

The Components of Ad Tech

An Essential Overview



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Forward

Every type of advertising media is the product of many parts. Traditional broadcast advertising consists of a complex process, including (but not limited to) scripting, casting, shooting, post-production, plus the trafficking and tracking of broadcast ads. Each one of these steps has a cost and benefit.

Digital advertising is no different. From advertiser spend to ad-on-page, the message passes through a finite number of steps. Each of these steps has a cost and a value, but unlike in the traditional media world, there's a spirited discussion around the number of steps involved, and that discussion often focuses on the cost (the ad-tech "tax") rather than the value.

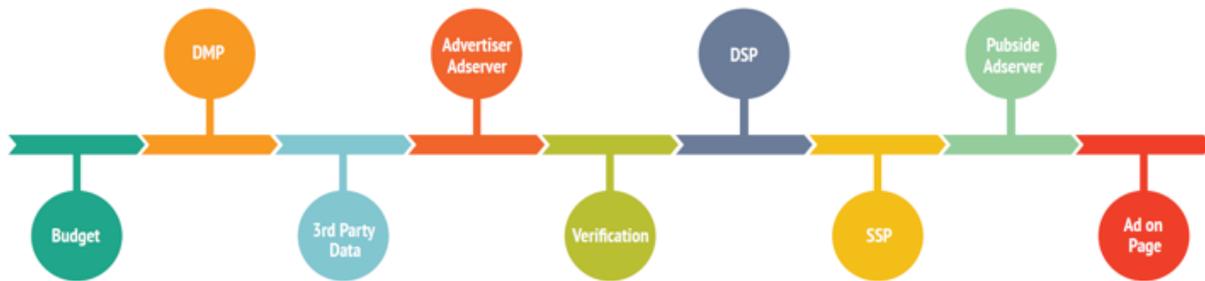
The IAB Ad-Tech council has produced a straightforward explanation of each of the components of the process. We're hoping that this paper will encourage advertisers to engage in conversations around transparency with their ad-tech partners to make sure that maximum value is being realized at every step.

IAB Canada Ad-Tech Council

IAB Canada would like to thank the ad-tech council members for their dedication to delivering this valuable guide to the eco-system.

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Ad Tech & The Value Chain

Digital advertising has never been so efficient or so complicated. The process which turns advertiser budget into a message in front of a consumer has many different steps along the way. Each of those steps should:

- 1) Add an efficiency or value greater than their cost.
- 2) Add a feature that is not duplicated by another step.
- 3) Be transparent to the advertiser in both cost and function.
- 4) Be something that the advertiser chooses to include.

This paper aims to offer a straightforward overview of the different elements of this value chain with the goal of demystifying the process and kickstarting conversations between advertisers, publishers, and ad tech suppliers.



Denotes value-add element of a digital media campaign



Denotes an essential element of a digital media campaign



A DMP is a Software as a Service-based product that helps marketers host and manage their own “first party” data about their known customers for use in marketing campaigns.

Data Management Platform - DMP

Most modern day campaigns make some use of data. Data can be used to target specific users, behaviours, demographics, weather conditions, location – the list is endless.

The same data can be used to report on consumer behaviour after an advertiser interaction – for example, what behavioural segment was most likely to buy a product.

Whether an advertiser uses their own data (like retargeting users who have visited their site) or third party data, (buying a segment of users whose behaviour has been collected by someone else), an ad-tech supplier will link the DMP to an ad server or DSP to deliver an impression based on that data.

These data-enabling systems are the Data Management Platforms, or DMPs. A DMP will store user profiles (usually anonymously), allowing multiple data feeds to be layered onto each profile to increase the depth of that profile, and then integrate with a Demand Side Platform (DSP) or ad server to activate the data by targeting the most relevant ad to a user.

Within the ad-tech value chain the DMP may be a standalone element, or it may be included as part of a DSP or an ad server. Either way, the DMP is a valuable part of the process.

If the DMP is a standalone product, licensed by the advertiser or agency, the cost and functions of the DMP will be transparent to whoever is paying that bill.

If the DMP is incorporated into other products (publisher site targeting, ad server, DSP) the cost and function of that DMP will be rolled into the cost of those products.



Third Party Data is nonpartisan data that provides insights into audience segments and/or competitors. It is aggregated by nature.

Third Party Data

Third Party data suppliers compile and sell data separately from media; for example an advertiser might want to target users who are in the market for a car purchase. The 3rd party data supplier partners with the Demand Side Platform (DSP) or DMP to pass those user IDs to the advertiser in a way that allows the advertiser to recognize and bid on impressions being served to those users.

