



RTB Project

*OpenRTB Dynamic Native Ads API
Specification Version 1.1*

DRAFT

You should take no reliance or action on this draft. Please wait for the final document to be published.

November, 2015

Introduction

The Native Ads sub-committee of the IAB OpenRTB Project assembled in May 2014 to develop a new supplementary API specification for companies interested in an open protocol for the automated trading of Native Ads enabled media across a broader range of platforms, devices, and advertising solutions. This document is the culmination of those efforts.

ABOUT THE IAB'S TECHNOLOGY LAB

The IAB Technology Laboratory 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 18 years have been the foundation for interoperability and profitable growth in the digital advertising supply chain.

Further details about the IAB Technology Lab can be found at:

<http://www.iab.com/organizations/iab-tech-lab/>. The OpenRTB Work Group is a working group within the IAB Technology Lab.

This document can be found at www.iab.com

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Change Log

Version	Date	Section Link	Change
1.0	Jan 2015		Original Version
1.1	Oct 2015	Examples	Correct ver field to a string in the examples
1.1	Oct 2015	Video request example	Added supported mime types to video request example
1.1	Oct 2015		Miscellaneous typos and corrections throughout
1.1	Oct 2015	Native Request Object	Further described how the 'seq' parameter is meant to be used
1.1	Oct 2015	Native Response Object	Mark as 'to be deprecated' imtrackers and jstrackers, in deference to a new more generic trackers object to be added to the parent OpenRTB 2.4 spec
1.1	Oct 2015	Title Object	Creative element standardization - created recommended supported fields, lengths, and sizes

		Data Asset Types Image Asset Types	for the image, title, and data asset objects to promote standardization
1.1	Oct 2015	Native Ad Request Context IDs Context Subtype IDs Placement Type IDs	Mark as 'to be deprecated' AdUnitID and LayoutID, and replace with new fields Context, Contextsubtype, and Placementtype to better reflect the types of inventory being transacted natively and the new In-Feed IAB Deep Dive
1.1	Oct 2015	Bid Request Bid Response	Added support for direct-object representation in addition to encoded-string representation of native requests and responses.

Before You Get Started

This specification contains a detailed explanation of a sub-protocol of the OpenRTB real-time bidding interface. Not all objects are required, and each object may contain a number of optional parameters. To assist a first time reader of the specification, we have indicated which fields are essential to support a minimum viable real time bidding interface for various scenarios.

A minimal viable interface should include the **required** and **recommended** parameters, but the scope for these parameters may be limited to specific scenarios. In these cases, the scope will be qualified with the applicable scenarios (e.g., **required for native impressions** and **recommended for native impressions**). Conversely, if the scope is not qualified, it applies to all scenarios.

Optional parameters may be included to ensure maximum value is derived by the parties.

Field	Scope	Type	Default	Description
<u>id</u>	<u>required</u>	<u>string</u>	-	Unique ID of the bid request, provided by the exchange.
<u>version</u>	<u>required</u>	<u>string</u>	-	Open RTB version
<u>imp</u>	<u>required</u>	<u>array of objects</u>	-	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.
<u>site</u>	<u>recommended for websites</u>	<u>object</u>	-	See Site Object
<u>app</u>	<u>recommended for native apps</u>	<u>object</u>	-	See App Object
<u>device</u>	<u>recommended</u>	<u>object</u>	-	See Device Object
<u>user</u>	<u>recommended</u>	<u>object</u>	-	See User Object
<u>at</u>	<u>optional</u>	<u>string</u>	2	Auction Type. If "1", then first price auction. If "2", then second price auction. Additional auction types can be defined as per the exchange's business rules.
<u>tmax</u>	<u>optional</u>	<u>integer</u>	-	Maximum amount of time in milliseconds to submit a

Required parameters must be included.

Recommended parameters should be included unless there is a compelling reason to omit them.

Optional parameters may be included at your discretion.

IMPORTANT: Since **recommended** parameters are not required, they may not be available from all supply sources. It is suggested that all parties to OpenRTB transaction complete the integration checklist (please refer to OpenRTB) to identify which parameters the supply side supports in the bid request, and which parameters the demand side requires for ad decisioning.

1 Introduction

1.1 Mission / Overview

The mission of the OpenRTB Native project is to spur standardization and greater growth in the Real-Time Bidding (RTB) marketplace for Native Ads by providing open industry standards for communication between buyers of advertising and sellers of publisher inventory.

This specification is a sub-protocol of OpenRTB to allow for the delivery of native advertising formats, as their specifics differ from publisher to publisher. In May 2013, a separate IAB subcommittee was formed to define the request and response structures of native ad units; version 1.0 was published in early 2015. Version 1.1 is designed to fix errors, make

clarifications, and promote further adoption through refined standardization of assets and classification fields.

