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# A GUIDE TO PROGRAMMATIC METADATA

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# A Guide to Programmatic Metadata

For the programmatic marketplace, metadata is what fuels every bid and what fuels programmatic advertising. Without proper data, the computer-driven, automated system of buying and selling ads stalls. For the buy-side, it needs to understand what the opportunity being offered is. The metadata included in a bid supplies this information, which is why the accuracy and data richness is there to make the process work.

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It's an exciting time for premium video advertising, but fragmentation continues to be a primary hurdle to targeting and delivering specific audiences programmatically. We're working with clients and partners to identify challenges and solve for premium video inventory unification. This guide is a step towards harmonizing inventory through programmatic metadata.

## **KELLY BLASCO**

*Senior Manager, Advisory Services, FreeWheel*

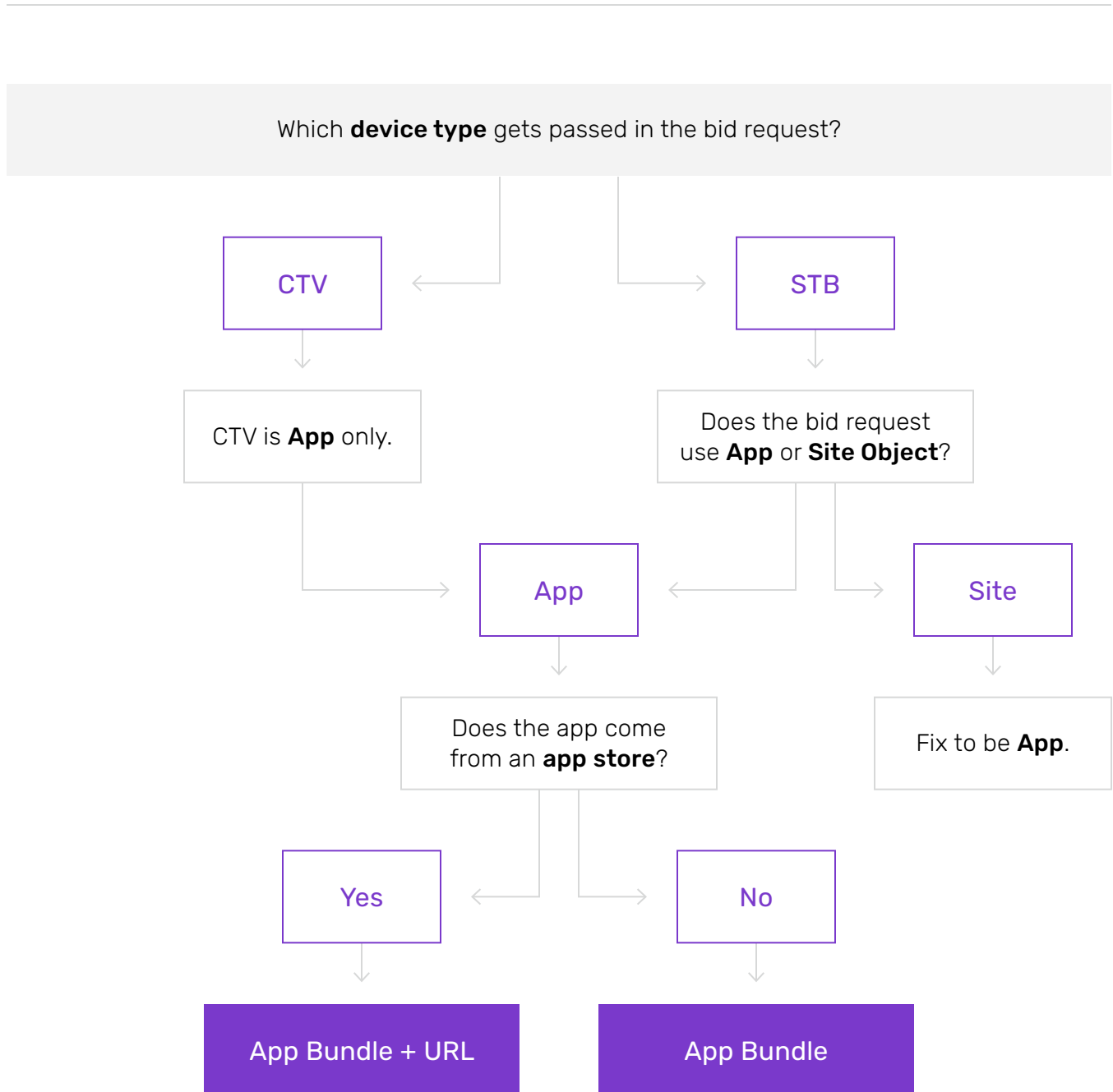
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FreeWheel has developed this tactical guide to help programmers and inventory owners recognize what the most common programmatic metadata problems are that cause a bid to be unsuccessful.

