.2.19). This is not necessarily their current location.	<a href="#">AdCOM.Geo</a>
<b>data</b> <i>optional</i>	Additional user data. Each Data object (Section 3.2.21) represents a different data source.	< <a href="#">AdCOM.Data</a> > array

## AdCOM.VideoSpec

Video creatives allowed in this impression

Name	Description	Schema
<b>subtype</b> <i>optional</i>	The subtype(s) of permitted creatives, if applicable. Refer to list 6.	< <a href="#">subtype</a> > array
<b>mindur</b> <i>optional</i>	Minimum video ad duration in seconds.	integer
<b>maxdur</b> <i>optional</i>	Maximum video ad duration in seconds.	integer
<b>protocols</b> <i>optional</i>	The following table lists the options for the various bid response protocols that could be supported by an exchange.	<a href="#">protocols</a>
<b>w</b> <i>optional</i>	Width of the video player in device independent pixels (DIPS).	integer

Name	Description	Schema
<b>h</b> <i>optional</i>	Height of the video player in device independent pixels (DIPS).	integer
<b>startdelay</b> <i>optional</i>	Indicates the start delay in seconds for pre-roll, mid-roll, or post-roll ad placements. Refer to List 5.12 for additional generic values.	integer
<b>placement</b> <i>optional</i>	The following table lists the various types of video placements derived largely from the IAB Digital Video Guidelines.	<a href="#">placement</a>
<b>skipmin</b> <i>optional</i>	Videos of total duration greater than this number of seconds can be skippable; only applicable if the ad is skippable.	integer
<b>skipafter</b> <i>optional</i>	Number of seconds a video must play before skipping is enabled; only applicable if the ad is skippable. maxextended integer Maximum extended ad duration if extension is allowed. If blank or 0, extension is not allowed. If -1, extension is allowed, and there is no time limit imposed. If greater than 0, then the value represents the number of seconds of extended play supported beyond the maxduration value.	integer
<b>minbitrate</b> <i>optional</i>	Minimum bitrate in Kbps.	integer
<b>maxbitrate</b> <i>optional</i>	Maximum bitrate in Kbps.	integer
<b>boxingallowed</b> <i>optional</i>	Indicates if letterboxing of 4:3 content into a 16:9 window is allowed, where 0 = no, 1 = yes.	integer
<b>playbackmethod</b> <i>optional</i>	Playback methods that may be in use. If none are specified, any method may be used. Refer to List 5.10. Only one method is typically used in practice. As a result, this array may be	< <a href="#">playbackmethod</a> > array

Name	Description	Schema
	converted to an integer in a future version of the specification. It is strongly advised to use only the first element of this array in preparation for this change. playbackend integer The event that causes playback to end. Refer to List 5.11.	
<b>delivery</b> <i>optional</i>	Supported delivery methods (e.g., streaming, progressive). If none specified, assume all are supported. Refer to List 5.15.	< <a href="#">delivery</a> > array
<b>pos</b> <i>optional</i>	The following table specifies the position of the ad as a relative measure of visibility or prominence. This OpenRTB table has values derived from the Inventory Quality Guidelines (IQG). Practitioners should keep in sync with updates to the IQG values as published on IAB.com. Values “4” - “7” apply to apps per the mobile addendum to IQG version 2.1.	<a href="#">pos</a>
<b>companiontype</b> <i>optional</i>	Supported VAST companion ad types. Refer to List 5.14. Recommended if companion Banner objects are included via the companionad array. If one of these banners will be rendered as an end-card, this can be specified using the vcm attribute with the particular banner (Section 3.2.6).	< <a href="#">companiontype</a> > array
<b>apis</b> <i>optional</i>	APIs permitted to be used in the creative, if applicable. Refer to list 3. mimes string array MIME types permitted, if applicable. For example, “video/mp4”, “application/javascript”.	< <a href="#">apis</a> > array

**subtype**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Subtype</b> <i>required</i>	Creative Subtype	integer

**protocols**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Protocol</b> <i>required</i>	Protocol	integer

**placement**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>PlacementType</b> <i>required</i>	Placement Type	integer

**playbackmethod**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Method</b> <i>required</i>	Playback Method	integer

**delivery**

<b>Name</b>	<b>Description</b>	<b>Schema</b>
<b>Method</b> <i>required</i>	Content Delivery Method	integer

**pos**

Name	Description	Schema
<b>AdPosition</b> <i>required</i>	Ad Position	integer

**companiontype**

Name	Description	Schema
<b>Type</b> <i>required</i>	Companion Type	integer

**apis**

Name	Description	Schema
<b>Framework</b> <i>required</i>	API Frameworks	integer

**AdCOM.VideoResp**

Name	Description	Schema
<b>subtype</b> <i>optional</i>	List 6 - List of Creative Subtypes	<a href="#">subtype</a>
<b>qagmediarating</b> <i>optional</i>	The following table lists the media ratings used in describing content based on the IQG 2.1 categorization. Refer to <a href="http://www.iab.com/guidelines/digital-video-suite">www.iab.com/guidelines/digital-video-suite</a> for more information.	<a href="#">qagmediarating</a>
<b>adm</b> <i>optional</i>	Creative markup (such as a snippet of HTML or AMP HTML).	string

