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# *streaming media*

THE BUSINESS &  
TECHNOLOGY OF  
ONLINE VIDEO

*ENHANCED  
SPORTS AND  
ESPORTS  
EXPERIENCES*

*BEYOND SOFTWARE*

*WELCOME  
TO THE  
AD TECH  
JUNGLE*



# WELCOME TO THE **AD TECH JUNGLE**

*Advertising technology is still scary, but here are some tools to help you make it out alive.*

**BY NADINE KREFETZ**

**T**he advertising technology workflow contains many moving parts, and ad tech solutions providers are constantly updating their offerings. The sector has lots of room for innovation, so I thought I'd check in with some of the leading vendors in the market to see what customer pain points they're addressing.

### **More Fill(ing)**

First up is ad fill. Typically, anywhere from 20% to 30% of ad placement spots go unfilled, because content owners and service providers can't sell them, according to various industry observers. Wurl has introduced Ad Pool, a service to increase fill rates by monetizing unfilled inventory. "We saw an opportunity to bring in extra demand," says Yuval Fisher, Wurl's SVP of technology. "What's interesting is it's a free service, so we don't take any cut of the CPM at all. Now, the fine print is [that] not everybody does as well. Some companies pay us money, but to other companies, we actually pay them more than we take in."

Wurl brings in demand and passes along the opportunity to bid on unused spots. "We're not in a position where we would compete with the traditional DSPs [demand-side platforms] or SSPs [supply-side platforms], but in an imagined generic workflow, we would be positioned as an SSP because we've aggregated a bunch of supply," says Fisher. Wurl handles programmatic demand and direct deals. It also enriches this supply with contextual metadata (which could include episode names, topics, genres, etc.).

"One of our chief concerns is not to compete with demand sold by the publishers. When a publisher uses Ad Pool, they set a floor price they're selling their inventory for," says Fisher. "Wurl ensures [that] ad buyers can't try and circumvent publisher's offerings and go around them and buy more cheaply from us. We ensure that we don't compete with publishers."

Publishers participating in Ad Pool can put in specific exclusions. "Sometimes they don't want their branded inventory available," says Fisher. The result is that buyers can purchase

for a specific set of channels, but they don't necessarily know what channel. "Suddenly, they [have] a route for monetizing this unsold inventory, but nobody knows that it's their inventory."

This all happens within a few seconds in each individual ad break. "We have about a 30% uplift in impressions," says Fisher. So that's one way to not leave money on the table.

### Welcome Multicasting

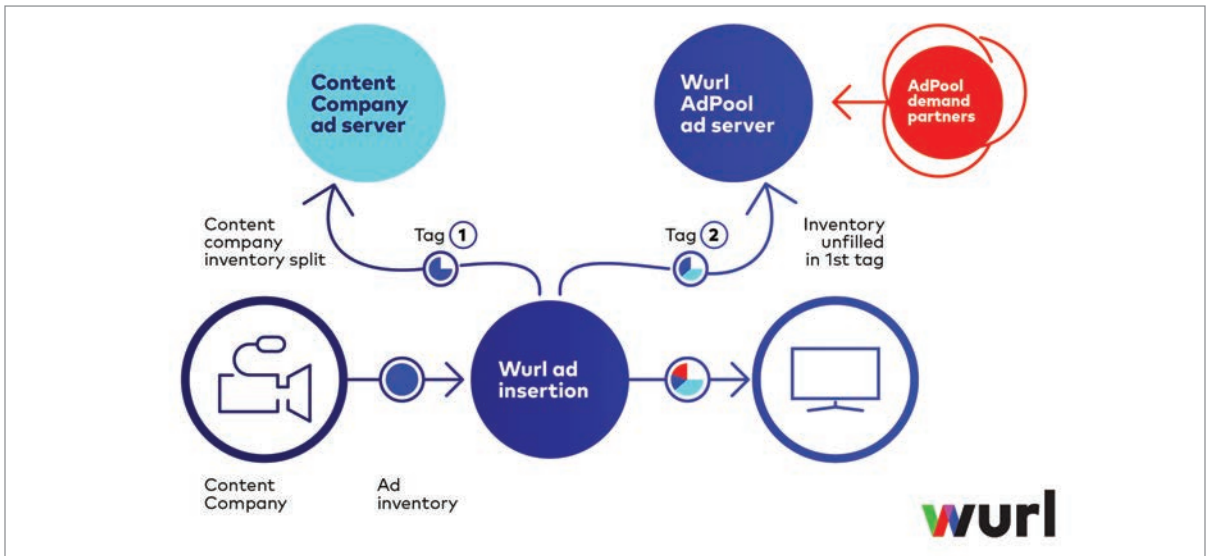
"Something that's very specific to our solution is the distribution through multicast," says Damien Sterkers, video solutions marketing director at Broadpeak. "We're doing multicast ABR [adaptive bitrate] for normal programs, which means that instead of distributing content on a one-to-one kind of transaction, ...

