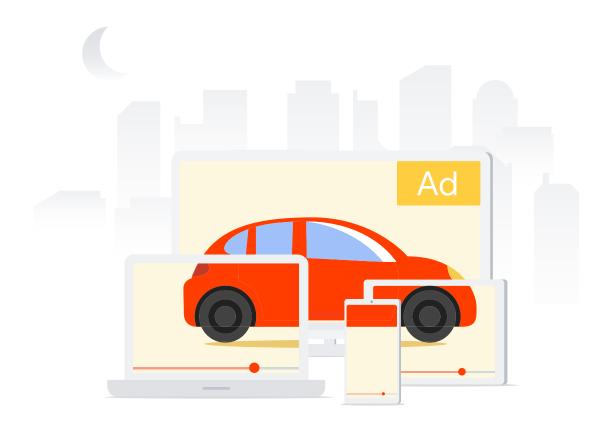
Google Ad Manager

Advanced TV inventory report



Executive overview

The viewership of TV content across digital devices is growing rapidly, which has created a new set of questions that TV programmers must understand and address in order to position their advertising businesses for success. This report uncovers and explores several of these questions to help our TV partners and the broader TV ecosystem thrive throughout the industry's digital transformation. The reports analysis includes global and regional insights from 44 global TV programmers using Google Ad Manager to monetize their TV content across digital and connected devices. Below are the questions the report addresses and a few of the top findings.

How are audiences consuming TV content across digital devices?

Data from Ad Manager's top TV partners indicates that mobile and desktop are the leading devices for the digital consumption of TV content globally. But connected TV viewership has gained a foothold in North America, and has become the region's leading digital device for TV programming viewership.

How are TV programmers transacting their digital inventory?

The prominence of traditional reservations—direct deals transacted without automation—has carried over from the linear TV advertising space. Today, 67 percent of TV ads shown on digital devices are bought via traditional reservations versus 16 percent transacted through programmatic technology. Additionally, Programmatic Guaranteed has emerged as the leading direct deal type to transact TV media through programmatic technology.

What role does programmatic play in the future of TV content monetization?

Because the majority of TV ad deals are still transacted manually, both TV programmers and advertisers have a large opportunity to automate, scale, and tap in to advanced functionality that programmatic platforms deliver. Programmatic offers a brand safe opportunity to grow demand and improve operational efficiency while also ensuring TV inventory retains its value online.

Which signals increase demand and value of programmatically sold TV inventory?

Through our research we've uncovered four indicators (viewability, addressability, context, and protections) that have the largest impact on TV inventory demand and CPMs. We explore what these signals are, how they are passed, and the value they have on programmatic demand.

See additional information on these findings and many more throughout the report.

The age of advanced TV

TV programming has evolved past the cable or satellite box and into the realm of digital. Consumers are now streaming content across a growing myriad of devices, platforms, and services, thrusting TV programmers into a new reality. They need to distribute their premium content everywhere their audiences are watching, and to monetize these disparate channels effectively.

At Google, we call the ability to engage and advertise in this new watching landscape "advanced TV." We define it as the digital technology used to reach and monetize TV audiences watching live, linear, or on-demand TV programming via video streams across desktop, mobile, tablet, connected or over-the-top (OTT) devices.

The convergence of traditional TV and digital video has upended the advertising business of legacy TV programmers. But while new challenges have emerged and viewership continues to skew towards digital, several universal truths remain for TV inventory.

TV content and inventory remain premium everywhere audiences are watching

TV programmers are investing more on content development, production, and acquisition than ever before. Over the past year, traditional programmers like CBS, Sky, HBO, and NBCU — as well as digital-first programmers like Netflix, Hulu, and Disney+ — have invested heavily in quality content.

Both advertisers and audiences recognize these investments and are responding in kind with dollars and viewership. eMarketer forecasted that US advertisers would increase their upfront TV spend in 2019 by 2.4 percent to \$21.25 billion and upfront digital video ad spend by a whopping 19.6 percent to \$4.39 billion. And although households with a subscription to traditional pay TV services (cable, satellite, telco/fiber operators and

Research Methodology

The research in this report is based on instream video data from 44 of Ad Manager's top TV programmer* partners in APAC, EMEA, LATAM, and North America. The content measured consists of TV content (long-form news, sports, and episodic shows) and TV-like content (short-form clips of TV content or premium long-form video content developed for digital distribution). The content was viewed across mobile. desktop, tablet, and connected TV (CTV) devices. All outstream and interstitial formats were excluded in the analysis. The data reflects a time period from Q4 2018 through Q1 2019 and primarily focuses on inventory available through Google's ad exchange, including transactions from Open Bidding.