Name	Description	Schema
	Normally only one of adm or curl is valid in a given ad.	
<b>curl</b> <i>optional</i>	URL at which the creative markup will be found. Applicable to creatives types such as AMP Ads, VAST, and DAAST.  Normally only one of adm or curl is valid in a given ad.	string
<b>api</b> <i>optional</i>	List 3 - API Frameworks	<a href="#">api</a>
<b>mimes</b> <i>optional</i>	Ad MIME types. For example, “video/mp4”, “application/javascript”.	< <a href="#">mimes</a> > array

**subtype**

Name	Description	Schema
<b>Subtype</b> <i>required</i>	Creative Subtype	integer

**qagmediarating**

Name	Description	Schema
<b>Rating</b> <i>required</i>	IQG Media Rating	integer

**api**

Name	Description	Schema
<b>Framework</b> <i>required</i>	API Frameworks	integer

**mimes**

Name	Schema
<b>mimetype</b> <i>optional</i>	string

## OpenRTB

### OpenRTB.Deal

This object constitutes a specific deal that was struck a priori between a buyer and a seller. Its presence with the Pmp collection indicates that this impression is available under the terms of that deal. Refer to Section 7.3 for more details.

Name	Description	Schema
<b>id</b> <i>optional</i>	A unique identifier for the direct deal.	<a href="#">id</a>
<b>bidfloor</b> <i>optional</i>	Minimum bid for this impression expressed in CPM.	number
<b>bidflooreur</b> <i>optional</i>	Currency specified using ISO-4217 alpha codes. This may be different from bid currency returned by bidder if this is allowed by the exchange.	<a href="#">ISO-4217</a>
<b>at</b> <i>optional</i>	Optional override of the overall auction type of the bid request, where 1 = First Price, 2 = Second Price Plus, 3 = the value passed in bidfloor is the agreed upon deal price.	integer

Name	Description	Schema
	Additional auction types can be defined by the exchange.	
<b>wseat</b> <i>optional</i>	Whitelist of buyer seats (e.g., advertisers, agencies) allowed to bid on this deal. IDs of seats and the buyer's customers to which they refer must be coordinated between bidders and the exchange a priori. Omission implies no seat restrictions.	< string > array
<b>wadomain</b> <i>optional</i>	Array of advertiser domains (e.g., advertiser.com) allowed to bid on this deal. Omission implies no advertiser restrictions.	< <a href="#">wadomain</a> > array
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

### wadomain

Name	Description	Schema
<b>domain</b> <i>required</i>	A domain name	string

## OpenRTB.PMP

This object is the private marketplace container for direct deals between buyers and sellers that may pertain to this impression. The actual deals are represented as a collection of Deal objects. Refer to Section 7.3 for more details.

Name	Description	Schema
<b>private_auction</b> <i>optional</i>	Indicator of auction eligibility to seats named in the Direct Deals object, where 0 = all bids are accepted, 1 = bids are restricted to the deals specified and the terms thereof.	integer

Name	Description	Schema
<b>deals</b> <i>optional</i>	Array of Deal (Section 3.2.12) objects that convey the specific deals applicable to this impression.	< <a href="#">OpenRTB.Deal</a> > array
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

## OpenRTB.Regis

This object contains any legal, governmental, or industry regulations that apply to the request. The coppa flag signals whether or not the request falls under the United States Federal Trade Commission's regulations for the United States Children's Online Privacy Protection Act ("COPPA").

Name	Description	Schema
<b>coppa</b> <i>optional</i>	Flag indicating if this request is subject to the COPPA regulations established by the USA FTC, where 0 = no, 1 = yes.	integer
<b>ext</b> <i>optional</i>		<a href="#">ext</a>

## OpenRTB.Source

This object describes the nature and behavior of the entity that is the source of the bid request upstream from the exchange. The primary purpose of this object is to define post-auction or upstream decisioning when the exchange itself does not control the final decision. A common example of this is header bidding, but it can also apply to upstream server entities such as another RTB exchange, a mediation platform, or an ad server combines direct campaigns with 3rd party demand in decisioning.

Name	Description	Schema
<b>fd</b> <i>optional</i>	Entity responsible for the final impression sale decision, where 0 = exchange, 1 = upstream source.	integer

Name	Description	Schema
<b>tid</b> <i>optional</i>	Transaction ID that must be common across all participants in this bid request (e.g., potentially multiple exchanges).	string
<b>pchain</b> <i>optional</i>	Payment ID chain string containing embedded syntax described in the TAG Payment ID Protocol v1.0.	string

## Digital Place Based Advertising Association

Also reference for OpenDirect v2 is the DPAA's DOOH extension, which can be used with OpenDirect for implementation of DOOH/OOH inventory.

