



移动广告交易平台版本：2.0.0

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# H2 openrtb 说明文档

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# H2 openrtb 说明文档

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## 2 欢迎进入程序化购买

程序化购买相关简介

## 3 集成和测试

开始进行

说明：

此文档是基于 OpenRTB-API-Specification-Version-2.2 的扩展。

OpenRTB 协议主要是用于 RTB 竞价交易，作为一个数字媒体的自动交易公开协议被广泛应用于平台、设备和广告解决方案中。

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## 4.1 BidRequest 对象：

### 4.1.1 BidRequest 对象概况

对象	是否支持	是否有扩展	是否有修改
BidRequest	是	否	否
Impression	是	是	是
Banner	是	否	否
PMP	是	否	否
Direct Deals	是	否	否
Video	否	否	否
Site	是	否	否
App	是	否	否
Content	是	否	否
Publisher	是	否	否
Producer	否	否	否
Device	是	是	否
Geo	是	否	否
User	是	否	否
Data	否	否	否
Segment	否	否	否

### 4.1.2 Bid Request Object

Filed	Scope	Type	Default	Description
id	required	string	-	Unique ID of the bid request, provided by the exchange. 由 SSP 提供的竞价请求唯一 ID。
imp	required	array of objects	-	Array of impression objects. Multiple impression auctions may be specified in a single bid request. At least one impression is required for a valid bid request. 广告曝光对象组。在一个竞价请求中可包含多个曝光对象。一次有效的竞价请求至少有一个曝光对象。
site	required	object	-	See Site Object 参见 Site Object
device	required	object	-	See Device Object 参见 Device Object
app	recommended for native apps	object		See App Object 参见 App Object
user	recommended	object	-	See User Object



				参见 User Object
tmax	optional	Integer	-	<p>Maximum amount of time in milliseconds to submit a bid (e.g., 120 means the bidder has 120ms to submit a bid before the auction is complete). If this value never changes across an exchange, then the exchange can supply this information offline.</p> <p>SSP RTB 竞价的超时时间（如：在竞拍结束前，竞价方只有 120 毫秒来进行竞价），SSP 可线下向提供信息。</p>
cur	optional	array of string	-	<p>Array of allowed currencies for bids on this bid request using ISO-4217 alphabetic codes. If only one currency is used by the exchange, this parameter is not required.</p> <p>竞价支持的货币类型列表，货币类型参考 ISO-4217。</p> <p>该数组为运用 ISO-4217 字母编码的竞价请求中允许使用的货币数组</p>
bcat	optional	array of string	-	<p>Blocked Advertiser Categories. Note that there is no existing categorization / taxonomy of advertiser industries. However, as a substitute, exchanges may decide to use IAB categories as an approximation. See Table 6.1-Content Categories in the IAB OpenRTB API Specifications Document Version 2.1.</p> <p>禁用的广告主分类列表。类别请参考 open rtb 协议 2.1 中的表 6.1。</p> <p>受限广告主分类属性。注意：目前对广告主产业还没有现成的编目方法，然而作为一个替代交易平台的替补可用 IR 分类来作为粗略估计。参考表 6.1 内容类别在 IAB OpenRTB API 规格文档版本 2.1.</p>
badv	optional	array of string	-	<p>Array of strings of blocked top-level domains of advertisers. For example, {"company1.com", "company2.com"}.</p> <p>禁用的广告主主域名列表。</p> <p>受限的广告主域名字符组串。如：{"company1.com","company2.com"}</p>
ext	optional	object	-	<p>This object is a placeholder that may contain custom JSON agreed to</p>



				by the parties in an OpenRTB transaction to support flexibility beyond the standards defined in this specification. 扩展字段。可以定义 open rtb 协议 2.1 中没有的字段。
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## 4.2 Impression 对象

### 4.2.1 Impression 对象扩展字段

字段名	字段范围	字段类型	字段说明
splash	optional	integer	是否开屏广告 0:不是 1:是
floating	optional	integer	是否视窗广告 0:不是 1:是

### 4.2.2 Impression 对象修改字段

字段名	字段范围	字段类型	字段说明
bidfloorcur	optional	string	竞价底价货币类型。默认是 CNY。

### 4.2.3 Impression Object

Field	Scope	Type	Default	Description
id	required	string	-	A unique identifier for this impression within the context of the bid request (typically, value starts with 1, and increments up to n for n impressions). 广告曝光对象 id (从 1 开始递增)。 在一个 bid request 中的广告印象 ID (通常情况, 该值从 1 开始递增)
banner	required	object	-	A reference to a banner object. Either a banner or a video object (or both if the impression could be either) must be included in an impression object. See Banner Object. NOTE-required for banner, mutually exclusive with video. banner 对象。请参考 Banner



				<p><b>Object。</b> 引用一个横幅对象。要么横幅或一个视频对象（或两者，如果曝光可以的话）必须包括在曝光对象。参考横幅对象。 注意的是，所需的旗帜与视频是相互排斥</p>
<i>instl</i>	optional	integer	0	<p>1 if the ad is interstitial or full screen; else 0 (i.e., no). 当为全插屏广告时，为 1。其他则为 0.</p>
tagid	optional	string	-	<p>Identifier for specific ad placement or ad tag that was used to initiate the auction. 广告位标识。</p>
bidfloor	optional	float	0	<p>Bid floor for this impression 底价。</p>
bidfloorcur	optional	string	CNY	<p>If bid floor is specified and multiple currencies supported per bid request, then currency should be specified here using ISO-4217 alphabetic codes. Note, this may be different from bid currency returned by bidder, if this is allowed on an exchange. 当前竞价的货币类型。</p>
pmp	optional	object	-	<p>A reference to the PMP object containing any Deals eligible for the impression object. See the PMP Object definition. pmp 对象</p>

### 4.3 Ext object

Field	Scope	Type	Description
splash	optional	integer	是否开屏广告 0:不是 1:是
floating	optional	integer	是否视窗广告 0:不是 1:是

### 4.4 Banner Object

Field	Scope	Type	Default	Description
w	required	integer	-	Width of the impression in pixels



				广告位的宽度（像素）。
h	required	integer	-	Height of the impression in pixels. 广告位高度（像素）
mimes	optional	array of string	all types are allowed	Whitelist of content MIME types supported. Popular MIME types MIME 类型的白名单（支持主流的 MIME 类型）
pos	optional	integer	-	广告位置。参考在 IAB OpenRTB API 规格文档版本 2.2 EE 表 6.5 的广告位置。
btype	optional	array of integer	all types are allowed	Blocked creative types. See Table 6.2- Banner Ad Types in the IAB OpenRTB API Specifications Document Version 2.2. If blank, assume all types are allowed. 禁用的创意类型列表。见 openrtb 2.2 表 6.2。当为空时，表示所有类型都被允许。 受限创意类型。见表 6.2。如为空，则假设允许所有类型。
battr	optional	array of integer	integer	Blocked creative attributes. See Table 6.3- Creative Attributes in the IAB OpenRTB API Specifications Document Version 2.2. If blank, assume all types are allowed. 禁用的创意属性列表。见 openrtb 2.2 表 6.3。当为空时，表示所有属性都被允许。 受限创意属性。见表 6.3。如为空，则假设允许所有类型
expdir	optional	array of integer	not expandable	Specify properties for an expandable ad. See Table 6.11- Expandable Direction in the IAB OpenRTB API Specifications Document Version 2.2. -for possible values.