It's important to note that this data only reflects consumption trends from broadcast partners using Ad Manager to monetize their content. It does not take into account performance data from other programmers, distributors, or external technology services, whose device and viewership trends may differ from Google partners.

*In the case of this report, we are defining TV programmer as an organization whose primary distribution and revenue channel is currently cable or satellite television.

multiple system operators) are declining in younger demos, US adults are still consuming 5 hours and 46 minutes of TV or video content per day on a TV set, computer, smartphone, or tablet.

TV inventory will always be in high demand

Historically there was a finite quantity of TV ad inventory for sale because TV was prepackaged and only allowed a handful of ads per hour. For successful TV programs, this naturally led to high advertiser demand, the creation of the upfronts, and a tendency for programmers to lean heavily towards direct deals for their digital sales strategies. This trend remains persistent today.

However, as consumption of TV content across different devices, platforms, and schedules continues to grow, programmers have an opportunity and challenge to tap more aggressively into programmatic sales strategies to grow both advertiser demand and their revenues.

Traditional TV and digital video sellers and buyers do not speak the same language

In our research report, "The convergence of TV and digital video", we uncovered several challenges facing programmers as linear television and digital video converge. Many are struggling with developing strategic revenue models, ad sales execution strategies, and common performance metrics in the converged ecosystem. Some top TV professionals are also hesitant to adopt programmatic more systematically into their businesses.

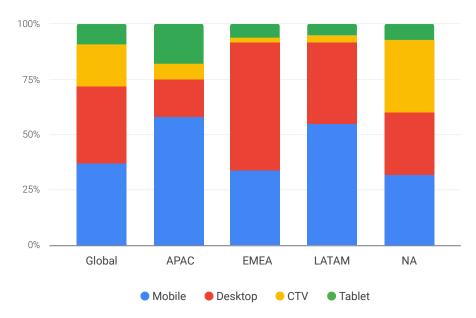
Understanding advanced TV and investing in programmatic offers TV programmers a path to address these challenges and prepare their businesses for the future. But before we dive into the details of both, let's take a moment to view a snapshot of how audiences are consuming and programmers are transacting digital TV inventory around the world.

How audiences are consuming Ad Manager partner inventory globally

Across the globe, "watching TV" means different things, as the digital devices used to consume TV content vary greatly from region to region. Looking at the percentage of total ad requests—when a player requests an advertisement be inserted into the programs content—across digital devices and regions, we can see some interesting trends.

Globally, 38 percent of advanced TV ad requests came from audiences watching TV programming on mobile devices, 35 percent on desktop, 19 percent on CTV, and 9 percent on tablet.

Advanced TV ad requests by digital device



Google Ad Manager Internal Data, Q4 2018 - Q1 2019

Looking into regional trends in APAC, mobile is the most used digital device to consume advanced TV content, representing over 58 percent of the regions total ad requests. Tablet is the next most used device representing 18 percent of total requests - highest among all global regions. Followed by desktop at 17 percent and CTV at 7 percent.

Across EMEA, desktop represents the majority of advanced TV ad requests at 58 percent share of viewership, the highest share of desktop among all regions globally. Mobile owns 34 percent of all requests in the region, followed by tablet then CTV.

Like APAC, LATAM is led by mobile at 55 percent of total advanced TV ads requested. Desktop still represents a sizable percentage of viewership at 37 percent, with tablet at 5 percent, and CTV at 3 percent.

In North America, viewership of advanced TV programming looks very different than the rest of the world, with CTV owning 33 percent of the total ad requests made. Mobile and desktop are responsible for 32 percent and 28 percent of ad requests, respectively. While tablet ad requests top out at 7 percent in the region.

In 2020, we anticipate measurable growth in CTV ad impression volumes globally and in North America with the addition of several new TV partners whose Ad Manager implementations went live later in 2019, and were not included in this report.