There are no standards around how, where and when third party data is collected. Looking more closely at the automotive example, it is difficult to determine why a user ID might have been allocated to an “automotive intender” segment. It might be because they visited a single article about a car 6 months ago but it could very well be that the user was recently actively researching car loans.

Both the cost and value of third party data varies widely. It is an advertiser best practice to isolate and carefully test campaigns / impressions that use this data to be sure that there is positive ROI once data costs are applied.

Third party data can show up as an individual cost, or it can be rolled into a Demand Side Platform (DSP) overall CPM.



Ad serving technology companies provide software to Web sites and advertisers to serve ads, count them, choose the ads that will make the Web site or advertiser most money, and monitor progress of different advertising campaigns.

Third Party Ad Server

Third Party ad serving is a key part of the ad-tech value chain; serving the following functions:

- Enables an advertiser to actively track every impression on every campaign across every platform and media source.
- Supports industry standards in counting methodologies like counting impressions that actually render on a page rather than merely being called from a server.
- Delivers dynamic creative to each user, for example - shopping cart retargeting.
- Provides creative that pulls data from an external source to show a specific version of creative, for example – an ad customized to the weather.
- Provides a hub of integration between ads delivered and advertiser billing systems.
- Audits supplier reporting and potentially exposes discrepancies in everything from impression numbers to geo-targeting.
- Provides conversion attribution reporting.
- Creates operational efficiencies by centralizing and standardizing the delivery of campaigns, for example – advertisers produce, upload and encode creative once across all publishers rather than creating individual versions.

Ad serving costs are transparent to the advertiser since they are openly billed on a CPM basis.

In some cases, it is possible to run a campaign without a third party ad server. But the reason the vast majority of campaigns use one is that the value in efficiency of process and accountability far outweighs the cost.

There is a possibility of duplication here. Ad servers can include features that are also delivered by Verification Vendors, including viewability, fraud reporting, domain audit reporting and more.

When analyzing the features of an ad server, it's an advertiser best practice to make sure that you are not paying for a similar feature in both the ad server and the verification vendor.



Verification vendors offer a software that checks the creative assets and where they appear. These solutions check against various parameters including placements, viewability standards, in-target exposure and invalid traffic.

Verification Vendors

Verification vendors are companies specialized in the important work of measuring viewability, invalid traffic, and domain audits. Generally the goal of the Verification Vendor is to report on the percentage of ads that are viewable to human traffic on brand safe domains.

The cost of a verification vendor is usually transparent, based on a CPM, and is a cost outside of media, ad serving and DSP. When an advertiser is buying verification services through an agency or other third party, there is often a markup on the actual verification company costs.

Verification may also be offered through the third party ad server, or even the publisher. It's an advertiser best practice to ensure that costs and processes aren't being duplicated by retaining a specialized Verification vendor.

With the correct contracts in place, Verification Vendor reports may be used to withhold payment or generate makegoods from other suppliers. For example, if a publisher has agreed only to bill on impressions that were viewable, it may be the third party verification vendor who decides how many impressions were viewable and therefore billable.

On the fraud front, it's essential to keep invalid traffic out of ad systems to maximize advertiser return and enable legitimate publishers to maximize their revenue. Verification vendors can add value by identifying bad actors who can then be blocked.

It's a best practice for advertisers to proactively avoid invalid traffic by using only quality partners who are buying on transparently disclosed inventory sources that are far less likely to be a source of invalid traffic.

Verification by TAG (Trustworthy Accountability Group) is a good indicator of legitimate companies in the space. Instead of analyzing traffic, TAG verifies the financial background of member companies, reassuring advertisers that they are not buying through the shell companies that defraud the ecosystem.

One consideration is that bringing on a Verification Vendor can add another invoice, another set of tags and set of numbers to reconcile. This can be complicated because methodologies of Verification Vendors are not generally transparent, leading to discrepancies in media costs that are often difficult to resolve. (ie: Verification Vendor categorizes impressions as IVT, publisher disagrees)

While each verification system will have standardized offerings, due to varying methodologies, there will always be some form of discrepancy in post campaign reporting. To avoid confusion at the reconciliation stage, a best practice for advertisers is to agree with publishers on which verification systems will be used and what the allowable margin of discrepancy might be ahead of the campaign.

Using a verification vendor has become standard practice for large agencies and advertisers, but many campaigns are delivered without them - it is the advertiser's decision to make based on a cost / complexity / benefit basis.