[we] push the same thing: one single copy to everyone."

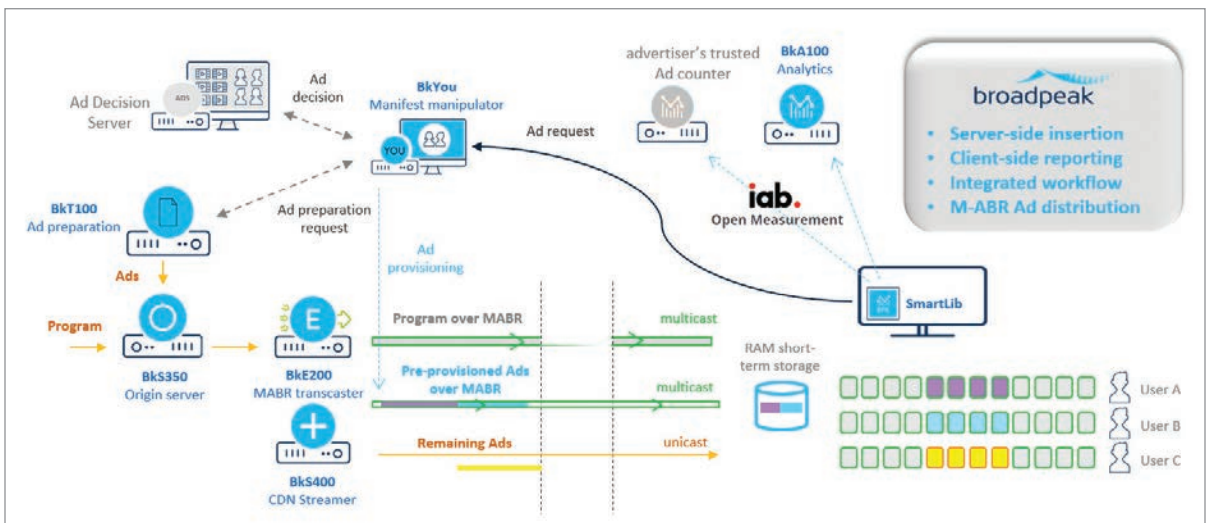
The result is unlimited capacity. "This is a copy that you can prioritize, and it is very minimal in terms of capacity on the network," says Sterkers. Broadpeak can use multicast for not only the program but for some of the advertising as well, and the ad decision could be from programmatic or direct sale.

"Everybody's watching the same thing at the same time, then comes an ad break, and, providing that the ad system is providing targeted ads, it means that not everyone will have the same content at the same time. Here, we've had to do some adaptation. The manifest manipulator knows which ads will be requested by most people," says Sterkers. "You

Wurl's Ad Pool service brings in demand from partners and presents the opportunity for publishers to bid on unused ad spots, increasing fill rates.



Broadpeak's multicast ad insertion is designed to make the ad insertion process more efficient.



can inform this multicast ABR server to say, 'These ads I know will be used a lot of times, you need to provision them on the multicast as well.' This way, they can be distributed through the multicast to the end users, and they can benefit from ... scalability and quality for these ads."

The principle of targeted advertising is that there is a theoretically infinite number of ads, but, actually, the number of possible ads that you will have during this time is limited, and some ads are more important than the others, according to Sterkers. "So the game here is to provision the most important ads so that they can be distributed in multicast."