How programmers are transacting advanced TV inventory

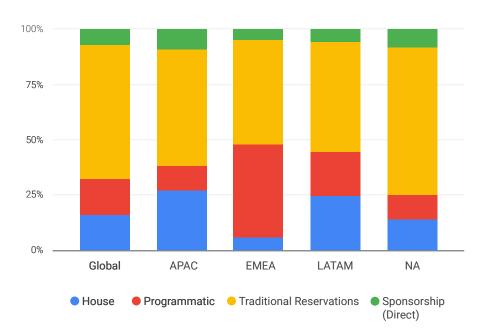
As noted earlier, the scarcity and quality of TV inventory has lead to a disproportionate mix of direct and indirect deal types across digital channels. But programmatic demand for TV inventory is growing and represents a sizable portion of the total picture in certain regions.

Before we dig into the performance of various deal types, let's start with a quick overview of how each one works. For traditional TV buyers who are less familiar with digital selling methodologies, the chart below represents all of the ways partners can currently transact deals through Ad Manager.

Open Auction	First Look	Private Auctions	Preferred Deals	Programmatic Guaranteed	Traditional Reservations
Hundreds of competing buyers	Hundreds of competing buyers	Negotiated minimum price	Fixed price	Fixed price	Non-automated
No invitation required	Preferred access	Invitation only auctions	One-to-one deals	One-to-one deals	One-to-one deals
	Non-guaranteed volumes	Non-guaranteed volumes	Non-guaranteed volumes	Guaranteed volumes	Tag based

"Programmatic Direct Deals"

Advanced TV transactions by deal type



Google Ad Manager Internal Data, Q4 2018 - Q1 2019

Looking at Ad Manager partner inventory by transaction type, we can see that TV programmers sell a huge proportion of their inventory directly.

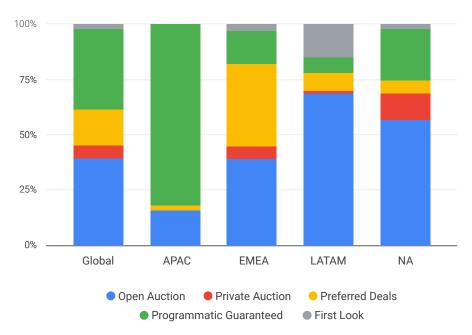
Globally, sponsorships and traditional reservations (both transacted without automation) combined represent 67 percent of all advanced TV ad impressions sold. In North America this percentage is even higher at 75 percent.

Advanced TV impressions transacted via programmatic deal types (including Open Auctions, First Look, Private Auctions, as well as Programmatic Direct Deals) represented 16 percent of total ads served globally.

Interestingly, in both EMEA and LATAM we see considerably higher rates of the programmatic exchange being used to monetize advanced TV inventory, at 42 percent and 20 percent respectively.

Around the world, house ads-ads typically used to promote proprietary programming-seem to be a major focus for programmers, representing 16 percent of all advanced TV ads shown globally. They are heaviest in APAC, representing 27 percent of the region's total impressions.

Advanced TV transactions by programmatic deal type



Google Ad Manager Internal Data, Q4 2018 - Q1 2019

When we dive into impressions sold through the programmatic deal types-16 percent of all Ad Manager advanced TV partner inventory transacted globally—we can evaluate which programmatic deal types are preferred regionally by impression volumes.

The first trend we see here is that even in the programmatic context, programmers are selling more inventory through Programmatic Direct Deals (Programmatic Guaranteed and Preferred Deals) than through the Open Auction—with Programmatic Direct Deals representing 52 percent of all advanced TV impressions sold, and Programmatic Guaranteed specifically representing 36 percent of all programmatic impressions sold globally.

A few notable programmatic transaction insights from across the regions include:

of APAC's advanced TV inventory sold programmatically is transacted via Programmatic Guaranteed deals, by far the largest percentage globally.

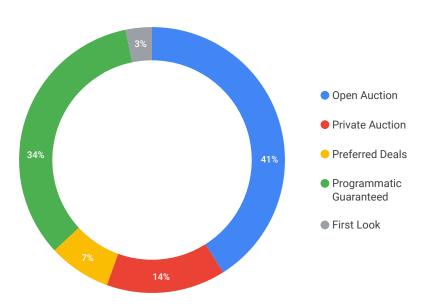
of EMEA's advanced TV inventory sold programmatically is transacted via Preferred Deals, the highest percentage of the deal type globally.

of LATAM's advanced TV inventory sold programmatically is transacted in the Open Auction and 15 percent is sold via First Look, both being the highest percentages globally.