A copy of the extension specification is available [here](#).

### DP-AA.Banner.ext

While the creative sizes will account for the unique specs the text based resolution will need to be clarified.

Name	Description	Schema
<b>dpi</b> <i>required</i>	This identifies if there is a minimum DPI for any text-based elements of the creative to ensure it is clearly legible and clear on the display.	integer
<b>exposetime</b> <i>required</i>	This identifies the exposure time per view that the creative will be displayed before refreshing to the next creative. Value will be represented in seconds	integer
<b>width</b> <i>required</i>	This identifies the actual physical dimension width (inches) of the ad creative's display size measured in inches. As the defined pixel sizes identify the standards, dependencies and considerations may vary based on whether the display will be on a tablet sized screen vs posters vs billboards	integer
<b>height</b> <i>required</i>	This identifies the actual physical dimension length (inches) of the ad creative's display size measured in inches. As the defined pixel sizes identify the standards, dependencies and	integer

Name	Description	Schema
	considerations may vary based on whether the display will be on a tablet sized screen vs posters vs billboards	

## DP-AA.BidRequest.ext

Modifiers are needed to account for latency (delayed ad delivery).

Name	Description	Schema
<b>displaytime</b> <i>required</i>	Expected time in epoch seconds UTC the ad will be shown. This is an estimated display time used for day & time targeting.	integer

## DP-AA.Data.ext

The Data object is intended to capture additional information about the user. Within the DOOH environment, the fields will reveal attributes about the expected viewers, not just an individual user.

Data records may come from one or more sources and each source will be provided uniquely.

Note: The passing of data records could also be solved via a Deal ID relationship as it sometimes done in traditional digital buying. This would entail setting up Deal IDs for a unique audience profile and establishing that accepted parameter between SSPs and DSPs. See section 3.2.20 (Deal)

Name	Description	Schema
<b>dataprovider</b> <i>required</i>	This identifies the source of the audience related data	integer
<b>agerange</b> <i>optional</i>	This identifies the pre-defined age ranges	integer

Name	Description	Schema
<b>agerangepersent</b> <i>optional</i>	This identifies the percentage of the given age range band to the overall audience enabling buyers to determine percentage of composition of the audience.	integer
<b>hhirange</b> <i>optional</i>	This identifies the pre-defined household income ranges	integer
<b>hhirangepersent</b> <i>optional</i>	This identifies the percentage of the given household income range to the overall audience enabling buyers to determine percentage of composition of the audience.	integer

## DP-AA.Device.ext

The device attributes need to be appended with the device venue to accurately identify the opportunity

Name	Description	Schema
<b>devicevenue</b> <i>required</i>	This identifies the venue of the console.	integer

## DP-AA.Geo.ext

This object will be used to describe the position

Name	Description	Schema
<b>positiontype</b> <i>required</i>	Descriptor identifying whether the media console is in a fixed position (ex. billboard, elevator, mall) vs a console that might move (ex. Ferry, taxi)	integer

## DP-AA.Imp.ext

The Impression object will need to account for the updated impression value as the actuals viewers are typically going to be greater than 1 impression.

Name	Description	Schema
<b>impmultiply</b> <i>required</i>	Adjustment to represent the number of expected viewers (delivered imps) expected to see the ad.  Note: the source of this value is declared in 3.2.16	number

## International Standards Organization

### ISO-639-1

Defines a language that the content is available in.

The API may support all or a subset of the languages specified in ISO 639-1 alpha 2.

Name	Description	Schema
<b>IsoCode</b> <i>required</i>	The language's two-character ISO code (ISO 639-1). <b>Length : 2</b>	string

### ISO-3166-1-a2

Defines a country that the API supports.

The API may support all or a subset of the countries specified in ISO 3166-1 alpha 2.

Name	Description	Schema
<b>IsoCode</b> <i>required</i>	The country's two-character ISO code (ISO 3166-1). <b>Length : 2</b>	string

### ISO-3166-1-a3

Defines a country that the API supports.

The API may support all or a subset of the countries specified in ISO 3166-1 alpha 3.

Name	Description	Schema
<b>ISOCode</b> <i>required</i>	The country's three-character ISO code (ISO 3166-1). <b>Length</b> : 3	string

## ISO-3166-2

Defines a region.

The API may support all or a subset of the countries specified in ISO 3166-2.

|Name|Description|Schema |**ISOCode**  
*required*|The regions's ISO code (ISO 3166-2).|string

=== ISO-4217 Defines a currency that the API supports.

The API may support all or a subset of the currencies specified in ISO-4217.

[options="header", cols=".3-11,^4"]

|Name|Description|Schema |**ISOCode**  
*required*|The currency's three-character ISO code (ISO 4217).  
**Length** : 3 | string