				可扩展广告的属性列表。见 2.2x 协议的 6.11 表。 表明广告可扩展方向的实行。 见表 6.11。
api	optional	array of integers	None	List of supported API frameworks for this banner. (See Table 6.4 API Frameworks). If an API is not explicitly listed it is assumed not to be supported. banner 支持的 api 框架列表（见 2.2 协议的表 6.4）。如为空，则表示不支持。 列出横幅广告支持的 API 框架，若未详述 API，则假设其不受支持。

## 4.5 Video Object

Field	Scope	Type	Default	Description
mimes	required	string array	-	Content MIME types supported. Popular MIME types may include “video/x-ms-wmv” for Windows Media and “video/x-flv” for Flash Video. 内容的 MIME 类型的支持。流行的 MIME 类型可能包括“视频 / x-ms-wmv”“Windows 媒体”“视频 / x-flv”“Flash 视频”
w	recommended	integer	-	Width of the video player in pixels. 视频播放器的宽度
h	recommended	integer		Height of the video player in pixels. 视频播放器的高度
battr		integer array		Blocked creative attributes. 封闭性创意属性
pos		integer		Ad position on screen 屏幕上的广告位
protocol	DEPRECATED	integer		Supported video bid response protocol. 支持视频投标应答协议
maxduration	recommended	integer		Maximum video ad duration in seconds. 最大视频广告持续时间秒



## 4.6 Native Object

Field	Scope	Type	Default	Description
request	required	string	-	Request payload complying with the Native Ad Specification. 请求符合原生广告规格的负载。
ver	recommended	string	-	Version of the Native Ad Specification to which request complies; highly recommended for efficient parsing 原生广告规格说明书，要求符合；高效解析的高度推荐
battr	optional	integer array		Blocked creative attributes. 封闭性创意属性

## 4.7 PMP Object

Field	Scope	Type	Description
private_auction	optional	integer	An integer flag indicating that this impression is a private auction eligible only to seats named in the Direct Deals object. (e.g., 1 = bids for this impression are restricted to the deals specified and the terms thereof; 0 = all bids are accepted) 是否是私有竞拍。（1：表示私有竞拍，0 则为公开竞拍） 一个整数，标志，标示着这个曝光是一个私人拍卖资格，仅对应着直接交易的对象。（e.g., 1 = 投标这种曝光只限于指定交易的条款没有的; 0 = 所有投标被接受）
deals	optional	array of objects	A collection of “deal” objects encapsulating a list of direct deals eligible for this impression. deal 对象列表。



## 4.8 Direct Deals Object

Field	Scope	Type	Default	Description
id	required	String		A unique identifier for the direct deal. direct deal 唯一 id
bidfloor	optional	Float	0	Bid floor for this impression (in CPM of bidfloorcur). 曝光底价 (CPM 底价).
bidfloorcur	optional	String	USD	If bid floor is specified and multiple currencies supported per bid request, then currency should be specified here using ISO-4217 alphabetic codes. Note, this may be different from bid currency returned by bidder, if this is allowed on an exchange. 曝光底价货币类型。参照 ISO-4217.
wseat	optional	array of strings	-	Array of buyer seats allowed to bid on this Direct Deal. Seats are an optional feature of an exchange. For example, ["4","34","82","45"] indicates that only advertisers using these exchange seats are allowed to bid on this direct deal. direct deal 指定的买方席位类别。 买方席位阵列允许这笔投标直接交易。席位交换的可选功能。例如, ["4","34","82","45"] 表明, 使用这些交易所的席位只有广告主被允许这笔投标直接交易。
wadomain	optional	array of strings	-	Array of advertiser domains allowed to bid on this Direct Deal. For example, ["advertiser1.com","advertiser2.com"] indicates that only the listed advertisers are allowed to bid on this direct deal. direct deal 允许的广告主域名列表。 广告主域名允许这笔投标直接交易。例如, ["advertiser1.com","advertiser2.com"] 表示只有上市广告客户可以竞标这一直接交易。
at	optional	Integer	-	Auction type. If "1", then first price auction. If "2", then second price auction. If "3", the passed bidfloor indicates the apriori agreed upon deal price. Additional auction types can be defined as per the exchange's business rules. 竞拍类型。默认为 3, 其他不支持。 拍卖类型。如果 "1", 那么第一价格拍卖。如果 "2", 那么第二价格拍卖。如果 "3", 所传递的 bidfloor 表示先验正商定的交易价格。其他拍卖类型可以被定义为按照交易所的业务规则。



## 4.9 Site Object

Field	Scope	Type	Default	Description
page	required	string	-	URL of the page where the impression will be shown. 广告显示页面的 url。 在一个 bid request 中的广告印象 ID(通常情况，该值从 1 开始递增)
name	optional	string	-	Site name (may be masked at publisher's request). 网站名称(可能会被媒体方的请求隐藏)
ref	optional	string	-	Referrer URL that caused navigation to the current page. 引导至当前页的提交页面 URL
keywords	optional	string	-	List of keywords describing this site in a comma separated string. 以逗号区隔的关键词列表,用以描述网站
content	optional	object	-	See Content Object 参考 Content Object



## 4.10 Device 对象

### 4.10.1 Device 对象扩展字段

字段名	字段范围	字段类型	字段说明
device_id	recommended	string	设备 ID 号。 对于 IOS(6.0 及以上)设备, 该值为 idfa 进行加密后的值 对于 IOS(6.0 以下)设备, 该值为 mac 进行加密后的值 对于 android 设备, 该值为 imei 进行加密后的值 加密规则和密钥请联系 exchange 接口人
device_sw	optional	string	设备屏幕分辨率宽度像素数
device_sh	optional	string	设备屏幕分辨率高度像素数
device_pixel_ratio	optional	Integer	设备像素比例。
device_orientation	optional	Integer	设备屏幕方向 1: 竖向, 2: 横向, 3: 正方形

### 4.10.2 Device Object

Field	Scope	Type	Description
dnt	recommended	Integer	If "0", then do not track is set to false, if "1", then do no track is set to true in browser. 浏览器中的不被跟踪的设置: 0 表示设置为假(允许跟踪); 1 表示设置为真(不被跟踪)。
ua	recommend	string	Browser user agent string. 浏览器 ua 信息。
ip	required	string	IPv4 address closest to the device. ip 地址 最接近设备的 IPv4 地址。
language	optional	string	Browser language; use alpha-2/ISO 639-1 codes. 浏览器语言。用 alpha-2/ISO 639-1 代码。
js	recommended	integer	"1" if the device supports JavaScript; else "0".