1.2 Credits / Project History

This document has been developed by the IAB Technology Lab’s OpenRTB Native Subgroup. The OpenRTB Working Group mission and participation list can be reviewed at: <http://www.iab.com/guidelines/real-time-bidding-rtb-project/>

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1.3 Resources

Resource	Location
OpenRTB Website	http://openrtb.info
OpenRTB Native Ads Project Page	http://github.com/openrtb/OpenRTB/NativeAds.html

Developer / Product Manager Mailing List	http://groups.google.com/group/openrtb-native
Making Sense of Programmatic Native (“OpenRTB for native for dummies”)	http://www.sharethrough.com/guides/programmatic-native/
IAB Deep-Dive on In-Feed Ads	http://www.iab.net/media/file/IAB_Deep_Dive_on_InFeed_Ad_Units.pdf
IAB Native Advertising Playbook	http://www.iab.net/media/file/IAB-Native-Advertising-Playbook2.pdf

1.4 Version History

Version 0.99.10.24 PUBLIC COMMENT DRAFT October 24, 2014

Version 0.99.10.27 PUBLIC COMMENT DRAFT October 27, 2014

Version 1.0.0.0 EXTERNAL DRAFT November 19, 2014

Version 1.0.0.1 EXTERNAL DRAFT December 14, 2014

Version 1.0.0.2 FINAL DRAFT January 23, 2015

Version **1.1** [In Process, Not done]

2 Native Ads Basics

Native advertising is an online advertising method in which the advertiser attempts to gain attention by providing content in the context of the user's experience. Native ad formats match both the form and function of the user experience in which it is placed. This is in contrast to traditional banner or interstitials ads, which are displayed in a separate space of predefined and universal size, without regard to their surroundings.




2.1 IAB Core Six

The [IAB Native Advertising Playbook](#) lists six types of native ad units:

- In Feed Units
- Paid Search Units
- Recommendation Widgets
- Promoted Listings
- IAB Standard with Native Elements
- Custom / “Can’t be contained”

2.2 Deep Dive on In-Feed Ad Units

To help further define and clarify the types and categories of native advertising, the IAB published a [Deep Dive on In-Feed Ad Units](#) in July 2015. Version 1.1 of the Native spec uses these concepts to refine the definitions of ad types, detailed below as Context and PlacementType, which will ultimately replace the previous LayoutID and AdUnitID, which were defined in Native 1.0 and based on the original Native Advertising Playbook referenced above.

	1	2	3
	Content Feeds	Social Feeds	Product Feeds
Where found	Publisher content sites and news aggregators such as CNN, Forbes, Yahoo	Social networking and messaging apps such as Facebook, Instagram, Tango	Retail sites and app listings such as Amazon, Etsy, eBay
Most common ad types/content objects	Story ad, video ad	Story ad, video ad, app install ad, product ad	Product ad, app install ad
Most common types of links	Articles, videos, stories, images, music	Social content, articles, videos, stories, images and music	Products and apps
Representative feed view			

2.3 Data Format

As this specification outlines an optional sub-protocol of the main OpenRTB protocol payload, the format must follow that of its parent. Please refer to the main OpenRTB specification for details of various formats that may be used

2.4 Versioning

The Native Object in the Bid Request (OpenRTB contains a “ver” field defining the version of the OpenRTB native extension.

2.5 Customization and Extensions

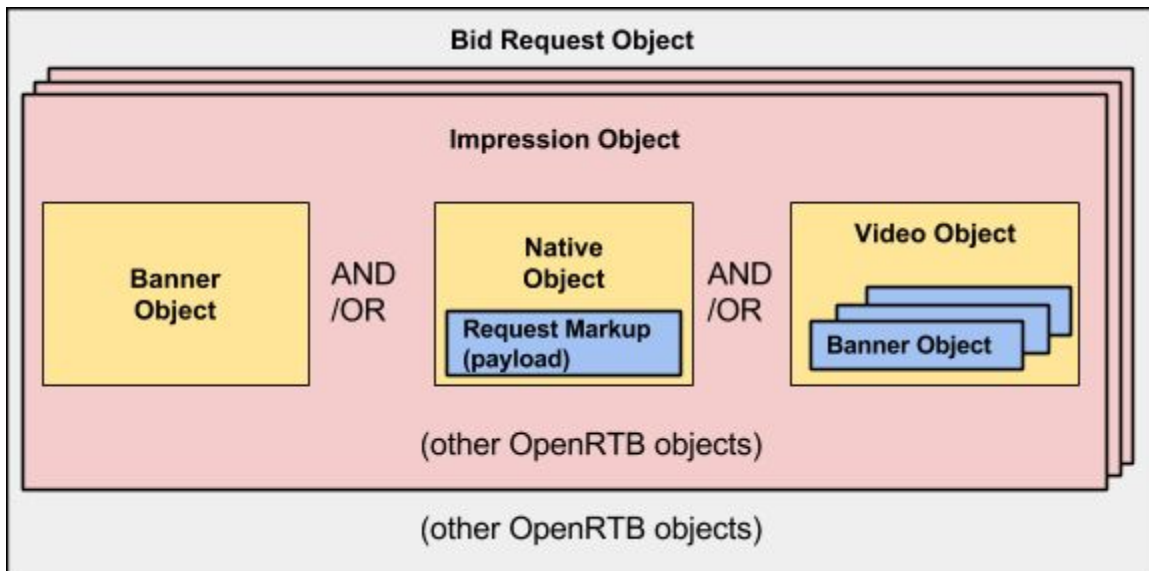
The OpenRTB Native Ads spec allows for exchange specific customization and extensions of the specification. Any object may contain extensions. In order to keep extension fields consistent across platforms, they should consistently be named “ext”.