56%

of North America's advanced TV inventory sold programmatically is transacted in the Open Auction, which is primarily driven by a large volume of shorter TV and news clips. 23 percent is transacted via Programmatic Guaranteed.

Global advanced TV partner revenue by programmatic deal type



Google Ad Manager Internal Data, Q4 2018 - Q1 2019

When we look at partner revenue by programmatic deal types, excluding sponsorships and traditional reservations, we uncover some additional insights in terms of which deal types are generating the highest value.

Globally, Open Auction deals are generating 41 percent of all Ad Manager partner advanced TV programmatic revenue, while representing 39 percent of global impressions.

Combined, Programmatic Direct Deals represent over 41 percent of total programmatic partner revenue for advanced TV inventory sold globally, with Programmatic Guaranteed owning the largest share of revenue at 34 percent.

Private Auctions are exhibiting higher revenue per impression than the average for all other programmatic deal types, representing only 6 percent of total impressions but 14 percent of partner revenues globally. This deal type offers programmers an interesting opportunity to use the power of the auction while also ensuring that only select advertisers are permitted to bid.

Insights like device usage and deal types are important benchmarks that can help programmers understand where they are in their journey to a programmatic future—one we believe is made brighter by investments in ad management technology.

Ad management platforms are positioned to help programmers scale revenues across digital devices

As noted above, 67 percent of all global advanced TV ad impressions were transacted via the traditional reservation process—which means neither programmers nor advertisers are enjoying the benefits of automation. As the "traditional TV" experience continues to converge with digital distribution, TV programmers now have the ability to grow revenue and evolve the traditional TV sales model while maintaining control and inventory value.

By using separate systems and processes to transact deals instead of a single, streamlined workflow, programmers and advertisers are losing out on performance and efficiency.

A study conducted by the Boston Consulting Group found that media sellers required 57 percent less time setting up and running Programmatic Guaranteed campaigns than with traditional reservations, while media buyers were 29 percent more efficient. In a separate study, Nielsen found that brands using Programmatic Guaranteed to consolidate their direct and indirect inventory experienced an 11 percent increase in reach efficiency across their campaigns.

Ad management platforms like Google Ad Manager can reconcile demand across TV programmers' inventory all while upholding its value and providing brand safety assurances. Programmatic should no longer be perceived as a means to fill remnant inventory, but as a tool that can ensure programmers are capturing the highest yield and revenue across all of their demand sources, in the most efficient manner.

Make ad breaks smarter

Ad Manager's Smarter Ad Breaks suite enables programmatic demand in commercial breaks with safety considerations built in to protect your brand. Programmers using the suite get TV-like control and digital-flexibility to configure a personalized commercial break. Using a combination of features-including optimized pods, ad rules, ad buffet, ad break templates, and protections and controls—programmers can craft a truly personalized ad experience for viewers while maximizing revenue and respecting advertiser requirements. This feature is best leveraged with Ad Manager's programmatic offerings, to further maximize yield while adhering to the same protections and controls as reservation ads.

Partners using the Smarter Ad Breaks suite have complete oversight of every ad break, and have seen an average revenue uplift of 50 percent over standard ad pods¹. In comparison, standard ad pods are commercial breaks where each ad slot is decisioned individually and independent of each other, which can lead to inefficient yield management.

A programmatic future for TV

Programmers who understand the benefits of programmatic can not only increase the value of their inventory, but also the efficiency of their teams, all while maintaining control of their sales strategies. First, Programmatic Guaranteed deals act as a logical alternative to today's traditional reservations, ensuring high revenues from top advertising partners, while improving selling and buying efficiency. Second, programmers using programmatic have complete control over their pricing floors, ensuring that they can continue to extract TV-like CPMs across their indirect programmatic demand.

The beauty of programmatic is that it operates on a clear set of rules that programmers define, allowing them to scale demand and grow revenues as their sales strategies evolve. As TV programmers become more sophisticated in their use of programmatic, implement and pass key signals to buyers, we'll continue to see their CPMs and revenues increase.