Demand Side Platform (DSP) is a technology platform used by media buyers to plan, target, execute, optimize and measure online media inventory.

Demand Side Platform - DSP

Programmatic buying is enabled through a Demand Side Platform or DSP.

A DSP is the essential technology that connects the advertiser to the opportunity to buy impressions.

The cost of the DSP should be transparent to the agency or advertiser, and is usually billed as a percentage of media.

There are many different types of DSPs – but essentially, the advertiser decides on the audience, or inventory that they want to buy. This could be to retarget users from a brand website, target a specific audience, or targeting specific inventory, geographic locations, time of day – there are too many possibilities to list.

The DSP then executes these targeting decisions by connecting the DSP to Exchanges, Supply Side Platforms (SSPs) or directly to publishers.

When a suitable impression is offered by one of the supply partners, the DSP will make a bid on the advertiser’s behalf. If the bid is successful, the impression is bought and the DSP will charge a margin on that buying process.

The DSP performs many other functions, including optimization, frequency capping, pacing and many others. When choosing a DSP, it’s an advertiser best practice to weigh features, costs, service, support and access to inventory.



The Supply Side Platform The Supply Side Platform (SSP) is a software that allows publishers of digital content to help manage and sell their inventory.

Supply Side Platform - SSP

Essential Element of a Digital Media Campaign

For every impression bought programmatically, there is a seller. These sellers might be:

1. Publishers that offer their inventory directly to advertisers via header tag or direct integration with the publisher side ad server.
2. SSPs (Supply Side Platforms) that connect to a publisher through the publisher-side ad server or through header bidding, and typically take a revenue share from the publisher to deliver quality demand.
3. Exchanges that combine the supply of multiple SSPs who typically take a percentage fee from the buyer.

Note that step 1 is closest to the publisher, and step 3 the furthest from the publisher, and with each step, additional costs are usually billed.

Except in the case of Exchange fees which are often paid directly by the advertiser, supply side fees are usually not transparent to the buyer. Neither is it always possible for an advertiser or agency to buy specific inventory through a preferred SSP since sites may have exclusive representation through a single SSP.

While these costs are often difficult to unpack, the general rule is that the closer an advertiser is to an inventory source, the fewer costs are incurred along the way. For example, a direct link from DSP to publisher would include fewer markups than a path with several intermediaries.

Header Bidding allows sites to open up more of their inventory to advertisers which can offer enhanced opportunity to advertisers while simultaneously driving up CPMs for publishers. Header Bidding also raises the future possibility of changing auction models from second to first price which could have a big influence on advertiser cost and value.

Most publishers have some form of header bidding enabled. It's entirely the publisher's choice on whether they implement Header Bidding, first or second price auction - it is the choice of the advertiser on whether to buy inventory on that publisher.



Publisher Side Ad Serving

Another essential element of the ad-tech value chain is the publisher-side ad server.

This is the technology that a publisher uses to manage, forecast and monetize their inventory.

Impressions can be bought directly from the publisher by advertisers. In this case, the creative is sent to the publisher and then uploaded directly to the publisher side ad server.

Ads also arrive to publisher sites through a combination of programmatic channels. Ultimately, all these various channels still have the ads delivered to the final page via the publisher side ad server.

Publisher side ad serving is usually opaque to the advertiser and is billed directly to the publisher on a CPM or revenue share basis.

Conclusion

The digital supply chain is undoubtedly complex, but it is made up of a number of easily defined steps. Each of the steps involve technology to help deliver on the original promise of digital media - targeted, flexible, automated and measurable.

It is critical for advertisers to see the ad-tech supply chain as a collection of components. If an agency or ad-tech partner bundles many services up in a single offering, it's more difficult for the costs and function of each component to be analyzed separately.

Special attention should be paid to providers who represent multiple interests - if a DSP or trading desk owns media, or controls the auction mechanics from the supply side, it becomes extremely difficult to isolate real costs and margins, making true transparency impossible to attain.

With increased pressure on the supply chain to deliver quality inventory and a higher level of accountability, it has never been more critical for advertisers to feel comfortable with their implementation of ad-tech to help facilitate each step of an online campaign.

Transparency is in the hands of the buyer. A quick analysis can be done by creating a simple matrix to assess areas of duplication. This will quickly reveal whether the duplication is significant enough to make a change to the "stack". In many cases, the duplication is minimal and has little financial impact on the overall media investment.

Transparency starts with breaking down the entire value chain into components and asking the right questions about every component. If advertisers demand transparency, they should be able to get it.