3 Bid Request Details

RTB transactions are initiated when an exchange or other supply source sends a bid request to a bidder. The bid request consists of a bid request object, at least one impression object, and may optionally include additional objects providing impression context.

3.1 Native Object Hierarchy

Following is the object hierarchy for a bid request. The new Native Object is another optional element of the impression object, and can be specified as an alternative to or in conjunction with a banner object or video object.



4 Native Ad Request Markup Details

4.1 Native Markup Request Object

The Native Object defines the native advertising opportunity available for bid via this bid request. It will be included as a JSON-encoded string in the bid request’s `imp.native` field or as a direct JSON object, depending on the choice of the exchange. While Native 1.0 supported only JSON-encoded strings, it is now the recommendation that exchanges move to a direct object approach for ease of implementaton.

The **Default** column dictates how optional parameters should be interpreted if explicit values are not provided.

Field	Scope	Type	Default	Description
-------	-------	------	---------	-------------

ver	optional	string	1.1	Version of the Native Markup version in use.
layout	recommended in 1.0, to be deprecated	integer	-	The Layout ID of the native ad unit. See the Table of Layout IDs below.
adunit	recommended in 1.0, to be deprecated	integer	-	The Ad unit ID of the native ad unit. See Table of Ad Unit IDs below for a list of supported core ad units.
context	recommended	integer	-	The context in which the ad appears. See Table of Context IDs below for a list of supported context types.
contextsubtype	optional	integer	-	A more detailed context in which the ad appears. See Table of Context SubType IDs below for a list of supported context subtypes.
plcmtype	recommended	integer	-	The design/format/layout of the ad unit being offered. See Table of Placement Type IDs below for a list of supported placement types.
plcmcnt	optional	integer	1	The number of identical placements in this Layout. Refer Section 8.1 Multiplacement Bid Requests for further detail.
seq	optional	integer	0	0 for the first ad, 1 for the second ad, and so on. Note this would generally NOT be used in combination with plcmcnt - either you are auctioning multiple identical placements (in which case plcmcnt>1, seq=0) or you are holding separate auctions for distinct items in the feed (in which case plcmcnt=1, seq=>=1)
assets	required	array of objects	-	An array of Asset Objects . Any bid response must comply with the array of elements expressed in the bid request.

ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification
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Note: Prior to VERSION 1.1, the specification could be interpreted as requiring the native request to have a root node with a single field “native” that would contain the object above as its value. The Native Markup Request Object specified above is now the root object.

4.2 Asset Object

The main container object for each asset requested or supported by Exchange on behalf of the rendering client. Any object that is required is to be flagged as such. Only one of the {title,img,video,data} objects should be present in each object. All others should be null/absent. The id is to be unique within the AssetObject array so that the response can be aligned.

To be more explicit, it is the ID of each asset object that maps the response to the request. So if a request for a title object is sent with id 1, then the response containing the title should have an id of 1.

New in version 1.1 of the spec, there are recommended sizes/lengths/etc with some of the asset types. The goal for asset requirements standardization is to facilitate adoption of native by DSPs by limiting the diverse types/sizes/requirements of assets they must have available to purchase a native ad impression. While great diversity may exist in publishers, advertisers/DSPs can not be expected to provide infinite headline lengths, thumbnail aspect ratios, etc. While we have not gone as far as creating a single standard, we've honed in on a few options that cover the most common cases. SSPs can deviate from these standards, but should understand they may limit applicable DSP demand by doing so. DSPs should feel confident that if they support these standards they'll be able to access most native inventory.

Field	Scope	Type	Default	Description
id	required	int	-	Unique asset ID, assigned by exchange. Typically a counter for the array.
required	optional	int	0	Set to 1 if asset is required (exchange will not accept a bid without it)
title	recommended 1	object	-	Title object for title assets. See TitleObject definition.
img	recommended 1	object	-	Image object for image assets. See ImageObject definition.

video	optional ¹	object	-	Video object for video assets. See the Video request object definition. Note that in-stream (ie preroll, etc) video ads are not part of Native. Native ads may contain a video as the ad creative itself.
data	recommended 1	object	-	Data object for brand name, description, ratings, prices etc. See DataObject definition.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

¹: each asset object may contain only one of title, img, data or video.