Partners using the Smarter Ad Breaks suite have complete oversight of every ad break, and have seen an average revenue uplift of 50% over standard ad pods.1

¹ Google Ad Manager Internal Data, March 2018

Top earning digital signals for TV inventory

Because programmatic offers the benefits of simplicity and addressability, more and more advertisers are beginning to shift portions of their budgets towards automated buying across both linear and advanced TV inventory. Advanced TV offers advertisers an opportunity to buy directly on certain programs they know they want to reach, as well as an opportunity to buy indirectly, by bidding on desired audiences across the broader pool of inventory. To take advantage of this trend, programmers need to pay attention to four key indicators that help determine the demand and value of their inventory. Without the use of these indicators, advertisers bid considerably less for their inventory, if they bid at all.

The indicators that carry the most weight for advertisers are viewability, addressability, context, and protection. Let's explore each of these in detail.

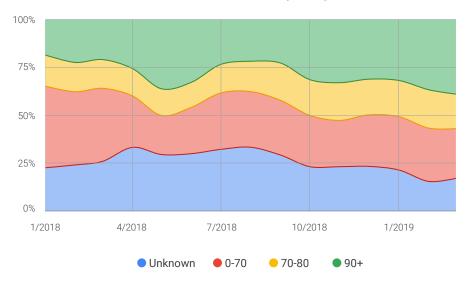
Viewability

The Interactive Advertising Bureau (IAB) defines a viewable video impression as an ad that has 50% of its pixels visible on screen continuously for 2 seconds or more. Higher viewability can lead to better viewing experiences for users, better results for advertisers, and increased demand, fill rates, and revenue for publishers.

Viewability rates measure the percentage of partner inventory that is considered viewable over a period of time, i.e., if ad impressions are considered in view only half of the time, you'd have a viewability rate of 50 percent. The Media Rating Council has developed a "viewability threshold" of 70 percent, which refers to the minimum proportion of measurable ad impressions in a campaign that meet their guidelines for viewable impressions. We can consider a viewability rating of 70 percent or better the current benchmark for viewable versus non viewable inventory.

Today, effectively measuring viewability is largely limited to desktop, mobile, and tablet devices. The standard for measuring CTV viewability is nascent and currently evolving. Because of the nature of TV viewership, and the playthrough rates of ads on TV, viewability on CTV inventory is currently inferred at a rate of 90 percent.

Global advanced TV viewability ratings over time



Google Ad Manager Internal Data, Q4 2018 - Q1 2019

Across the 44 global programmers we evaluated, we can see three important trends developing that we believe reflect the current state of video viewability.

- 1. Globally, more than 55 percent of advanced TV partner inventory on Ad Manager has a viewability rating over 70 percent.
- 2. Over 35 percent of advanced TV inventory globally has a 90 percent or higher viewability rating, and this percentage is trending higher in 2019.
- 3. More than 80 percent of global advanced TV inventory has a reportable viewability rating, and this number is continuing to grow.

Additionally, we've found a direct correlation between increasing viewability and revenue uplift.

Increasing the viewability rate of video ads from 50 percent to 90 percent grew revenue by more than 80 percent on average across desktop and mobile sites globally.

Ad Manager measures viewability through our Media Rating Council (MRC) accredited Active View technology for web and app. We also support third-party measurement providers such as Integral Ad Science and MOAT through Open Measurement. To learn more about improving viewability across your sites and apps, download our quide on Video Viewability Best Practices for Publishers.

Addressability

Addressable advertising is the ability to deliver relevant ads to digital devices in real-time at scale. And while addressability for mobile and desktop devices has become commonplace, addressability on CTV devices remains a challenge due to growing device and OTT service fragmentation.

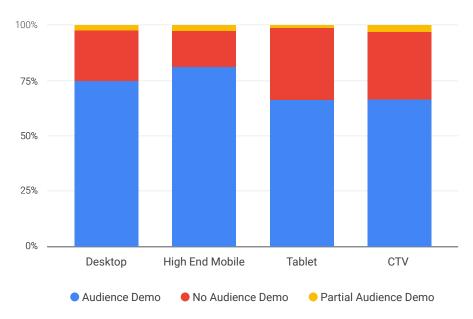
In today's environment, privacy is top of mind for users, advertisers, and programmers—and CTV is no exception. As people gain more control over what content they watch, they also want to be in control of how their data is used to inform the ads they see. It's critical that the industry adopts user-first practices to help build a sustainable connected TV advertising ecosystem.