			1 表示支持 JavaScript；0 表示不支持。
geo	recommended if IP is not supplied	object	Geography as derived from the device's location services (e.g., cell tower triangulation, GPS) or IP address. See Geo ObjectError! Reference source not found. 地理位置信息。
carrier	optional	string	Carrier or ISP derived from the IP address. Should be specified using Mobile Network Code (MNC) <a href="http://en.">http://en.</a> 运营商 ISP
didmd5	optional	string	MD5 hashed device ID; IMEI when available, else MEID or ESN. Should be interpreted as case insensitive. 设备 ID 的 MD5 编码。优先是 IMEI，其次是 MEID 或 ESN，大小写敏感。
dpidmd5	optional	string	MD5 hashed platform-specific ID (e.g., Android ID or UDID for iOS). Should be interpreted as case insensitive. 平台 ID 的 MD5 编码。大小写敏感
macmd5	optional	string	MD5 hashed MAC address of the device. MAC 地址的 MD5 编码。
make	optional	string	Device make (e.g., "Apple"). 设备生产商
model	optional	string	Device model (e.g., "iPhone"). 设备型号
osv	optional	string	Device operating system version (e.g., "3.1.2"). 设备操作系统的版本。
os	optional	string	Device operating system (e.g., "iOS"). 设备操作系统
connectiontype	optional	integer	Return the detected data connection type for the device. See Table 6.10 Connection Type. 表明探测到的设备上网类型数据。见表 6.10。
devicetype	optional	integer	Return the device type being used. See Table 6.16 Device Type. 设备类型。具体可参考 2.2 表 6.16
ifa	optional	string	Native identifier for advertisers; an opaque ID assigned by the device or browser for use as an advertising identifier. (e.g. Apple's IFA, Android's Advertising ID, etc) 原始的设备标识 ID。例如苹果的 IFA，安卓的广告 ID。 本地标识为广告主;作为广告标识符用于分配由设备或浏览器的不透明标识. (e.g. Apple's IFA, Android's Advertising ID, etc)



## 4.11 Ext object

Field	Scope	Type	Description
device_id	recommended	string	设备 ID 号。 对于 IOS(6.0 及以上)设备，该值为 idfa 进行加密后的值 对于 IOS(6.0 以下)设备，该值为 mac 进行加密后的值 对于 android 设备，该值为 imei 进行加密后的值 加密规则和密钥请联系 exchange 接口人
device_sw	optional	string	设备屏幕分辨率宽度像素数
device_sh	optional	string	设备屏幕分辨率高度像素数
device_pixel_ratio	optional	Integer	设备像素比例。
device_orientation	optional	Integer	设备屏幕方向 1: 竖向, 2: 横向, 3: 正方形

## 4.12 Geo Object

Field	Scope	Type	Description
lat	optional	float	Latitude from -90 to 90. South is negative. This should only be passed if known to be accurate (For example, not the centroid of 纬度。 从北纬-90 到北纬 90. 南为负.
lon	optional	float	Longitude from -180 to 180. West is negative. This should only be passed if known to be accurate. 经度。从-180 到 180. 西为负.
country	optional	string	Country using ISO-3166-1 Alpha-3. 所在国家编码，参考 ISO-3166-1
region	optional	string	Region using ISO 3166-2. 所在地区编码。采用 ISO3166-2
type	recommended	integer	Indicate the source of the geo data (GPS, IP address, user provided). See Table 6.15 Location Type for a list of potential values. Type should be provided when lat/lon is provided. I 表示地理数据的来源（GPS，IP 地址，用户提供）。见表 6.15



## 4.13 App Object

Field	Scope	Type	Description
id	recommend	string	Application ID on the exchange. 应用在 SSP 平台上面的应用 ID.
name	optional	string	Application name (may be masked at publisher's request). 应用名称 (可以被媒体要求而屏蔽).
domain	optional	string	Domain of the application (e.g., "mygame.foo.com"). 应用程序的域名 (e.g., "mygame.foo.com").
cat	optional	array of strings	Array of IAB content categories for the overall application. 应用程序分类列表.
sectioncat	optional	array of strings	Array of IAB content categories for the current subsection of the app. 应用程序当前部分分类列表.
pagecat	optional	array of strings	Array of IAB content categories for the current page/view of the app. 应用程序当前页面分类列表.
ver	optional	string	Application version. 应用版本.
bundle	recommended	string	Application bundle or package name (e.g., com.foo.mygame). This is intended to be a unique ID across multiple exchanges. 应用程序包和包名 (e.g., com.foo.mygame). 这是为了在多个交易平台中使用一个唯一的 ID.
privacypolicy	optional	integer	Specifies whether the app has a privacy policy. "1" means there is a policy and "0" means there is not. 指定应用程序是否有隐私政策. "1" 表示有一个政策和 "0" 表示不存在.
publisher	optional	object	See Publisher Object 参考 Publisher Object
paid	optional	integer	"1" if the application is a paid version; else "0" (i.e., free). "1", 如果应用程序是付费版本; 否则为 "0" (i.e., free).
keywords	optional	string	List of keywords describing this app in a comma separated string. ALTERNATE 描述应用程序的关键词列表.
storeurl	optional	string	For QAG 1.5 compliance, an app store URL for an installed app should be passed in the bid request.





			应用商店应用程序的 url。
content	optional	object	See Content Object 参考内容对象

## 4.14 Content Object

Field	Scope	Type	Description
id	optional	string	ID uniquely identifying the content 内容的唯一识别 ID。
<i>contentrating</i>	optional	string	Content rating (e.g., MPAA) 内容分级。
<i>userrating</i>	optional	string	User rating of the content (e.g., number of stars, likes, etc.). 用户评价(e.g., 众多星级, 喜好 等.).
context	optional	string	Specifies the type of content (game, video, text, etc.). See Table <b>6.13</b> Content Context. 指定的内容的类型(游戏, 视频, 文本等.). 见表 6.13 上下文内容。

## 4.15 Publisher Object

Field	Scope	Type	Description
id	recommended	string	Publisher ID on the exchange. 媒体在 SSP 平台上的 ID
name	optional	string	Publisher name (may be masked at publisher's request). 媒体名称 (可能会隐藏)
cat	optional	array of strings	Array of IAB content categories for the publisher. See Table 6.1 Content Categories. 媒体分类列表 (遵循 IAB), 见表 6.1

## 4.16 User Object

Field	Scope	Type	Description
id	recommended	string	Unique consumer ID of this user on the exchange. 用户在 SSP 平台上面的 ID.
buyerid	recommended	string	Buyer's user ID for this user as mapped by exchange for the buyer. 需求方的用户 ID。



## 4.17 BidResponse 对象

### 4.17.1 BidResponse 对象概况

对象	是否支持	是否有扩展	是否有修改
BidResponse	是	否	否
Seat Bid	是	否	否
Bid	是	是	是

### 4.17.2 Bid 对象扩展字段

字段名	字段范围	字段类型	字段说明
impmonurl	optional	array of string	曝光监控。主要用于投放前审核，DSP 可以实时的把监测地址给到 SSP。SSP 会执行该监测。
clkmonurl	optional	array of string	点击监控。主要用于投放前审核，DSP 可以实时的把监测地址给到 SSP。SSP 会执行该监测。
clkurl	optional	string	落地页面。主要用于投放前审核，SSP 会优先使用实时传递过来的落地页面地址。
extend	optional	string	DSP 扩展参数。注意：该数据必须 url 安全。(一般使用 base64 或 base85 编码)
instl	optional	integer	仅在全插屏广告时返回。插屏:1,全屏: 2
splash_time	optional	integer	仅在开屏广告时返回，标识开屏广告的播放时长(秒)
splash_end	optional	string	仅在开屏广告时返回，标识开屏广告的过期时间，格式 :YYYYMMdd ， 例如 20140730, 广告展示到 2014 年 7 月 29 日结束，7 月 30 日不再展示