4.3 Title Object

The Title object is to be used for title element of the Native ad.

Field	Scope	Type	Default	Description
len	required	integer	-	Maximum length of the text in the title element. Recommended to be 25, 90, or 140.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

4.4 Image Object

The Image object to be used for all image elements of the Native ad such as Icons, Main Image, etc. **Recommended sizes and aspect ratios are included in the [Image Asset Types section](#).**

Field	Scope	Type	Default	Description
type	optional	integer	-	Type ID of the image element supported by the publisher. The publisher can display this

				information in an appropriate format. See Table Image Asset Types .
w	optional	integer	-	Width of the image in pixels.
wmin	recommended	integer	-	The minimum requested width of the image in pixels. This option should be used for any rescaling of images by the client. Either w or wmin should be transmitted. If only w is included, it should be considered an exact requirement.
h	optional	integer	-	Height of the image in pixels.
hmin	recommended	integer	-	The minimum requested height of the image in pixels. This option should be used for any rescaling of images by the client. Either h or hmin should be transmitted. If only h is included, it should be considered an exact requirement.
mimes	optional	array of strings	All types allowed	<p>Whitelist of content MIME types supported. Popular MIME types include, but are not limited to “image/jpg” “image/gif”.</p> <p>Each implementing Exchange should have their own list of supported types in the integration docs. See Wikipedia's MIME page for more information and links to all IETF RFCs.</p> <p>If blank, assume all types are allowed.</p>
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

4.5 Video Object

The video object to be used for all video elements supported in the Native Ad. This corresponds to the Video object of OpenRTB. Exchange implementers can impose their own specific restrictions. Here are the required attributes of the Video Object. For optional attributes please refer to OpenRTB.

Field	Scope	Type	Default	Description
mimes	required	array of string		Content MIME types supported. Popular MIME types include, but are not limited to “video/x-ms-wmv” for Windows Media, and “video/x-flv” for Flash Video, or “video/mp4”. Note that native frequently does not support flash.
minduration	required	integer	-	Minimum video ad duration in seconds.
maxduration	required	integer	-	Maximum video ad duration in seconds.
protocols	required	array of integers	-	An array of video protocols the publisher can accept in the bid response. See OpenRTB Table ‘Video Bid Response Protocols’ for a list of possible values.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

4.6 Data Object

The Data Object is to be used for all non-core elements of the native unit such as Brand Name, Ratings, Review Count, Stars, Download count, descriptions etc. It is also generic for future native elements not contemplated at the time of the writing of this document. In some cases, additional recommendations are also included in the [Data Asset Types](#) table.

Field	Scope	Type	Default	Description
-------	-------	------	---------	-------------

type	required	integer	-	Type ID of the element supported by the publisher. The publisher can display this information in an appropriate format. See Data Asset Types table for commonly used examples.
len	optional	integer	-	Maximum length of the text in the element's response.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

5 Native Ad Response Markup Details

The structure and contents of the Bid Response are the same as in the OpenRTB standard. The difference is in how the ad creative is returned. **The native creative may be returned as either a JSON-encoded string in the adm field of the Bid Object or as a direct JSON object. While Native 1.0 supported only an encoded string, 1.1 adds support for a direct object and encourages adoption of that option to reduce confusion.**

5.1 Native Markup Response Object

The native object is the top level JSON object which identifies a native response. The native object has following attributes:

Field	Scope	Type	Default	Description
ver	optional	string	"1.1"	Version of the Native Markup version in use.
assets	required	array of objects	-	List of native ad's assets.
link	required	object	-	Destination Link. This is default link object for the ad. Individual assets can also have a link object which applies if the asset is activated(clicked). If the asset doesn't have a link object, the parent link object applies. See LinkObject Definition

imptrackers[]	optional	array of strings	-	Array of impression tracking URLs, expected to return a 1x1 image or 204 response - typically only passed when using 3rd party trackers. To be deprecated in future version - replaced by eventracker in parent OpenRTB 2.4 spec.
jstracker	optional	string	-	Optional JavaScript impression tracker. This is a valid HTML, Javascript is already wrapped in <script> tags. It should be executed at impression time where it can be supported. To be deprecated in future version - replaced by eventracker in parent OpenRTB 2.4 spec.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

Note: Prior to VERSION 1.1, the native response's root node was an object with a single field "native" that would contain the object above as its value. The Native Object specified above is now the root object.