Discover actionable solutions that will increase the likelihood of an ultimately successful programmatic bid.

# Programmatic Metadata Success Is in the Details

Before diving into the metadata items and solutions, we recommend familiarizing yourself with the following decision tree. This decision tree describes the logic that programmers should follow when reviewing their programmatic metadata setup.



# Device Type

## DEFINITION

The device on which the end user would see the ad, e.g., a mobile phone, tablet, CTV, or other specific type of hardware.

The list of possible device types is defined by the Interactive Advertising Bureau (IAB) as part of the [OpenRTB specification](#).

## ISSUE

It is important that inventory is declared as the appropriate device type as DSPs and buyers may rely on this for targeting and other purposes.

Misclassifications do occur for instance when CTV inventory is labeled as STB and vice versa.

## SOLUTION CHECKLIST

### CTV

- For on-domain endpoints, programmers should pull a report to check whether their CTV endpoints have the correct device type being passed in the bid requests. This report can be pulled in the MRM UI in the Programmatic Insights tab under the Metadata Troubleshooting sub-tab.
- For off-domain endpoints, programmers should also check to see if these CTV endpoints (where their content is distributed through other partner endpoints such as MVPDs or virtual MVPDs) have the correct device type being passed in the bid requests.
- Programmers and MVPDs should label non-MVPD devices (e.g., Roku, Hulu) as device type 3 (CTV) instead of device type 7 (set-top box). To do so, for on-domain endpoints, programmers should change settings on their CTV player profiles or endpoints to be device type = 3.
- For off-domain endpoints, programmers should coordinate with their MVPD partners to ask them to make those same changes on their MVPD CTV player profiles.

### Set-Top Box

- For on-domain endpoints, programmers should pull a report to check whether their set-top box endpoints have the correct device type being passed in the bid requests. This report can be pulled in the MRM UI in the Programmatic Insights tab under the Metadata Troubleshooting sub-tab.
- For off-domain endpoints, programmers should also check to see if those set-top box endpoints (where their content is distributed through other partner endpoints such as MVPDs or virtual MVPDs) have the correct device type being passed in the bid requests.
- For on-domain endpoints, programmers should change settings on their set-top box player profiles or endpoints to be device type = 7.
- For off-domain endpoints, programmers should coordinate with their MVPD partners to ask them to make those same changes on their MVPD set-top box player profiles.

# Object Type

## DEFINITION

All bid requests are structured according to the [IAB's specifications](#) and consist of a variety of objects representing different conceptual parts of the metadata for the inventory being offered in the bid request (e.g., a content object for metadata tied to the content such as genre). Programmers can also refer to [FreeWheel's HUB](#) for more information on request objects and how metadata can be set up with MRM.

Every bid request also has to include metadata on the environment where the opportunity is coming from, where the OpenRTB spec says **either** an app object **or** a site object should be used.

A site object is meant to be used when the impression opportunity is occurring on a website, while an app object should be used when the impression opportunity occurs in an app (e.g., an app on a mobile device like iPhone).

## ISSUE

For STB inventory, this does not fit neatly into the taxonomy of site vs. app, as it is neither web-based nor app-based (in the traditional meaning of an app). However, the bid request still has to use one of these two objects.