This is why we teamed up with the IAB Tech Lab's OTT Technical Working Group to design shared industry guidelines for creating high-quality and privacy-safe CTV advertising experiences. These guidelines formalize the Identifier for Advertising (IFA), which allows advertisers to reach audiences and measure their campaigns in a way that gives users more transparency and control than alternatives, such as solutions that use the IP address of a viewer's device.

As CTV addressability and measurement capabilities continue to advance, we acknowledge the need to develop solutions that solve for multi-user devices. Which is why it's critically important to get fundamental building blocks like IFA established now. As IFA adoption increases across the broader ecosystem, we anticipate a highly addressable future for CTV.

Although IFA is a developing standard today, we are already seeing a substantial amount of privacy safe audience demographic data across all device types, which is lifting inventory CPMs for programmers.

Global demographic identification on advanced TV inventory by device

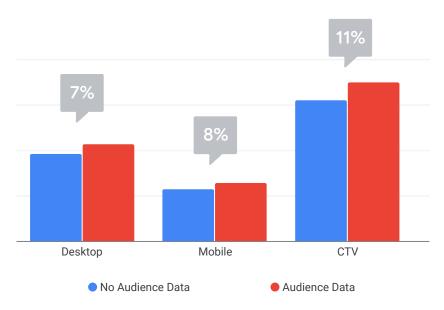


Google Ad Manager Internal Data, Q4 2018 - Q1 2019

The beauty of addressable advertising is that it benefits everyone involved; audiences are shown ads that are more relevant and helpful to them, advertisers reach audiences who are more likely to buy their products, and programmers earn more for delivering ads to more accurate audiences.

When we look at impressions delivered by our top TV programmer partners, we see the majority of advanced TV impressions are currently addressable across all device types, including CTVs.

Global advanced TV CPMs with and without audience data signals



Google Ad Manager Internal Data, Q4 2018 - Q1 2019

The ability to segment and package audiences based on demographic data is one of the most important aspects of advanced TV.

Today, global programmers are seeing averaged CPMs across their desktop, mobile, and CTV devices lift by 7 percent, 8 percent, and 11 percent, respectively, when audience signals are available during programmatic transactions.

Context

Contextual signals like content ratings play an important role in helping programmers classify their content so they can more easily market and sell their inventory. Without them, marketers would have a harder time understanding if the inventory they're buying is appropriate for their audiences. Our data shows that advertisers place significant value on contextual signals, that's why it's important for programmers to include this data for programmatic buyers.

Currently broadcasters provide content URL, description URL, App name, and App rating, as well as video length to help marketers assess the brand safety of their inventory. In 2020, we will allow TV programmers to pass a standardized signal for genre, duration, and content rating, allowing advertisers to plan, package and buy on the signals across programmatic deals and open auction, with the same security as reservation deals.

Content ratings are currently inferred based off of the description URL and content URL provided by Ad Manager programmer partners. They play an important role in understanding what types of content audiences are consuming, whether or not it's brand safe, and where audiences are consuming it.

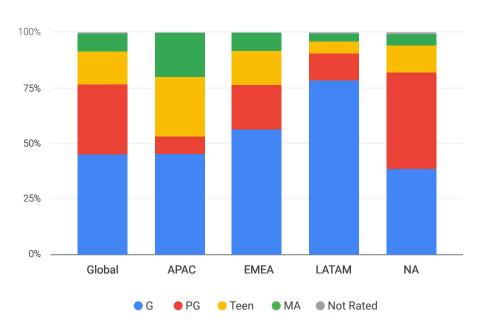
Globally, over 90 percent of Ad Manager's advanced TV partner inventory is reported as brand safe, carrying a rating of G, PG, or Teen.

Content ratings across advanced TV inventory vary greatly from region to region. In EMEA, LATAM, and North America, we find that more than 75 percent of advanced TV content viewed across digital devices is rated either G or PG.



Globally, over 90% of Ad Manager's advanced TV partner inventory is reported as brand safe, carrying a rating of G, PG, or Teen.