### 4.17.3 Bid 对象修改字段

字段名	字段范围	字段类型	字段说明
crid	optional	string	用于投放前审核。需求方平台在上传素材的同时，也须同时填入创意 id。

### 4.17.4 Bid response object

Field	Scope	Type	Description
id	required	string	ID of the bid request. 对应竞价的竞价请求的 ID
seatbid	required	array of objects	Array of seatbid objects- always single seat. 竞价席位对象类别
bidid	optional	string	Bid response ID to assist tracking for bidders. This value is chosen by the bidder for cross- reference. 竞价响应 ID，被用于辅助竞价方追踪监测。该值由竞价方选择以便交叉检查
cur	optional	string	Bid currency using ISO-4217 alphabetic codes; default is "CNY". 竞价的货币种类使用 ISO-4217 编码标准。在 H2 实时竞价中必须以人民币交易

### 4.17.5 Seat Bid Object

Field	Scope	Type	Description
bid	required	array of objects	Array of bid objects; each bid object relates to an imp object in the bid request. Note that, if supported by an exchange, one imp object can have many bid objects. 竞价对象组。每个竞价对象关联竞价请求中的一个广告



			曝光对象。
seat	optional	string	ID of the bidder seat on whose behalf this bid is made. 竞价方席位 ID。

#### 4.17.6 Bid Object

Field	Scope	Type	Description
id	required	string	ID for the bid object chosen by the bidder for tracking and debugging purposes. Useful when multiple bids are submitted for a single impression for a given seat.  竞价对象 ID, 由竞价方选择用以追踪监测及排除故障。将有助于对一个广告印象进行竞价的多个席位
impid	required	string	ID of the impression object to which this bid applies.  曝光对象 ID。
price	required	float	Bid price in CPM. WARNING-Best Practice Note- Although this value is a float, OpenRTB strongly suggests using integer math for accounting to avoid rounding errors.  出价。 以 CPM 计价。
adid	optional	string	ID that references the ad to be served if the bid wins. 广告 ID。
nurl	optional	string	Win notice URL. Note that the markup is also typically, but not necessarily, returned via this URL.  竞价胜出通知的 URL。
adm	optional	string	Actual ad markup. XHTML if



			<p>a response to a banner object, or VAST XML if a response to a video object, 目前采用 UTF-8 编码。</p> <p>A 实际的广告标记。如果 XHTML 到一个横幅对象, 或 VAST 的 XML, 如果对一个视频对象的响应, 目前采用 UTF-8 编码</p>
adomain	optional	array of string	<p>Advertiser's primary or top-level domain for the advertiser checking. This can be a list of domains if there is a rotating creative. However, exchanges may mandate that only one landing domain is allowed.</p> <p>广告主域名列表。以供广告审核, 若是轮播创意, 可列出域名列表。然而, 交易平台可能仅允许唯一登录域名授权</p>
crid	required	string	<p>Creative ID for reporting content issues or defects. This could also be used as a reference to a creative ID that is posted within an exchange.</p> <p>创意 ID, 用来报告广告内容问题或缺陷。也可用于参照交易平台上已审核的广告创意 ID。</p>
attr	optional	array of integers	<p>Array of creative attributes. See Table 6.3- Creative Attributes in the IAB OpenRTB API Specifications Document Version 2.1.</p> <p>创意属性列表</p>
dealid	optional	string	<p>A unique identifier for the direct deal associated with the bid. If the bid is associated and in response to a dealid in the request object it is required in the response object.</p> <p>与投标相关的直接交易的唯一标识符。如果出价关</p>



			联的，并且响应于在所述请求对象中的 dealid 它需要在对象中响应。
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## 4.18 Ext object

## 5 Reference Lists/Enumerations 参考列表/参照表

BEST PRACTICE : All reference lists are actively maintained by the IAB on the OpenRTB web site. As such, implementers should ensure they are working from the latest lists and enumerations

### 5.1 Content Categories 内容类别

The following list represents the IAB's contextual taxonomy for categorization. Standard IDs have been adopted to easily support the communication of primary and secondary categories for various objects. Note to the reader: This OpenRTB table has values derived from the IAB Quality Assurance Guidelines (QAG). Users of OpenRTB should keep in synch with updates to the QAG values as published on IAB.net.

请读者注意：此 OpenRTB 表有来自 IAB (QAG)。使用 OpenRTB 的用户应保持同步并及时根据 IAB.net 所公布的信息更新 QAG 值。

Value	Description
IAB1	Arts & Entertainment 艺术与娱乐
IAB1-1	Books & Literature 图书与文学
IAB1-2	Celebrity Fan/Gossip 名人/绯闻
IAB1-3	Fine Art 美术
IAB1-4	Humor 幽默
IAB1-5	Movies 电影
IAB1-6	Music 音乐
IAB1-7	Television 电视
IAB2	Automotive 汽车
IAB2-1	Auto Parts 汽车配件
IAB2-2	Auto Repair 汽车修理
IAB2-3	Buying/Selling Cars 买/卖汽车
IAB2-4	Car Culture 汽车文化
IAB2-5	Certified Pre-Owned 二手认证
IAB2-6	Convertible 转卖
IAB2-7	Coupe 跑车
IAB2-8	Crossover 跨界车
IAB2-9	Diesel 柴油
IAB2-10	Electric Vehicle 电动车



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IAB2-11	Hatchback 两厢
IAB2-12	Hybrid 混合
IAB2-13	Luxury 豪华
IAB2-14	MiniVan 面包车
IAB2-15	Mororcycles 摩托车
IAB2-16	Off-Road Vehicles 越野车
IAB2-17	Performance Vehicles 高性能汽车
IAB2-18	Pickup 皮卡
IAB2-19	Road-Side Assistance 路边援助
IAB2-20	Sedan 轿车
IAB2-21	Trucks & Accessories 卡车及配件
IAB2-22	Vintage Cars 老爷车
IAB2-23	Wagon 旅行车
IAB3	Business 业务
IAB3-1	Advertising 广告
IAB3-2	Agriculture 农业
IAB3-3	Biotech/Biomedical 生物技术/生物医院
IAB3-4	Business Software 商业软件
IAB3-5	Construction 建设
IAB3-6	Forestry 林业
IAB3-7	Government 政府
IAB3-8	Green Solutions 绿色解决方案
IAB3-9	Human Resources 人力资源
IAB3-10	Logistics 物流
IAB3-11	Marketing 营销
IAB3-12	Metals 金属
IAB4	Careers 职业
IAB4-1	Career Planning 职业生涯规划
IAB4-2	College 学院
IAB4-3	Financial Aid 财政援助
IAB4-4	Job Fairs 招聘会
IAB4-5	Job Search 职业搜索
IAB4-6	Resume Writing/Advice 简历写作/咨询
IAB4-7	Nursing 护理
IAB4-8	Scholarships 奖学金
IAB4-9	Telecommuting 远程办公
IAB4-10	U.S. Military 美国军事
IAB4-11	Career Advice 职业建议
IAB5	Education 教育
IAB5-1	7-12 Education 教育
IAB5-2	Adult Education 成人教育
IAB5-3	Art History 艺术史
IAB5-4	Colledge Administration 管理公外
IAB5-5	College Life 大学生活
IAB5-6	Distance Learning 远程教育
IAB5-7	English as a 2nd Language 英语作为第二语言
IAB5-8	Language Learning 语言学习
IAB5-9	Graduate School 研究生院
IAB5-10	Homeschooling 在家上学
IAB5-11	Homework/Study Tips 作业/学习秘笈