5.2 Asset Object

Corresponds to the Asset Object in the request. The main container object for each asset requested or supported by Exchange on behalf of the rendering client. Any object that is required is to be flagged as such. Only one of the {title,img,video,data} objects should be present in each object. All others should be null/absent. The id is to be unique within the AssetObject array so that the response can be aligned.

Field	Scope	Type	Default	Description
id	required	int	-	Unique asset ID, assigned by exchange, must match one of the asset IDs in request.
required	optional	int	0	Set to 1 if asset is required. (bidder requires it to be displayed).

title	optional ¹	object	-	Title object for title assets. See TitleObject definition.
img	optional ¹	object	-	Image object for image assets. See ImageObject definition.
video	optional ¹	object	-	Video object for video assets. See Video response object definition. Note that in-stream video ads are not part of Native. Native ads may contain a video as the ad creative itself.
data	optional ¹	object	-	Data object for ratings, prices etc.
link	optional	object	-	Link object for call to actions. The link object applies if the asset item is activated (clicked). If there is no link object on the asset, the parent link object on the bid response applies.
ext ²	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

¹: asset object may contain only one of title, img, data or video.

²: Bidders are encouraged not to use asset.ext for exchanging text assets. Use data.ext with custom type instead.

5.3 Title Object

Corresponds to the Title Object in the request, with the value filled in.

Field	Scope	Type	Default	Description
text	required	String	-	The text associated with the text element.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the

standard defined in this specification

5.4 Image Object

Corresponds to the Image Object in the request. The Image object to be used for all image elements of the Native ad such as Icons, Main Image, etc.

Field	Scope	Type	Default	Description
url	required	string	-	URL of the image asset.
w	recommended	integer	-	Width of the image in pixels.
h	recommended	integer	-	Height of the image in pixels.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

5.5 Data Object

Corresponds to the Data Object in the request, with the value filled in. The Data Object is to be used for all miscellaneous elements of the native unit such as Brand Name, Ratings, Review Count, Stars, Downloads, Price count etc. It is also generic for future native elements not contemplated at the time of the writing of this document.

Field	Scope	Type	Default	Description
label	optional	string	-	The optional formatted string name of the data type to be displayed.
value	required	string	-	The formatted string of data to be displayed. Can contain a formatted value such as “5 stars” or “\$10” or “3.4 stars out of 5”.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

5.6 Video Object

Corresponds to the Video Object in the request, yet containing a value of a conforming VAST tag as a value.

Field	Scope	Type	Default	Description
vasttag	required	string	-	vast xml.

5.7 Link Object

Used for 'call to action' assets, or other links from the Native ad. This Object should be associated to its peer object in the parent Asset Object or as the master link in the top level Native Ad response object. When that peer object is activated (clicked) the action should take the user to the location of the link.

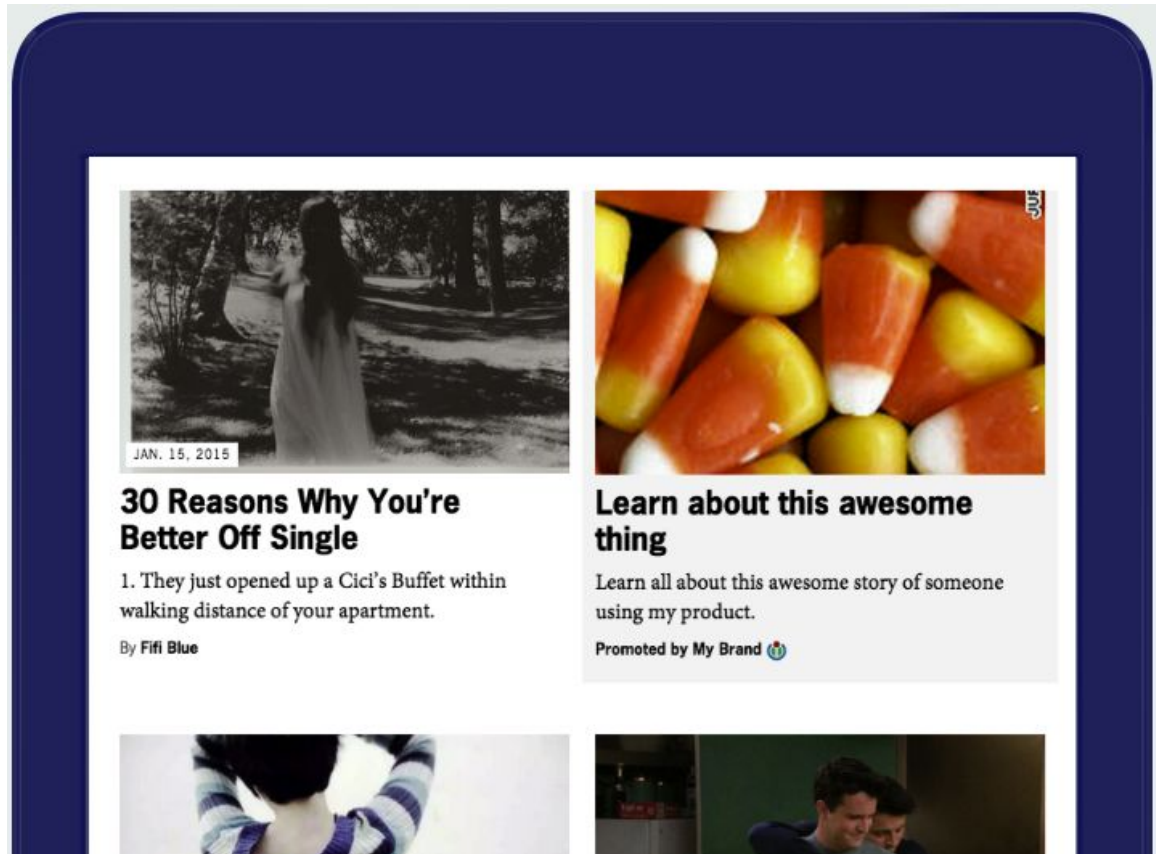
Field	Scope	Type	Default	Description
url	required	string	-	Landing URL of the clickable link.
clicktrackers[]	optional	array of strings	-	List of third-party tracker URLs to be fired on click of the URL.
fallback	optional	string (URL)	-	Fallback URL for deeplink. To be used if the URL given in url is not supported by the device.
ext	optional	object	-	This object is a placeholder that may contain custom JSON agreed to by the parties to support flexibility beyond the standard defined in this specification