Some viewers will have ads pre-provisioned and distributed through multicast. Other viewers get a different ad load that could not be pre-provisioned, so their broadcast goes unicast at this point. "The main thing is that you've secured that when you get to the ad break; you don't have everyone going to unicast requesting their own private copy. Most of them will get something from the multicast, and just a limited amount of people will have to do a private connection to get their ad," says Sterkers.

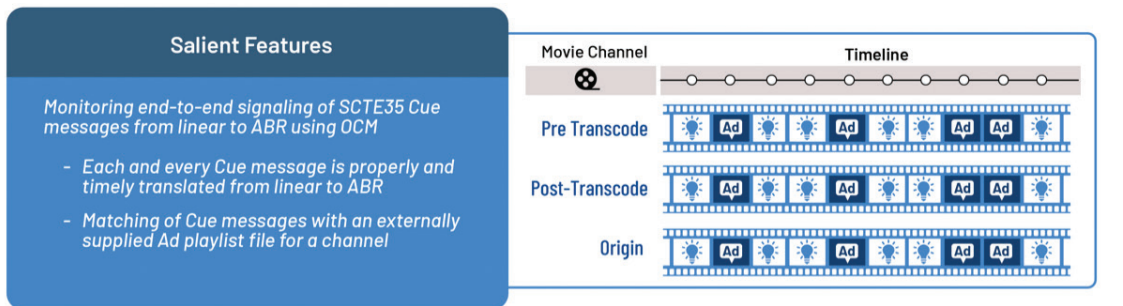
How do you get multicast? Broadpeak gets customers who've started with a manifest manipulation from Google. However, Google assumes you're getting the ad from its servers.

Two issues arise: Ads can be far away, and Google charges for each time the ad is pulled, according to Sterkers. Caching the commercials closer to the edge and provisioning for ABR multicast solves those problems. "We have an added value, because Broadpeak is providing the distribution system," says Sterkers.

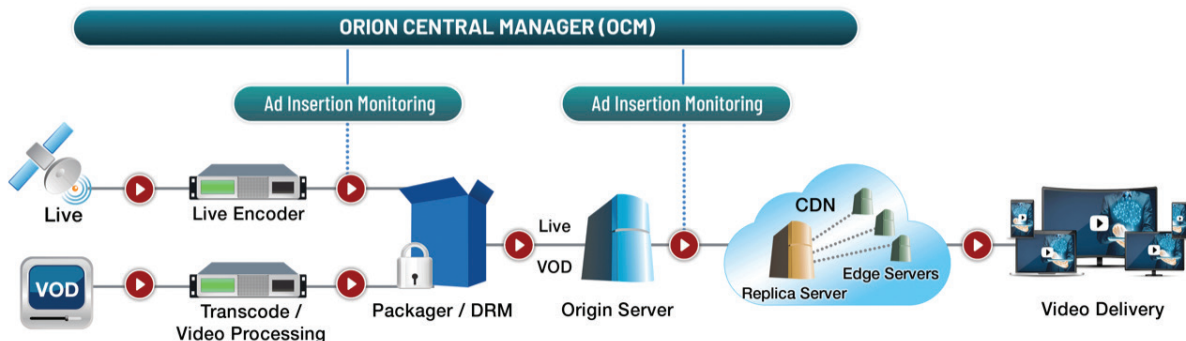
### Trust and Verify

"Ad insertion monitoring is very important, and I would say in the last two years, there is an increased interest because for some of our customers, the primary monetization is from ads," says Anupama Anantharaman, VP of product management at Interra Systems. "In the ABR world, ad insertion monitoring is particularly complex."

Interra Systems' Orion now features detailed ad insertion monitoring reports, which include video thumbnails for visual proof that the ad was in fact inserted. The software is installed on a server, and there may be multiple probes running. For example, one probe may be running at ingest and another at a CDN location. Orion monitors the incoming streams in real time and can perform manifest validation for different profiles. "If there are any problems, then you can locate where the problem is. You can troubleshoot with all the built-in tools that we have in the monitor," says Anantharaman.



Interra Systems' Orion monitors ad insertion on both live and video-on-demand content, giving brands confidence that their ads are being delivered.



“We can compare both at pre-insertion and post-insertion to make sure that the ad in fact went into the same spot where it was supposed to go. We also have information about resolution of the ad and bitrate, and we can also perform [quality control] on that ad to make sure that audio and video quality meets customer requirements,” says Anantharaman. Orion also looks at how many ad slots were available and how many went unfilled.