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IAB5-12	K-6 Educators K-6 教育家
IAB5-13	Private School 私立学校
IAB5-14	Special Education 特殊教育
IAB5-15	Studying Business 研究业务
IAB6	Family & Parenting 家庭与教养
IAB6-1	Adoption 领养
IAB6-2	Babies & Toddlers 婴儿和幼儿
IAB6-3	Daycare/Pre School 日托/学校前
IAB6-4	Family Internet 家庭互联网
IAB6-5	Parenting - K-6 Kids 育儿 - K-6 儿童
IAB6-6	Parenting teens 育儿青少年
IAB6-7	Pregnancy 怀孕
IAB6-8	Special Needs Kids 特殊需要儿童
IAB6-9	Eldercare 老年保健
IAB7	Health & Fitness 健康与健身
IAB7-1	Exercise 运动
IAB7-2	A.D.D.
IAB7-3	AIDS/HIV 艾滋
IAB7-4	Allergies 过敏
IAB7-5	Alternative Medicine 替代医学
IAB7-6	Arthritis 关节炎
IAB7-7	Asthma 哮喘
IAB7-8	Autism/PDD 自闭症/ PDD
IAB7-9	Bipolar Disorder 躁郁症
IAB7-10	Brain Tumor 脑肿瘤
IAB7-11	Cancer 癌症
IAB7-12	Cholesterol 胆固醇
IAB7-13	Chronic Fatigue Syndrome 慢性疲劳综合征
IAB7-14	Chronic Pain 慢性疼痛
IAB7-15	Cold & Flu 感冒与流感
IAB7-16	Deafness 耳聋
IAB7-17	Dental Care 牙科保健
IAB7-18	Depression 萧条
IAB7-19	Dermatology 皮肤科
IAB7-20	Diabetes 糖尿病
IAB7-21	Epilepsy 癫痫
IAB7-22	GERD/Acid Reflux GERD/反酸
IAB7-23	Headaches/Migraines 头痛/偏头痛
IAB7-24	Heart Disease 心脏病
IAB7-25	Herbs for Health 中药健康
IAB7-26	Holistic Healing 整体治疗
IAB7-27	IBS/Crohn's Disease IBS/克罗恩氏病
IAB7-28	Incest/Abuse Support 乱伦/滥用支持
IAB7-29	Incontinence 尿失禁
IAB7-30	Infertility 不孕不育
IAB7-31	Men's Health 男性健康
IAB7-32	Nutrition 营养
IAB7-33	Orthopedics 骨科
IAB7-34	Panic/Anxiety Disorders 恐慌/焦虑症
IAB7-35	Pediatrics 儿科

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IAB7-36	Physical Therapy 物理疗法
IAB7-37	Psychology/Psychiatry 心理学/精神病学
IAB7-38	Senor Health 塞纳健康
IAB7-39	Sexuality 性行为
IAB7-40	Sleep Disorders 睡眠障碍
IAB7-41	Smoking Cessation 戒烟
IAB7-42	Substance Abuse 物质滥用
IAB7-43	Thyroid Disease 甲状腺疾病
IAB7-44	Weight Loss 减肥
IAB7-45	Women's Health 女性健康
IAB8	Food & Drink 食物和饮料
IAB8-1	American Cuisine 美国美食
IAB8-2	Barbecues & Grilling 烧烤和烧烤
IAB8-3	Cajun/Creole 印第安/克里奥尔
IAB8-4	Chinese Cuisine 中国菜
IAB8-5	Cocktails/Beer 鸡尾酒/啤酒
IAB8-6	Coffee/Tea 咖啡/茶
IAB8-7	Cuisine-Specific 美食特定
IAB8-8	Desserts & Baking 甜品和烘焙
IAB8-9	Dining Out 外出就餐
IAB8-10	Food Allergies 食物过敏
IAB8-11	French Cuisine 法国菜
IAB8-12	Health/Lowfat Cooking 健康/低脂烹饪
IAB8-13	Italian Cuisine 意大利美食
IAB8-14	Japanese Cuisine 日本料理
IAB8-15	Mexican Cuisine 墨西哥菜
IAB8-16	Vegan 素食
IAB8-17	Vegetarian 素食主义者
IAB8-18	Wine 葡萄酒
IAB9	Hobbies & Interests 兴趣嗜好
IAB9-1	Art/Technology 艺术/技术
IAB9-2	Arts & Crafts 工艺品
IAB9-3	Beadwork 珠饰细工
IAB9-4	Birdwatching 观鸟
IAB9-5	Board Games/Puzzles 棋类游戏/拼图
IAB9-6	Candle & Soap Making 蜡烛和肥皂制造
IAB9-7	Card Games 纸牌游戏
IAB9-8	Chess 象棋
IAB9-9	Cigars 雪茄
IAB9-10	Collecting 收集
IAB9-11	Comic Books 漫画书
IAB9-12	Drawing/Sketching 绘图/素描
IAB9-13	Freelance Writing 自由写作
IAB9-14	Genealogy 家谱
IAB9-15	Getting Published 入门发布
IAB9-16	Guitar 吉他
IAB9-17	Home Recording 家庭录音
IAB9-18	Investors & Patents 投资者及专利
IAB9-19	Jewelry Making 珠宝制作
IAB9-20	Magic & Illusion 魔术和幻觉

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IAB9-21	Needlework 刺绣
IAB9-22	Painting 绘画
IAB9-23	Photography 摄影
IAB9-24	Radio 电台
IAB9-25	Roleplaying Games 角色扮演游戏
IAB9-26	Sci-Fi & Fantasy 科幻与幻想
IAB9-27	Scrapbooking 剪贴
IAB9-28	Screenwriting 编剧
IAB9-29	Stamps & Coins 邮票钱币
IAB9-30	Video & Computer Games 视频和电脑游戏
IAB9-31	Woodworking 木工
IAB10	Home & Garden 家居与园艺
IAB10-1	Appliances 家电
IAB10-2	Entertaining 娱乐
IAB10-3	Environmental Safety 环境安全
IAB10-4	Gardening 园艺
IAB10-5	Home Repair 家居维修
IAB10-6	Home Theater 家庭影院
IAB10-7	Interior Decorating 室内装饰
IAB10-8	Landscaping 园林绿化
IAB10-9	Remodeling & Construction 改造与建设
IAB11	Law, Gov't & Politics 法律政府与政治
IAB11-1	Immigration 移民
IAB11-2	Legal Issues 法律问题
IAB11-3	U.S. Government Resources 美国政府资源
IAB11-4	Politics 政治
IAB11-5	Commentary 评论
IAB12	News 新闻
IAB12-1	International News 国际新闻
IAB12-2	National News 国家新闻
IAB12-3	Local News 本地新闻
IAB13	Personal Finance 个人理财
IAB13-1	Beginning Investing 开始投资
IAB13-2	Credit/Debt & Loans 信用/债务及贷款
IAB13-3	Financial News 财经新闻
IAB13-4	Financial Planning 财务规划
IAB13-5	Hedge Fund 对冲基金
IAB13-6	Insurance 保险
IAB13-7	Investing 投资
IAB13-8	Mutual Funds 共同基金
IAB13-9	Options 选项
IAB13-10	Retirement Planning 退休规划
IAB13-11	Stocks 股票
IAB13-12	Tax Planning 税务规划
IAB14	Society 协会
IAB14-1	Dating 约会
IAB14-2	Divorce Support 离婚支持
IAB14-3	Gay Life 同性恋生活
IAB14-4	Marriage 婚姻
IAB14-5	Senior Living 高级生活