6 Bid Request/Response Samples

Note: for purposes of readability, these examples are written as JSON objects directly, even though they may or may not be string-encoded in the actual message. Also note that only the native portion of the request/response is illustrated. For full examples, please see the OpenRTB 2.4 parent document.

6.1 Social Context, Clickout Response

The ad might look like -



Bid Request

```

"native":{
  "ver": "1.1",
  "context": 2,
  "contextsubtype": 20,
  "plcmtype": 11,
  "plcmcnt": 1,
  "assets": [
    {
      "id": 123,
      "required": 1,
      "title": {
        "len": 140
      }
    }
  ]
}

```

```
    }
  },
  {
    "id":128,
    "required":0,
    "img":{
      "wmin":836,
      "hmin":627,
      "type":3
    }
  },
  {
    "id":124,
    "required":1,
    "img":{
      "wmin":50,
      "hmin":50,
      "type":1
    }
  },
  {
    "id":126,
    "required":1,
    "data":{
      "type":1,
      "len":25
    }
  },
  {
    "id":127,
    "required":1,
    "data":{
      "type":2,
      "len":140
    }
  }
]
}
```

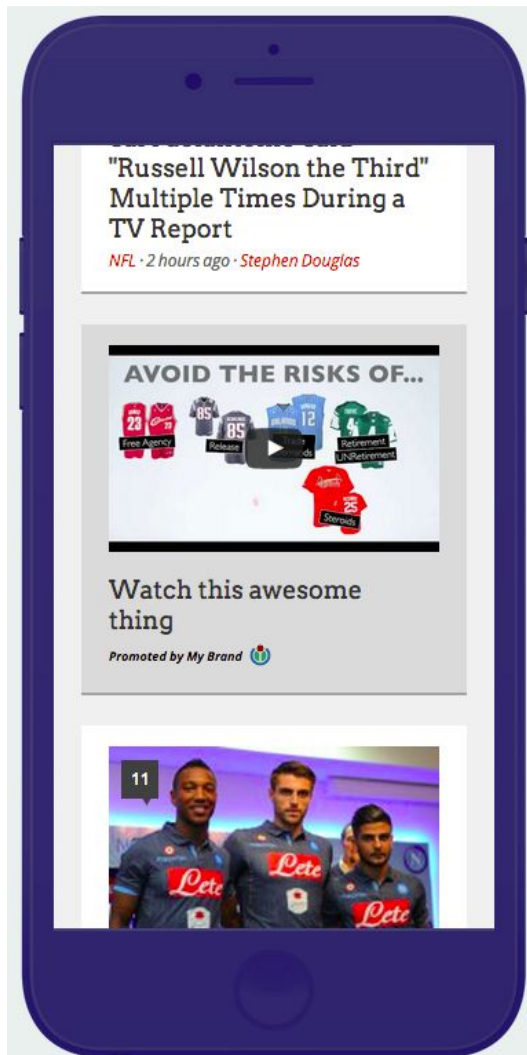

Bid Response

```
"native": {
  "link": {
    "url": "http://i.am.a/URL"
  },
  "assets": [
    {
      "id": 123,
      "required": 1,
      "title": {
        "text": "Learn about this awesome thing"
      }
    },
    {
      "id": 124,
      "required": 1,
      "img": {
        "url": "http://www.myads.com/thumbnail1.png"
      }
    },
    {
      "id": 128,
      "required": 1,
      "img": {
        "url": "http://www.myads.com/largethumb1.png"
      }
    },
    {
      "id": 126,
      "required": 1,
      "data": {
        "value": "My Brand"
      }
    },
    {
      "id": 127,
      "required": 1,
```

```
    "data": {  
      "value": "Learn all about this awesome story of someone using  
my product."  
    }  
  }  
]  
}
```