In an OTT scenario in which content is being consumed in many countries, probes can be deployed in the cloud nearest to the customer. “Dynamic ad insertion enables streaming services to reach a much wider audience across so many different geographies, but that also means many different viewing platforms,” says Anantharaman. “It definitely adds to the complexity.”

### Context and AI

To get even more complicated, maybe we should invent some new ad formats? That’s exactly what CatapultX is doing with its On-Stream platform, which inserts display-like ads into contextually relevant moments in video that’s adjacent to the main video. It can identify activities, logos, and objects, as well as significant moments that brands may want to be associated with.

“Our AI identifies different brands and logos and finds one we’re programmatically connected to, and then delivers [it] into the stream at that moment,” says Zack Rosenberg, CEO of CatapultX. One example might be that a soccer goal being scored could trigger an ad that’s selling the player’s jersey. This works for live or on-demand content. It can also be used in

ad-supported video on demand and more subtly in subscription video on demand. The premise is that this type of ad gives a better experience than showing a traditional 30-second ad in a subscription service in which viewers don’t traditionally see ads, according to Rosenberg.

“84% of people will leave as soon as pre-roll starts, 65% will hit skip the moment they can, and 25% of people will block ads,” says Rosenberg. “We invented a completely new set of inventory. We provide publishers with effectively three options: They buy it [based] on time, on percentage, or high-impact moments. If we know the video is three minutes long and they only want 10% of the video monetized, we have 30 seconds.

“We’re connected to DSPs. Everything can be bought programmatically. So while they’re not kind of your ... standard formats, they use existing ads,” says Rosenberg. “We took the approach to partner with video players so that we get access to any imaginable content. We’re compatible with everything from JW Player and Brightcove [to] AirTV and Dailymotion.”

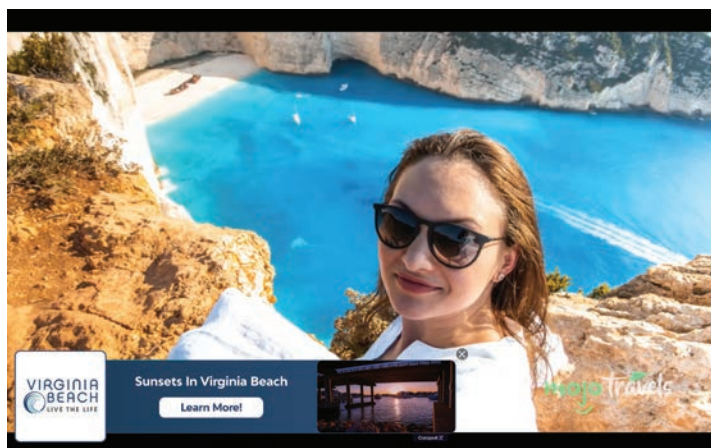
Sports has gravitated toward this type of advertising, and it didn’t hurt that CatapultX recently worked within a sports technology incubator. Its first ads went live in December 2020 and are contextually targeted. If an advertiser’s spokesperson is Serena Williams, CatapultX can deliver top CPM around content featuring her, then lower CPM around content featuring Venus Williams, and lower CPM still for other tennis players. The viewer has the option of clicking on the ad to pause the video or to continue consuming the content with the inline, or what the company calls on-stream, ads.