Based on feedback from FreeWheel's DSP partners and current practices in the programmatic ecosystem, FreeWheel recommends using an app object for STB VOD bid requests.

For CTV, there is not a similar concern, as most CTV environments are app-based in the traditional sense of the term, and therefore using app object has long been the industry practice.

## SOLUTION CHECKLIST

### CTV

FreeWheel will always generate an app object for inventory where the programmatic device type is declared as CTV.

### Set-Top Box

FreeWheel identifies STB inventory by the programmatic device type being declared as STB. Device type can be declared in MRM for inventory in different ways, but it is most commonly declared at the player profile level (your FreeWheel account team can help provide further details on how device type declarations are set for your inventory).

Assuming inventory is declared as being STB, FreeWheel's default logic is to use a site object for bid requests. Therefore, we recommend that for STB inventory, the default logic is overridden to instead use an app object. This can be done by programmers by adding the customized metadata "AppOrSiteORTB : app" to the site section representing the inventory.

Information on whether a site object is currently being used for STB inventory can be pulled by the programmer in their MRM UI in the Programmatic Insights tab under the Metadata Troubleshooting sub-tab.

Note that while this guide recommends using the App Object rather than the Site Object for set-top boxes in the U.S., there may be use cases in other geographies that require programmers to use Site Object instead, due to market convention or specific technical requirements. This is the case in France, for example, where programmers use the Site object for their IPTV inventory.

# App Bundle

## DEFINITION

A bundle ID is defined in the OpenRTB spec, a platform-specific application identifier intended to be unique to the application.

In lay terms, it is meant as a unique identifier for the app in which the inventory is coming from.

For “traditional” apps this value comes from an app store, e.g., Google Play on Android devices, but there may be cases where no app store exists.

## SOLUTION CHECKLIST

### CTV

App Bundles should be set as defined in the [IAB's specifications](#).

For cases in which a centralized app store exists, the App Bundle should be derived from that app store. For platforms without a centralized app store (and therefore no native App Bundle) a synthesized App Bundle should be constructed as recommended by IAB:

*appName.deviceplatform (e.g., com.nbcu.peacock.x1).*

CTV inventory will most often be from environments where a centralized app store exists, but this is not universally the case.

- ❑ Programmers can pull a report to check whether their CTV endpoints have the correct App Bundle values being passed in bid requests. This report can be pulled in the MRM UI in the Programmatic Insights tab under the Metadata Troubleshooting sub-tab.
- ❑ The correct App Bundle should be declared either in MRM in the customized metadata for the site section representing the inventory or as a custom key-value (`_fw_app_bundle`) in the ad request. Your FreeWheel account team can consult on which method is best suited for particular integrations.

## ISSUE

It is important that bid requests with an app object always pass a correct App Bundle as this serves as the primary inventory identifier for DSPs. With a missing or incorrect App Bundle, DSPs are blind to where the impression is playing out and will therefore be much less likely to bid.

Common issues:

- There is no App Bundle at all
- The value passed is not correct (*see below for details*)
- The value passed does not match the App Store URL also being passed (*see next page*)

### Set-Top Box

App Bundles should be set as defined in the [IAB's specifications](#).

For cases in which a centralized app store exists, the App Bundle should be derived from that app store. For platforms without a centralized app store (and therefore no native App Bundle) a synthesized App Bundle should be constructed as recommended by IAB:

*appName.deviceplatform (e.g., com.nbcu.peacock.x1).*

Inventory from legacy set-top boxes will usually fall into the latter category, e.g., Canoe, where a synthetic App Bundle in the form `canoe.stb` should be used.

- ❑ Programmers can pull a report to check whether their set-top box endpoints have the correct App Bundle values being passed in bid requests. This report can be pulled in the MRM UI in the Programmatic Insights tab under the Metadata Troubleshooting sub-tab.
- ❑ The correct App Bundle should be declared either in MRM in the customized metadata for the site section representing the inventory or as a custom key-value (`_fw_app_bundle`) in the ad request. Your FreeWheel account team can consult on which method is best suited for particular integrations.