6.2 Content Context, Video Response

The ad might look like -



Bid Request

```

"native":{
  "ver": "1.1",
  "context":1,
  "contextsubtype":10,
  "plcmtype":11,
  "plcmcnt":1,
  "assets":[
    {
      "id": 4,
      "video": {
        "linearity": 1,
        "minduration": 15,
        "maxduration": 30,
        "protocols": [
          2,3
        ],
        "mimes": [
          "video/mp4"
        ]
      }
    },
    {
      "id":123,
      "required":1,
      "title":{
        "len":140
      }
    },
    {
      "id":128,
      "required":0,
      "img":{
        "wmin":836,
        "hmin":627,
        "type":3
      }
    },
    {
      "id":124,

```

```
        "required":1,
        "img":{
            "wmin":50,
            "hmin":50,
            "type":1
        }
    },
    {
        "id":126,
        "required":1,
        "data":{
            "type":1,
            "len":25
        }
    },
    {
        "id":127,
        "required":1,
        "data":{
            "type":2,
            "len":140
        }
    }
]
}
```

Bid Response

```
    "native": {
    "link": {
        "url": "http: //i.am.a/URL"
    },
    "assets": [

        {
            "id": 4,
            "video": {
                "vasttag": "<VAST version='2.0'></VAST>"
            }
        },
    ],
}
```

```
{
  "id": 123,
  "required": 1,
  "title": {
    "text": "Watch this awesome thing"
  }
},
{
  "id": 124,
  "required": 1,
  "img": {
    "url": "http://www.myads.com/thumbnail1.png"
  }
},
{
  "id": 128,
  "required": 1,
  "img": {
    "url": "http://www.myads.com/largethumb1.png"
  }
},
{
  "id": 126,
  "required": 1,
  "data": {
    "value": "My Brand"
  }
},
{
  "id": 127,
  "required": 1,
  "data": {
    "value": "Watch all about this awesome story of someone using
my product."
  }
}
]
```

7 Reference Lists/Enumerations

7.1 Native Layout IDs - To Be Deprecated

Layout ID is to be deprecated in a future version and is not suggested for new implementations.

Below is a list of the core layouts described in the introduction above.

An implementing exchange may not support all asset variants or introduce new ones unique to that system.

Layout ID	Description
1	Content Wall
2	App Wall
3	News Feed
4	Chat List
5	Carousel
6	Content Stream
7	Grid adjoining the content
500+	Reserved for Exchange specific layouts.

7.2 Native Ad Unit IDs - To Be Deprecated

Ad Unit ID is to be deprecated in a future version and is not suggested for new implementations.

Below is a list of the core ad unit ids described by IAB here

<http://www.iab.net/media/file/IABNativeAdvertisingPlaybook120413.pdf>

In feed unit is essentially a layout, it has been removed from the list. The in feed units can be identified via the layout parameter on the request.

An implementing exchange may not support all asset variants or introduce new ones unique to that system.

Ad Unit ID	Description
1	Paid Search Units
2	Recommendation Widgets
3	Promoted Listings
4	In-Ad (IAB Standard) with Native Element Units
5	Custom /"Can't Be Contained"
500+	Reserved for Exchange specific formats.

7.3 Context Type IDs

The context in which the ad appears - what type of content is surrounding the ad on the page at a high level. This maps directly to the new [Deep Dive on In-Feed Ad Units](#). This denotes the primary context, but does not imply other content may not exist on the page - for example it's expected that most content platforms have some social components, etc.

Context Type ID	Description
1	Content-centric context such as newsfeed, article, image gallery, video gallery, or similar.
2	Social-centric context such as social network feed, email, chat, or similar.
3	Product context such as product listings, details, recommendations, reviews, or similar.
500+	To be defined by the exchange.

7.4 Context Sub Type IDs

Next-level context in which the ad appears. Again this reflects the primary context, and does not imply no presence of other elements. For example, an article is likely to

contain images but is still first and foremost an article. SubType should only be combined with the primary context type as indicated (ie for a context type of 1, only context subtypes that start with 1 are valid).