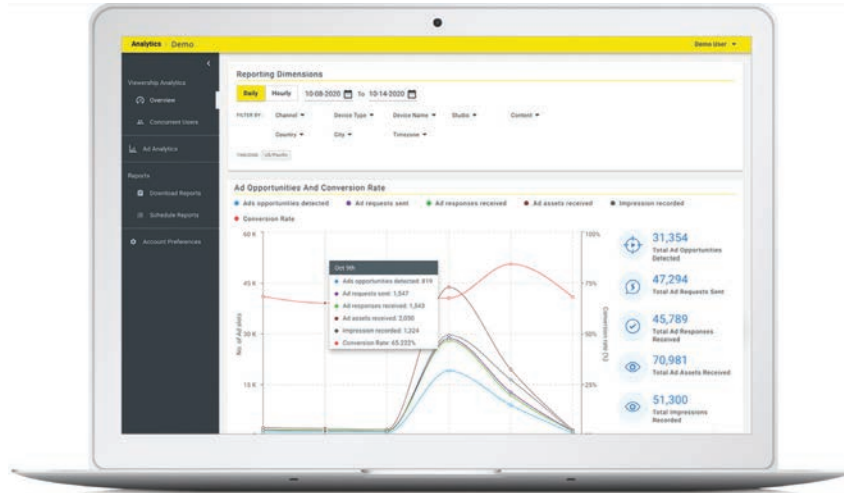
### Ad Intelligence

Amagi’s SSAI platform Thunderstorm has been on the market for about 6 years. Some of the features that customers appreciate are the analytics capabilities that accompany it.

“I was talking with a customer who said that they completely revamped their programming based on the analytics that they actually got,” notes Amagi co-founder Srinivasan KA. He says the customer was able to get answers to a number of questions: Should I have 24/7 unique programming? How many viewers fall off if I

*CatapultX’s On-Stream delivers contextually relevant video ads on top of the main content, and the new format has been more effective than traditional pre-rolls.*





Amagi brings granular analytics to SSAI with its Thunderstorm platform.

do repeats? What sort of ad loads should I have? What's the trade-off between monetization and viewership drop? What sort of stickiness is there in terms of average time spent across, and when do the viewers fall off?

Amagi's platform has three common use cases. "The content partner has cue points or SCTE markers within the stream. When we see the SCTE markers, we make the ad request. We transcode the ad in real time and serve in the format that the platform needs based on the specific profile," says Srinivasan KA. Amagi also does real-time header bidding, in which it provides the request to multiple partners at the same time. "Based on the highest bid or the second highest bid, we would insert the appropriate ad in real time." The third use is for live streams that do not have SCTE markers. "We can recognize the ads in real time using [machine learning] and can replace those ads in those linear streams without any markers."

### The New DSP

The Trade Desk's Solimar DSP provides advertisers with data-driven tools that enable them to leverage the power of their first-party data and still abide by the latest privacy requirements.

Solimar uses AI capabilities, so marketers can optimize their campaigns and tie their ad spend to real business outcomes. "The result of more than two years of product development, Solimar addresses key concerns for today's marketers, including easy and secure onboarding of first-party data; the need to connect marketing performance to business growth goals;

an increasingly cross channel digital media environment including the fast growing world of CTV; and a rising focus on digital identity," according to a company press release.

Marketers are grappling with seismic changes—including data privacy requirements and shifts in TV consumption—that make delivering ROI and performance measurement even more important. Solimar shows how decisions impact the success or failure of a campaign, and The Trade Desk's advanced AI tools are there to help ensure the campaign is a success.