# App Store URL

## DEFINITION

The App Store URL is a URL pointing to a particular app store's representation of a given app.

For example, the NBCU Sports app can be found on the iOS app store with this URL: <https://apps.apple.com/us/app/nbc-sports/id542511686>. Note: this would be a different URL if the app was from the Amazon or Roku app store.

Some DSPs may use the app store URL as the primary identifier for apps instead of or in addition to app bundle. It is required for all apps from environments where a centralized app store exists.

The app store URL is also used by DSPs for enforcing app-ads.txt, which is common industry standard used to ensure that inventory for a given app (e.g., Peacock) is only sold through sellers who have been identified as authorized. See [FreeWheel's HUB](#) for more information.

## SOLUTION CHECKLIST

### CTV

- For CTV apps that **do** have an app store, the programmer should pull a report to check whether their CTV endpoints have app store URLs being passed in bid requests. This report can be pulled in the MRM UI in the Programmatic Insights tab under the Metadata Troubleshooting sub-tab.
- The programmer should determine if the app store URL being passed follows the [IAB guidelines for CTV](#).
- If programmers own the endpoint's player, the app store URL for that app can be passed in the ad request as a key value "\_fw\_app\_store\_url". If the programmer does not own the player, e.g., if it is a distribution partner (MVPD or virtual MVPD) player, then programmers must communicate to their partner to update their ad request. However, editing ad requests is a slow-going process; therefore, alternatively, the App Store URL can also be hard-coded in MRM in the Network Item's customized metadata via "appStoreURL" name for that endpoint.
- For CTV apps that **do not** have an app store, only the app bundle should be passed in the bid request.

## ISSUE

Common issues:

- The inventory comes from an environment where an app store exists, yet no app store URL is passed.
- An app store URL is passed but does not match the app bundle (*see previous page*). For instance, the app bundle may be for NBCU Sports on Android, but the app store URL is for NBCU Sports on iOS.

These issues can lead to the DSPs not being able to correctly identify the app, flagging the inventory as IVT or not being able to enforce app-ads.txt.

This can have a significant impact on bid rates, so it is important app store URL is set correctly.

### Set-Top Box

- For set-top box apps that **do** have an app store, programmers should pull a report to check whether their set-top box endpoints have app store URLs being passed in bid requests. This report can be pulled in the MRM UI in the Programmatic Insights tab under the Metadata Troubleshooting sub-tab.
- The programmer should determine if the app store URL being passed follows the [IAB guidelines for set-top box](#). Note to refer to the CTV part of the IAB guidelines to configure set-top box app store URLs in MRM.
- For set-top box apps that **do not** have an app store (e.g., Canoe), only the app bundle should be passed in the bid request.

# About FreeWheel

FreeWheel empowers all segments of The New TV Ecosystem. We are structured to provide the full breadth of solutions the advertising industry needs to achieve their goals. We provide the technology, data enablement and convergent marketplaces required to ensure buyers and sellers can transact across all screens, across all data types, and all sales channels, in order to ensure the ultimate goal – results for marketers. With offices in New York, San Francisco, Chicago, London, Paris, Beijing, and across the globe, FreeWheel, A Comcast Company, stands to advocate for the entire industry through the FreeWheel Council for Premium Video.

For more information, please visit [freewheel.com](https://freewheel.com), and follow us on [Twitter](#) and [LinkedIn](#).

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## For More Information

[freewheel.com/advisory-services](https://freewheel.com/advisory-services)

## Inquiries

**Kelly Blasco**, Senior Manager, Advisory Services  
[kblasco@freewheel.com](mailto:kblasco@freewheel.com)



The image features a dark blue gradient background with a series of thin, white, wavy lines that create a sense of motion and depth, particularly in the lower half. The Freewheel logo is centered in the upper half, consisting of the word 'FREEWHEEL' in a bold, white, sans-serif font with a unique circular cutout in the 'E's. Below it, the text 'A COMCAST COMPANY' is written in a smaller, white, sans-serif font.

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