Context SubType ID	Description
10	General or mixed content.
11	Primarily article content (which of course could include images, etc as part of the article)
12	Primarily video content
13	Primarily audio content
14	Primarily image content
15	User-generated content - forums, comments, etc
20	General social content such as a general social network
21	Primarily email content
22	Primarily chat/IM content
30	Content focused on selling products, whether digital or physical
31	Application store/marketplace
32	Product reviews site primarily (which may sell product secondarily)
500+	To be defined by the exchange

7.5 Placement Type IDs

The FORMAT of the ad you are purchasing, separate from the surrounding context

Placement Type ID	Description
1	In the feed of content - for example as an item inside the organic feed/grid/listing/carousel.
2	In the atomic unit of the content - IE in the article page or single image page
3	Outside the core content - for example in the ads section on the right rail, as a banner-style placement near the content, etc.

4	Recommendation widget, most commonly presented below the article content.
500+	To be defined by the exchange

7.6 Data Asset Types

Below is a list of common asset element types of native advertising at the time of writing this spec. This list is non-exhaustive and intended to be extended by the buyers and sellers as the format evolves.

An implementing exchange may not support all asset variants or introduce new ones unique to that system.

Type ID	Name	Description	Format	Recommendations
1	sponsored	Sponsored By message where response should contain the brand name of the sponsor.	text	Required. Max 25 or longer.
2	desc	Descriptive text associated with the product or service being advertised. Longer length of text in response may be truncated or ellipsed by the exchange.	text	Recommended. Max 140 or longer.
3	rating	Rating of the product being offered to the user. For example an app's rating in an app store from 0-5.	number formatted as string	Optional. 0-5 integer formatted as string.
4	likes	Number of social ratings or "likes" of the product being offered to the user.	number formatted as string	
5	downloads	Number downloads/installs of this product	number formatted as string	
6	price	Price for product / app / in-app purchase. Value should include currency symbol in localised format.	number formatted as string	

7	saleprice	Sale price that can be used together with price to indicate a discounted price compared to a regular price. Value should include currency symbol in localised format.	number formatted as string	
8	phone	Phone number	formatted string	
9	address	Address	text	
10	desc2	Additional descriptive text associated with the product or service being advertised	text	
11	displayurl	Display URL for the text ad. To be used when sponsoring entity doesn't own the content. IE sponsored by BRAND on SITE (where SITE is transmitted in this field).	text	
12	ctatext	CTA description - descriptive text describing a 'call to action' button for the destination URL.	text	Optional. Max 15 or longer.
500 +	XXX	Reserved for Exchange specific usage numbered above 500	Unknown	

7.7 Image Asset Types

Below is a list of common image asset element types of native advertising at the time of writing this spec. This list is non-exhaustive and intended to be extended by the buyers and sellers as the format evolves.

An implementing exchange may not support all asset variants or may introduce new ones unique to that system.

In order to facilitate adoption, recommendations are made for both minimum sizes and aspect ratios. We speak here of 'minimum maximum height' or 'max height of at least', which means the SSP should support a max height of at least this value. They are free to support larger, but the DSP knows that if they have an image of this size it will be accepted. Note that SSPs will be responsible for sizing image to exact size if min-max-height framework is used; exact size may not be available at bid request time. Width is calculated from the 3 supported aspect ratios. Note we are merging the prior overlapping type 1 and type 2 as just type 1 - to be used for app icon, brand logo, or similar.

Type ID	Name	Description	Recommendations
1	Icon	Icon image	Optional. max height: at least 50 aspect ratio: 1:1
2	Logo	Logo image for the brand/app.	To be deprecated in future version - use type 1 Icon.
3	Main	Large image preview for the ad	At least one of 2 size variants required: Small Variant: max height: at least 200 max width: at least 200, 267, or 382 aspect ratio: 1:1, 4:3, or 1.91:1 Large Variant: max height: at least 627 max width: at least 627, 836, or 1198 aspect ratio: 1:1, 4:3, or 1.91:1
500+	XXX	Reserved for Exchange specific usage numbered above 500	No recommendations

8 Implementation Notes

8.1 Multi Placement Bid Requests

If the bid request has a placement count (“plcmcnt”) greater than 1, then the implication is that the bidder is submitting bids to a Generalized Second Price auction where multiple identical placements are being offered in the same content feed or stream.

Example If a bid request is for 5 ad placements within a feed based layout. The bidder can return 1-5 bids. The exchange runs a generalized second price auction across these bids. The bidder can potentially win between 0-5 placements in the auction.

An example bid response would look like

```
{
  "id": "1234567890",
  "seatbid": [{
    "bid": [{
      "id": "1",
      "impid": "1",
      "price": 10,
      "nurl": "http://adserver.com/WinNoticeUrlThatReturnsNative1",
      "adm": "<native response>"
    },
    "bid": [{
      "id": "2",
      "impid": "1",
      "price": 20,
      "nurl": "http://adserver.com/WinNoticeUrlThatReturnsNative2"
      "adm": "<native response>"
    }
  ]
}]
}
```