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IAB14-6	Teens 青少年
IAB14-7	Weddings 婚礼
IAB14-8	Ethnic Specific 民族细分
IAB15	Science 科学
IAB15-1	Astrology 占星术
IAB15-2	Biology 生物学
IAB15-3	Chemistry 化学
IAB15-4	Geology 地质学
IAB15-5	Paranormal Phenomena 超自然现象
IAB15-6	Physics 物理
IAB15-7	Space/Astronomy 空间/天文
IAB15-8	Geography 地理
IAB15-9	Botany 植物学
IAB15-10	Weather 天气
IAB16	Pets 宠物
IAB16-1	Aquariums 水族馆
IAB16-2	Birds 鸟类
IAB16-3	Cats 猫类
IAB16-4	Dogs 狗类
IAB16-5	Large Animals 大型动物
IAB16-6	Reptiles 爬行动物
IAB16-7	Veterinary Medicine 兽医
IAB17	Sports 体育
IAB17-1	Auto Racing 赛车
IAB17-2	Baseball 棒球
IAB17-3	Bicycling 自行车
IAB17-4	Bodybuilding 健美
IAB17-5	Boxing 拳击
IAB17-6	Canoeing/Kayaking 独木舟/皮划艇
IAB17-7	Cheerleading 啦啦队
IAB17-8	Climbing 攀岩
IAB17-9	Cricket 板球
IAB17-10	Figure Skating 花样滑冰
IAB17-11	Fly Fishing 钓鱼
IAB17-12	Football 足球
IAB17-13	Freshwater Fishing 淡水钓鱼
IAB17-14	Game & Fish 游戏和鱼
IAB17-15	Golf 高尔夫
IAB17-16	Horse Racing 赛马
IAB17-17	Horses 马
IAB17-18	Hunting/Shooting 狩猎/射击
IAB17-19	Inline Skating 旱冰
IAB17-20	Martial Arts 武术
IAB17-21	Mountain Biking 山地自行车
IAB17-22	NASCAR Racing NASCAR 赛车
IAB17-23	Olympics 奥运会
IAB17-24	Paintball 彩弹
IAB17-25	Power & Motorcycles 电源及摩托车
IAB17-26	Pro Basketball 专业篮球
IAB17-27	Pro Ice Hockey 临冰球

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IAB17-28	Rodeo 圈地
IAB17-29	Rugby 橄榄球
IAB17-30	Running/Jogging 运行/慢跑
IAB17-31	Sailing 帆船
IAB17-32	Saltwater Fishing 海水捕捞
IAB17-33	Scuba Diving 潜水
IAB17-34	Skateboarding 滑板
IAB17-35	Skiing 滑雪
IAB17-36	Snowboarding 滑雪
IAB17-37	Surfing/Bodyboarding 冲浪/趴板冲浪
IAB17-38	Swimming 游泳
IAB17-39	Table Tennis/Ping-Pong 乒乓球/乒乓
IAB17-40	Tennis 网球
IAB17-41	Volleyball 排球
IAB17-42	Walking 散步
IAB17-43	Waterski/Wakeboard 滑水/滑水
IAB17-44	World Soccer 世界足球
IAB18	Style & Fashion 样式和时尚
IAB18-1	Beauty 美容
IAB18-2	Body Art 人体艺术
IAB18-3	Fashion 时尚
IAB18-4	Jewelry 珠宝
IAB18-5	Clothing 服装
IAB18-6	Accessories 配件
IAB19	Technology & Computing 技术和计算机
IAB19-1	3-D Graphics 3-D 图形
IAB19-2	Animation 动画
IAB19-3	Antivirus Software 防病毒软件
IAB19-4	C/C++
IAB19-5	Cameras & Camcorders 相机及摄像机
IAB19-6	Cell Phones 手机
IAB19-7	Computer Certification 计算机认证
IAB19-8	Computer Networking 计算机网络
IAB19-9	Computer Peripherals 计算机外设
IAB19-10	Computer Reviews 电脑评测
IAB19-11	Data Centers 数据中心
IAB19-12	Databases 数据库
IAB19-13	Desktop Publishing 桌面出版
IAB19-14	Desktop Video 桌面视频
IAB19-15	Email 电子邮件
IAB19-16	Graphics Software 图形软件
IAB19-17	Home Video/DVD 家庭视频/ DVD
IAB19-18	Internet Technology 互联网技术
IAB19-19	Java
IAB19-20	JavaScript
IAB19-21	Mac Support
IAB19-22	MP3/MIDI
IAB19-23	Net Conferencing 网络会议
IAB19-24	Net for Beginners 网络入门
IAB19-25	Network Security 网络安全

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IAB19-26	Palmtops/PDAs 掌上电脑/掌上电脑
IAB19-27	PC Support PC 支持
IAB19-28	Portable 便携式
IAB19-29	Entertainment 娱乐
IAB19-30	Shareware/Freeware 共享软件/免费软件
IAB19-31	Unix
IAB19-32	Visual Basic
IAB19-33	Web Clip Art 网页剪贴画
IAB19-34	Web Design/HTML 网页设计/ HTML
IAB19-35	Web Search 网络搜索
IAB19-36	Windows 视窗
IAB20	Travel 旅游
IAB20-1	Adventure Travel 探险旅游
IAB20-2	Africa 非洲
IAB20-3	Air Travel 航空旅行
IAB20-4	Australia & New Zealand 澳大利亚和新西兰
IAB20-5	Bed & Breakfasts 民宿
IAB20-6	Budget Travel 预算旅游
IAB20-7	Business Travel 商务旅游
IAB20-8	By US Locale 通过美国的语言环境
IAB20-9	Camping 露营
IAB20-10	Canada 加拿大
IAB20-11	Caribbean 加勒比海
IAB20-12	Cruises 游轮
IAB20-13	Eastern Europe 东欧
IAB20-14	Europe 欧洲
IAB20-15	France 法国
IAB20-16	Greece 希腊
IAB20-17	Honeymoons/Getaways 蜜月/自助游
IAB20-18	Hotels 酒店
IAB20-19	Italy 意大利
IAB20-20	Japan 日本
IAB20-21	Mexico & Central America 墨西哥和中美洲
IAB20-22	National Parks 国家公园
IAB20-23	South America 南美
IAB20-24	Spas 温泉
IAB20-25	Theme Parks 主题公园
IAB20-26	Traveling with Kids 与孩子旅行
IAB20-27	United Kingdom 英国
IAB21	Real Estate 房地产
IAB21-1	Apartments 公寓
IAB21-2	Architects 建筑师
IAB21-3	Buying/Selling Homes 买/卖公寓
IAB22	Shopping 购物
IAB22-1	Contests & Freebies 竞赛和赠品
IAB22-2	Coupons 优惠券
IAB22-3	Comparison 比较
IAB22-4	Engines 引擎
IAB23	Religion & Spirituality 宗教与灵性
IAB23-1	Alternative Religions 替代宗教

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IAB23-2	Atheism/Agnosticism 无神论/不可知论
IAB23-3	Buddhism 佛教
IAB23-4	Catholicism 天主教
IAB23-5	Christianity 基督教
IAB23-6	Hinduism 印度教
IAB23-7	Islam 伊斯兰教
IAB23-8	Judaism 犹太教
IAB23-9	Latter-Day Saints 圣徒
IAB23-10	Pagan/Wiccan 异教徒/巫术
IAB24	Uncategorized 未分类
IAB25	Non-Standard Content 非标准内容
IAB25-1	Unmoderated UGC 未经协调的 UGC
IAB25-2	Extreme Graphic/Explicit Violence 至尊图形/显性暴力
IAB25-3	Pornography 色情
IAB25-4	Profane Content 亵渎内容
IAB25-5	Hate Content 仇恨的内容
IAB25-6	Under Construction 正在建设中
IAB25-7	Incentivized 诱因
IAB26	Illegal Content 非法内容
IAB26-1	Illegal Content 非法内容
IAB26-2	Warez
IAB26-3	Spyware/Malware 间谍软件/恶意软件
IAB26-4	Copyright Infringement 侵犯版权

## 5.2 Banner Ad Types

The following table indicates the types of ads that can be accepted by the exchange unless restricted by publisher site settings.

