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PROGRAMMATIC ADVERTISING

Demystifying signals - Part 1.

SIGNALS AT A GLANCE

What it is, why is it important for advertisers

Signals are discrete pieces of information or data points that flow through the digital advertising ecosystem and help marketers decide whether or not to bid on an impression. They exist because programmatic advertising operates in real time: every time an impression becomes available, buyers must evaluate its relevance and value within milliseconds. Signals make this evaluation possible.

- Publisher name (which site or app the ad would run on)
- Device type (mobile, desktop, CTV, etc.)
- Geography (IP-derived location)
- Page content labels (contextual tags about the article or video)
- Audience identifiers (cookies, device IDs, or UID2s)

COMMON ISSUES WITH SIGNALS

- Missing signals caused by publisher-side misconfigurations.
- Incomplete or inconsistent OpenRTB integrations.
- Identity and consent strings not being passed correctly.
- Lack of clarity on what certain signals or parameters mean (publishers and buyers may interpret them differently)
- Limited technical resources on the publisher/buyer side to diagnose and fix issues

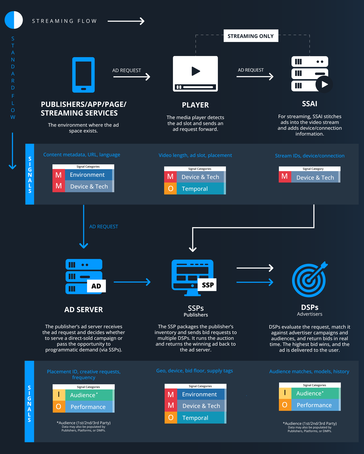
WHAT CAN YOU DO?

- Work with on-page / in-app developers
- Speak to buyers directly
- Ask DSP contacts for clarification on signals

Up next: we'll unpack practical solutions in Part 2.

FROM PAGE LOAD TO AD DISPLAY

Journey of an impression



WHERE ARE SIGNALS FOUND?

SIGNAL TYPE AND EXAMPLES

ORIGIN IN BID STREAM

	Signal type	Examples	Origin in bid stream	
M	Environment	Publisher, APP, Page Content, Language	Publisher SSP	Passed in the bid request as site/app metadata and contextual labels
M	Device & Tech	Device Type, OS, Browser, Connection	User Device/ SSP	Automatically detected and passed via device object in OpenRTB
I	Audience	UID2, Cookies, Hashed Emails, 1P Segments	DSP/ID Graph	Appended by DSPs, DMPs, or ID solutions (not always in raw SSP call)
O	Temporal	Time of Day, Day of Week, Seasonality	Exchange/ RTB Protocol	Timestamp on each bid request
O	Performance	Historic CTR, VCR, Viewability, CPM Benchmarks	DSP Logs & Predictive Models	Passed in the bid request as site/app metadata and contextual labels

USAGE

01 Planning Teams	02 Inventory Teams	03 Activation Teams	04 Measurement Teams
Select relevant publishers & contexts	Validate brand safety and supply quality	Decide whether to bid based on site/app context	Attribute results by environment
Identify platforms for reach (CTV, Mobile, Desktop)	Confirm inventory covers needed devices	Adjust bid(s) per device (e.g., higher CPM on CTV)	Compare outcomes by device
Build audience strategies & test plans	Ensure supply is addressable	Match impression to audience segment, bid accordingly	Attribute conversions to exposed audience
Plan campaigns around consumer patterns	Assess delivery pacing opportunities	Act differently at high vs. low traffic times	Measure impact of timing
Forecast outcomes using historical learnings	Benchmark supply performance	Algorithms optimise based on historic signal weight	Analyse which signals correlated with conversions

M Mandatory signals

O Optional signals

I Identity/Consent Sensitive

GLOSSARY

AD SERVER	Software/platform that manages and delivers ads. Decides whether an ad impression is filled by a direct-sold campaign or sent to programmatic demand.
AUDIENCE 1ST/2ND/3RD PARTY	1st Party: Data a publisher or advertiser collects directly (e.g., from their website, app, or CRM). 2nd Party: Another company's first-party data shared via partnership (e.g., retailer data). 3rd Party: Data aggregated and sold by external vendors.
DMP DATA MANAGEMENT PLATFORM	Software that collects, organizes, and segments data from multiple sources (websites, apps, 3rd party providers). Creates audience segments used by DSPs for targeting.
DSP DEMAND SIDE PLATFORM	Advertiser-side platform in the programmatic ecosystem. Analyzes bid requests and decides in real time which impressions to bid on.
SSP SUPPLY SIDE PLATFORM	Publisher-side platform that packages ad inventory and auctions it to multiple DSPs.
SSAI SERVER SIDE AD INSERTION	In streaming, ads are stitched into the video stream on the server side (not inserted as separate files), so the user sees one continuous stream.
OpenRTB REAL-TIME BIDDING PROTOCOL	Industry standard protocol for programmatic auctions. Defines how SSPs send bid requests to DSPs.
SIGNALS	Data points (e.g., device, location, audience ID) that help advertisers evaluate whether to bid on an impression.
ENVIRONMENT SIGNALS	Contextual data about where the ad runs, e.g., publisher, app, page content, or language.
DEVICE & TECH SIGNALS	Technical attributes like device type, operating system, browser, or connection type.
TEMPORAL SIGNALS	Time-based data such as time of day, day of week, or seasonality.
PERFORMANCE SIGNALS	Historical performance metrics like CTR, viewability, or CPM benchmarks.
UID2 UNIFIED ID 2.0	Open-source identity framework designed as a privacy-friendly alternative to third-party cookies.
CONSENT STRING	An encoded signal (per IAB's TCF standard) that communicates whether a user has given consent for data usage.
IMPRESSION	One instance of an ad being served on a user's device, regardless of whether the user clicks.

This guide was developed in partnership with IAB Canada's Programmatic Committee and its members

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EXPERIENCING ISSUES WITH SIGNALS?

SHARE YOUR INSIGHTS! CLICK BELOW TO COMPLETE OUR QUICK SURVEY AND HELP SHAPE FUTURE INDUSTRY RESOURCES.

ADD YOUR VOICE