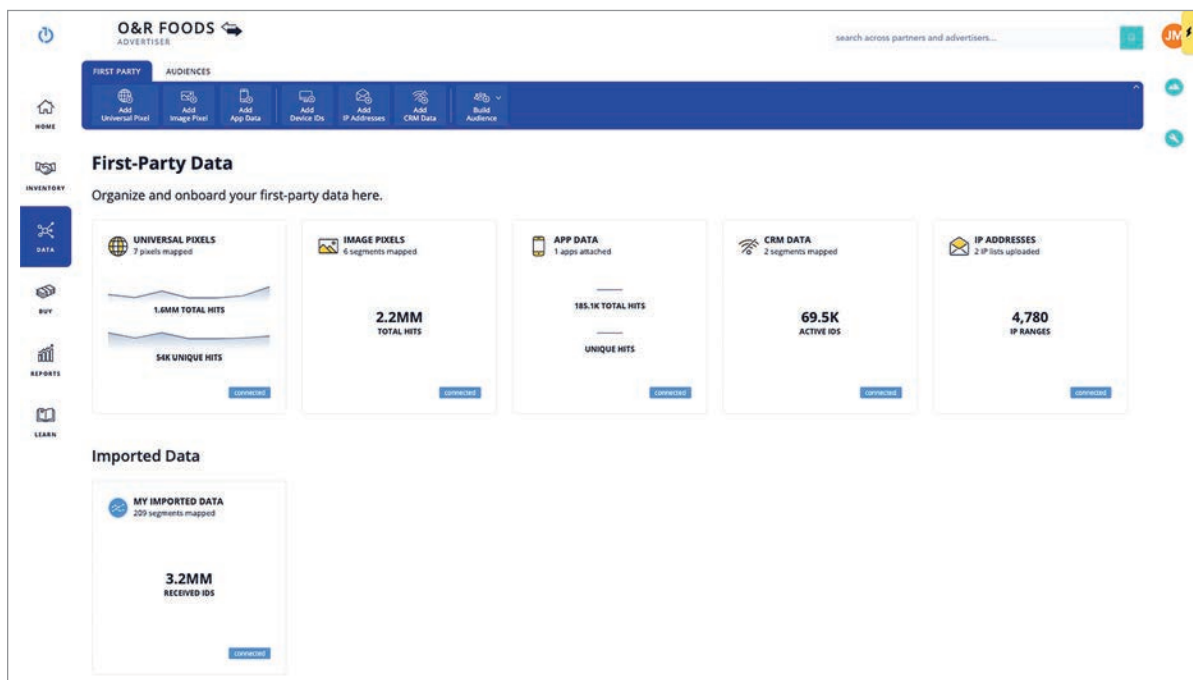
Marketers can onboard their CRM and Unified ID 2.0 data (the data identification standard that has been promoted by The Trade Desk). "Solimar connects this first-party data to pseudonymized data, such as data generated by [Unified ID 2.0]. This allows brands to find new customers who share the same characteristics as their most loyal consumers," according to the press release.

### The New SSP

If one of your biggest complaints about ad tech is that there are too many moving parts, FreeWheel feels your pain and has created a one-stop solution with its supply management platform Monetization Rights Management (MRM).

"[This is the platform used by the] majority of the big TV media companies for their digital and dynamic operations, as well as the big cable and satellite distributors. It helps them to manage and monetize their inventory across both linear and digital," says David Dworin, VP of advisory services and trust at FreeWheel.

The Trade Desk's Solimar demand-side platform uses AI to let marketers leverage first-party data without running afoul of privacy requirements.



FreeWheel built capabilities to coordinate direct-sold and programmatic advertising into one source. According to a company press release from 2020, “By combining an ad server and SSP into a single system, FreeWheel has the functionality to consider all factors that impact both a publisher’s advertising clients and viewers, including:

- Programmatic demand across multiple sources, including guaranteed deals and private marketplaces
- Rules, objectives and requirements of the buyer
- TV-level compliance, such as category and competitive separation requirements
- High-quality user experience considerations, such as ad repetition and relevance.”

SSPs allow publishers to set pricing floors as well as other controls, like rejecting certain types of ads or assigning the amount of inventory to sell programmatically. MRM connects different types of demand coming in from agencies, programmatic partners and resellers, and publishers. “If you think about a world where video is more fragmented on all these different devices, you have both linear and TV-style inventory,” Dworin says. “You might have multi-

ple brands that are operating separately. You might have multiple platforms. We help them to bring that all together into a single place.”

Some publishers will optimize for fill, showing as many ads as they can. Others will focus on filling fewer spots with premium inventory at a higher price. “For a buyer, it means that their ads are in front of eyeballs that they wouldn’t have access to before, because there’s actually not nearly enough inventory, especially at scale in streaming,” Dworin says.

The MRM platform also makes programmatic buying possible for publishers that may have wanted to buy programmatically but didn’t have the relationships needed to do so. “Normally, what happens is you get some programmatic demand, and you have to either wait for it, and you might miss out on good opportunities, or it flows between different systems, and you might lose things from a workflow perspective due to latency,” Dworin says. “By moving everything into a single system, we improve the workflow.”

Nadine Krefetz has a consulting background providing project and program management for many of the areas she writes about. She also does competitive analysis and technical marketing focused on the streaming industry. Half of her brain is unstructured data, and the other half is structured data. She can be reached at [nadinek@realitysoftware.com](mailto:nadinek@realitysoftware.com) or on [LinkedIn](#). Comments? Email us at [letters@streamingmedia.com](mailto:letters@streamingmedia.com), or check the masthead for other ways to contact us.