Advanced TV content ratings by region



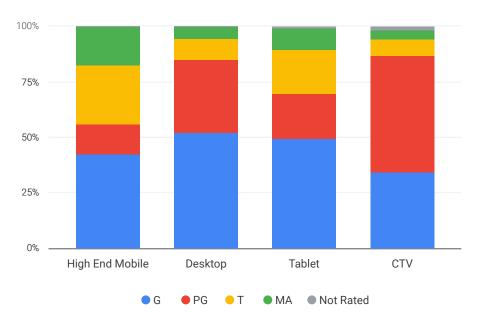
Google Ad Manager Internal Data, Q4 2018 - Q1 2019

In APAC, by contrast, Teen and Mature content combine to represent over 50 percent of all advanced TV impressions in the region.

LATAM appears to have the most family friendly programming, with more than 75 percent of advanced TV impressions rated as G. And North America over-indexes on PG, which accounts for more than 35 percent of total impressions.

When evaluating content rating by device, we see a clear correlation between the size of the screen and the type of content being consumed.

Global advanced TV content ratings by device



Google Ad Manager Internal Data, Q4 2018 - Q1 2019

Globally, over 80 percent of CTV and desktop impressions are rated G and PG; more personal devices, such as mobile phones and tablets, have a statistically significant percentage of Teen and Mature viewership. Regional device saturation and audience age may play a large role in screen preference.

Protections

Ad Manager provides sophisticated spam detection by analyzing a variety of signals such as IP address and the like to protect buyers from invalid traffic and programmers from bad actors trying to mimic their inventory, which is critical in preserving the trust between Google and advertisers.

One of our top priorities is to sustain a healthy digital advertising ecosystem, one that works for everyone: users, advertisers, and programmers. Teams of Google engineers, policy experts, and product managers combat and stop bad actors on a daily basis. Last year, we removed 734 thousand publishers and app developers from our ad network and ads from nearly 28 million pages that violated our publisher policies.

Additionally, we <u>recently announced</u> that we are expanding the Interactive Advertising Bureau's (IAB) ads.txt protections to include partner apps. We've actively contributed to the specification of app-ads.txt since it began, and will support the standard across all relevant publisher products.



Last year, we removed 734 thousand publishers and app developers from our ad network and ads from nearly 28 million pages that violated our publisher policies.

As of August 2019, we began blocking ad serving of unauthorized app inventory in both AdMob and Ad Manager, as identified by a publisher's app-ads.txt file.

We'll continue to address these and new challenges like CTV ad fraud as we move forward. CTV is a particular area of focus for protections because it is an emerging device type and the landscape is currently very fragmented.

Combined, these indicators translate into greater demand, CPMs, and protections for programmers

Layering the benefits of viewability, addressability, context, and protection creates demand and increased revenue for TV programmers. As TV media sellers become more sophisticated with their digital sales models, and the identification of devices and audiences continues to improve, we anticipate the value of digital TV inventory will continue to rise.

Reimagine the commercial break

The business of TV is undergoing dramatic change. Pay TV subscriptions are declining, and more content is being consumed on mobile devices and connected TVs than ever before. But around the globe, important distinctions remain in the kinds of media audiences consume, the devices they use to do it, and the way advertising is sold and delivered to them.

As all devices become addressable and digital signals become the standard when buying or selling advanced TV inventory, programmers will have an enormous opportunity to grow revenue and increase their relevance among media buyers.

Interested in investing more in your programmatic future? We recommend taking the following four steps:

- 1. Use this report to better understand how advertisers are buying advanced TV inventory programmatically, and develop a sales and pricing strategy that reflects regional transactional preferences.
- 2. Evaluate the benefits of launching a solution like Smarter Ad Breaks. This will help grow advertiser demand, maximize revenue, deliver premium and relevant experiences, while maintaining complete control over your brand's safety.
- 3. Where possible, shift your traditional reservation business to Programmatic Guaranteed for digital inventory. This will enable you to reap the benefits of automation while providing advertiser partners with the opportunity to improve performance.
- 4. Work to understand and improve viewability ratings and pass contextual signals to media buyers via content ingestion. By implementing the Interactive Media Ads SDK, you can ensure all inventory signals are passed to Ad Manager. These signals will increase the demand and value of your TV inventory across digital channels.

The business of entertainment has never been more exciting. Moving forward, we're here to help you reimagine the commercial break in a way that supports your business today and in the future.

Click here to learn more about how Google Ad Manager can help prepare bring your broadcasting business into the next era of distribution and monetization.