Value	Description
-------	-------------

- |   |  |
|---|--|
| 1 | XHTML text ad. (usually mobile) 文本广告（通常为移动设备）  |
| 2 | XHTML banner ad. (usually mobile) 横幅广告（通常为移动设备）  |
| 3 | JavaScript ad; must be valid XHTML (i.e., script tags included). JavaScript 广告；必须为有效 XHTML（例：包含脚本标签） |
| 4 | Iframe   |

## 5.3 Creative Attributes

The following table specifies a standard list of creative attributes that can describe an ad being served or serve as restrictions of thereof.

Value	Description
-------	-------------

- |   |  |
|---|--|
| 1 | Audio Ad (Auto Play) 音频广告（自动播放）                    |
| 2 | Audio Ad (User Initiated) 音频广告（用户触发）               |
| 3 | Expandable (Automatic) 可扩展广告（自动播放）                 |
| 4 | Expandable (User Initiated - Click) 可扩展广告（用户触发-点击） |
-



- 
- 5 Expandable (User Initiated - Rollover) 可扩展广告（用户触发-滚动）
  - 6 In-Banner Video Ad (Auto Play) 横幅视频广告（自动播放）
  - 7 In-Banner Video Ad (User Initiated) 横幅视频广告（用户触发）
  - 8 Pop (e.g., Over, Under, or upon Exit) 弹窗（例：弹出式、底层或退出）
  - 9 Provocative or Suggestive Imagery 引导性图片
  - 10 Shaky, Flashing, Flickering, Extreme Animation, Smileys 摇晃、闪光、闪烁、大动画、表情符号
  - 11 Surveys 调研
  - 12 Text Only 纯文本
  - 13 User Interactive (e.g., Embedded Games) 用户互动（例：嵌入式游戏）
  - 14 Windows Dialog or Alert Style 窗体对话或提醒形式
  - 15 Has audio on/off button 有音频开关按钮
  - 16 Ad can be skipped (e.g., skip button on preroll video) 广告能跳过（例：前贴片有跳过按钮）

## 5.4 API Frameworks API 框架

This is a list of API frameworks.

Value	Description
1	VPAID 1.0 视频播放器-广告界面定义 1.0
2	VPAID 2.0 视频播放器-广告界面定义 2.0
3	MRAID-1 手机富媒体界面定义-1
4	ORMMA 公开富媒体移动端广告
5	MRAID-2 手机富媒体界面定义-2



**BEST PRACTICE** : Note that MRAID-1 is a subset of MRAID-2. In OpenRTB 2.1 and prior, value #3 was “MRAID”. However, not all MRAID capable APIs understand MRAID-2 features and as such the only safe interpretation of value #3 is MRAID-1. In OpenRTB 2.2, this has been made explicit and MRAID-2 has been added as value #5.

## 5.5 Ad Position

The following table specifies the position of the ad as a relative measure of visibility or prominence. Note to the reader: This OpenRTB table has values derived from the IAB Quality Assurance Guidelines (QAG). Users of OpenRTB should keep in sync with updates to the QAG values as published on IAB.net. Values 3-6 apply to native apps per the mobile addendum to the version 1.5 of the QAG.

下表说明了广告位置可视性或特别性。注：H<sup>2</sup> 实时竞价的表单中的值系自 IAB QAG 中摘取。H<sup>2</sup> 实时竞价的广告主需依据 QAG 的值同步更新。QAG 值在 IAB.net 上发布。

Value	Description
0	Unknown 未知
1	Above the fold 不滚动即可见（例：首屏）
2	DEPRECATED - May or may not be immediately visible depending on screen size and resolution. 可能会也可能不会立即可见，取决于屏幕尺寸和分辨率。
3	Below the fold 该广告最初没有出现在屏幕或在屏幕下方需要滚动屏幕可见的可能性很高。
4	Header 页眉



- 
- 5 Footer 页脚
  - 6 Sidebar 侧边栏
  - 7 Fullscreen 全屏

## 5.6 Video Linearity

The following table indicates the options for video linearity. "In-stream" or "linear" video refers to pre-roll, post-roll, or mid-roll video ads where the user is forced to watch ad in order to see the video content. "Overlay" or "non-linear" refer to ads that are shown on top of the video content. Note to the reader: This OpenRTB table has values derived from the IAB Quality Assurance Guidelines (QAG). Users of OpenRTB should keep in synch with updates to the QAG values as published on IAB.net.

This field is optional. The following is the interpretation of the bidder based upon the presence or absence of the field in the bid request:

If no value is set, any ad (linear or not) can be present in the response.

If a value is set, only ads of the corresponding type can be present in the response.

Value	Description
1	Linear/In-stream
2	Non-Linear/Overlay

## 5.7 Video Bid Response Protocols

The following table lists the options for video bid response protocols that could be supported by an exchange.

Value	Description
1	VAST 1.0
2	VAST 2.0
3	VAST 3.0
4	VAST 1.0 Wrapper
5	VAST 2.0 Wrapper
6	VAST 3.0 Wrapper

## 5.8 Video Playback Methods

The following table lists the various video playback methods.

Value	Description
1	Auto-play sound on 自动播放有声音
2	Auto-play sound off 自动播放声音关闭
3	Click-to-play 点即玩
4	Mouse-over 鼠标悬停

---





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## 5.9 Video Start Delay

The following table lists the various options for the video start delay. If the start delay value is greater than 0 then the position is mid-roll, and the value represents the number of seconds into the content that the ad will be displayed. If the start delay time is not available, the exchange can report the position of the ad in general terms using this table of negative numbers.

Value	Description
-------	-------------

- |    |                         |
|----|-------------------------|
| 0  | Pre-roll 前贴             |
| -1 | Generic mid-roll 通用插播广告 |
| -2 | Generic Post-roll 通用后贴  |

## 5.10 Connection Type

The following table lists the various options for the connection type.

下表为链接选择方式

Value	Description
-------	-------------

- |   |  |
|---|--|
| 0 | Unknown 未知                                   |
| 1 | Ethernet 以太网                                 |
| 2 | Wifi   |
| 3 | Cellular data – Unknown Generation 蜂窝数字分组-未知 |
| 4 | Cellular data – 2G 蜂窝移动数据-2G                 |
| 5 | Cellular data – 3G 蜂窝移动数据-3G                 |
| 6 | Cellular data – 4G 蜂窝移动数据-4G                 |

## 5.11 Expandable Direction

The following table lists the directions in which an expandable ad may expand, given the positioning of the ad unit on the page and constraints imposed by the content.

假设广告位上的内容受页面位置影响的情况下，下表为广告可扩展的方向

Value	Description
-------	-------------

- |   |               |
|---|---------------|
| 1 | Left 左        |
| 2 | Right 右       |
| 3 | Up 上          |
| 4 | Down 下        |
| 5 | Fullscreen 全屏 |

## 5.12 Content Delivery Methods

The following table lists the various options for the delivery of video content.

Value	Description
-------	-------------

- |   |           |
|---|-----------|
| 1 | Streaming |
|---|-----------|
-

## 5.13 Content Context

The following table lists the various options for the content context; what type of content is it. Note to the reader: This OpenRTB table has values derived from the IAB Quality Assurance Guidelines (QAG). Users of OpenRTB should keep in synch with updates to the QAG values as published on IAB.net.

Value	Description
1	Video (a video file or stream that is being watched by the user, including (Internet) television broadcasts)
2	Game (an interactive software game that is being played by the user)
3	Music (an audio file or stream that is being listened to by the user, including (Internet) radio broadcasts)
4	Application (an interactive software application that is being used by the user)
5	Text (a document that is primarily textual in nature that is being read or viewed by the user, including web page, ebook, or news article)
6	Other (content type unknown or the user is consuming content which does not fit into one of the categories above)
7	Unknown

## 5.14 Video Quality

The following table lists the options for the video quality (as defined by the IAB – <http://www.iab.net/media/file/long-form-video-final.pdf>).

下表列出了视频质量（由 IAB 所定义的选项）

<http://www.iab.net/media/file/long-form-video-final.pdf>）。

Value	Description
0	Unknown 未知
1	Professionally Produced 专业制作
2	Prosumer 产消者
3	User Generated (UGC) 用户生成 (UGC)

## 5.15 Location Type

The following table lists the options to indicate how the geographic information was determined.

下表列出的选项，所述地理信息确定信息。




---

Value	Description
-------	-------------

- |   |   |
|---|---|
| 1 | GPS/Location ServicesGPS/定位服务                         |
| 2 | IP Address IP 地址                                      |
| 3 | User provided (e.g., registration data) 用户提供（例如，登记资料） |

## 5.16 Device Type

The following table lists the options to indicate how the geographic information was determined. Notes to the reader:

This OpenRTB table has values derived from the IAB Quality Assurance Guidelines (QAG). Users of OpenRTB should keep in synch with updates to the QAG values as published on IAB.net.

下表是确定地理位置的选择方式。注：OpenRTB 的表单中的值系自 IAB 的 QAG 条例中摘取。H<sup>2</sup> 实时竞价的用户需依据 QAG 的值同步更新。QAG 值在 IAB.net 上发布。

Version 2.2 of the spec added distinct values for Mobile and Tablet. Any implementing exchange and bidder should co-ordinate dependencies on transmitting or receiving the new values. It is recommended that any bidder adding support for 2.2 treat a value of 1 as an acceptable alias of 4 & 5.

Value	Description	Note
1	Mobile/Tablet	Version 2.0. 移动/平板设备
2	Personal Computer	Version 2.0 个人电脑
3	Connected TV	Version 2.0 有线电视
4	Phone	New for Version 2.2. 电话
5	Tablet	New for Version 2.2 平板
6	Connected Device	New for Version 2.2 连接设备
7	Set Top Box	New for Version 2.2 智能机顶盒

## 5.17 VAST Companion Types

The following table lists the options to indicate markup types allowed for video companion ads.

下表列出的选项，以指视频广告可标记类型。

This table is derived from IAB VAST 2.0+. See [www.iab.net/vast/](http://www.iab.net/vast/) for more information.

Value	Description
1	Static Resource 静态资源
2	HTML Resource
3	iframe Resource

## 5.18 QAG Media Ratings

The following table lists the media ratings using the QAG categorization.

下表列出了使用 QAG 分类的媒体的评分

[http://www.iab.net/ne\\_guidelines](http://www.iab.net/ne_guidelines) for more information

Value	Description
1	All Audiences 所有受众

---



- 
- 2 Everyone over 12 12 岁以上受众
  - 3 Mature Audiences 成年人受众

## 5.19 No-Bid Reason Codes

The following table lists the options to signal the exchange why the impression was not bid on.  
下表列出的选项表明未出价信息。

Value Description

- 0 Unknown Error 未知错误
- 1 Technical Error 技术错误
- 2 Invalid Request 无效请求
- 3 Known Web spider 已知网络
- 4 Suspected Non-Human Traffic 怀疑作弊流量
- 5 Cloud, Data center, or Proxy IP 云计算，数据中心，或代理 IP
- 6 Unsupported Device 不支持的设备
- 7 Blocked Publisher or Site 阻止媒体或网站
- 8 Unmatched user 不匹配用户

## 6 Sample

### 6.1 Mobile

**BidRequest:**

```
{
  "id": "539D4B5A-1C9C-97BA-CE74-50B900000000",
  "imp": [{
    "id": "1",
    "banner": {
      "w": 960,
      "h": 720,
      "mimes": ["image/jpeg"],
      "btype": [4],
      "batrr": [14],
      "pos": 1,
      "api": [3]
    },
    "instl": 1,
    "bidfloor": 1.2,
    "bidfloorcur": "CNY",
  }],
  "site": {
    "page": "http://www.example.com",
```



```
    },
    "app": {
      "id": "agltb3B1Yi1pbmNyDAsSA0FwcBiJkflUDA",
      "name": "Yahoo Weather",
      "cat": [ "weather", "IAB15", "IAB15-10" ],
      "ver": "1.0.2",
      "bundle": "628677149",
      "storeurl": "https://itunes.apple.com/id628677149"
    },
    "device": {
      "dnt": 0,
      "ua": "Mozilla/5.0 (iPhone; CPU iPhone OS 6_1 like Mac OS X) AppleWebKit/534.46 (KHTML, like Gecko) Version/5.1 Mobile/9A334 Safari/7534.48.3",
      "ip": "222.66.142.90",
      "language": "cn",
      "geo": {
        "country": "CN",
        "lat": 31.012345,
        "lon": 121.12345
      },
      "dpidmd5": "AA003EABFB29E6F759F3BDAB34E50BB11",
      "carrier": "310-410",
      "make": "Apple",
      "model": "iPhone 5s",
      "os": "ios",
      "osv": "6.1",
      "connectiontype": 3,
      "devicetype": 1,
      "js": 1,
      "ext": {
        "device_id": "11203ERBFF2719F759F3ED1334E50FE1A",
        "device_sw": "1024",
        "device_sh": "768",
        "device_pixel_ratio": 1.5,
      }
    },
    "user": {
      "id": "20692dc0eb8028f968130002ccaf1c2e",
    },
    "cur": ["CNY"]
  }
```

## 7 宏的使用说明

- 1、\${EXTEND}  
DSP Extension code
- 2、\${AUCTION\_PRICE}



Unencrypted price

3、\${AUCTION\_PRICE:BLOWFISH}

Winnotice is encrypted by blowfish algorithm via base64 code. See c++/java pecification.

Blowfish 解密可参考 blowfish 文件夹下的测试代码。

4、\${CLICK\_URL}

点击监测地址。

5、\${IMP\_URL}

曝光监测地址

---