



TV[R]EV

**THE EMERGING SMART TV
ECOSYSTEM**

A TV[R]EV REPORT

LG Ads

SAMSUNG Ads

VIZIO

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Executive Summary



Photo courtesy of Samsung Ads

Smart TV manufacturers are having a moment.

The shift to streaming has put them in the role that MVPDs occupy in the current linear universe.

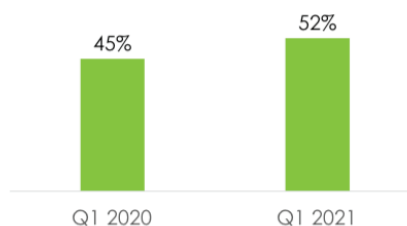
And then some.

A [recent study from Hub Entertainment](#) shows that smart TVs account for 50% of TVs overall in the U.S., and can be found in 70% of all TV homes.

THE NUMBER OF SMART TVS AS A SHARE OF THE NUMBER OF ALL TV SETS WENT OVER 50% FROM 2020 TO 2021



Smart TVs as % of all TV sets



Source: Connected Home 2021 report from Hub Entertainment Research

HUB ENTERTAINMENT RESEARCH

Smart TV OEMs not only play gatekeeper to the raft of streaming services that are now available, but they have their own free ad-supported streaming TV services (FASTs), their own ad inventory and ad sales teams and their own ACR measurement data.

In addition to content, data and advertising, smart TVs have a new look. The OEMs have realized the importance of interface and user experience and have made real strides in catching up to streaming devices—so much so that users are increasingly bypassing those devices.

The advertising ecosystem created by the smart TV OEMs is booming. It can provide much more exact metrics and brands can more easily implement frequency capping as the OEMs have insight into what viewers have watched on linear, VOD, DVR and streaming.



Photo courtesy of VIZIO

TV[R]EV predicts that the big three OEMs—Samsung, VIZIO and LG—will see a significant growth in ad revenue over the next five years as a direct result of increased viewership on smart TVs, from \$1.37 billion in 2021 to \$6.17 billion in 2026. This will help to cement the OEMs role as key players in the new streaming TV ecosystem and make them a force the industry will need to reckon with.

The Early Days of Smart TVs



Once upon a time, TVs were dumb cube-shaped boxes that weighed more than a large St. Bernard and rarely grew beyond 33 inches. (Sony did actually roll out a 40 inch TV in 2002, but it weighed—I kid you not—300 lbs.)

TVs started changing shape in the early 00s, as HDTV came into its own and TV sets grew thinner, lighter, and notably bigger,

In the late 00s, they got smart too, as manufacturers started to roll out “smart” or internet connected TVs.

The roll out coincided with the birth of streaming television, Netflix in particular.

Before smart TVs, anyone who wanted to watch Netflix needed to buy an HDMI cable to run from their laptop to their TV.

Before smart TVs, anyone who wanted to watch Netflix needed to buy an HDMI cable to run from their laptop to their TV (provided their set had an HDMI input port—many did not) and then remember to keep their laptop open and plugged in while the movie was playing.

Given that set-up was beyond the average viewer’s technological ability, companies like Amazon, Roku, Google, and Apple began rolling out what were known as “streaming devices”—hockey puck sized devices that attached to your TV and used your existing home Wifi signal to stream Netflix and other services to your set, smart, dumb or otherwise.

Since few people had smart TVs, these peripheral devices became the default way of watching streaming among the early adopter set, as they worked on any TV and were fairly simple to operate.

That was not, unfortunately, the case for the early round of smart TVs.



Photo courtesy of LG

TV OEMs never had to deal with anything remotely resembling an interface before—electronic program guides (EPGs) were the province of the MVPDs and their set top box manufacturers—so they did not have any expertise in this area... and it showed.

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Early smart TV interfaces were basically HTML pages that proved clunky, confusing and hard to use. This only served to drive viewers away from smart TVs to the much better designed devices from Roku, Amazon, and Apple. As [Wired](#) magazine noted at the time “the bottom line is that smart TVs typically have baffling interfaces that make the act of simply finding and watching your favorite stuff more difficult, not less.”

And because smart TVs at the time didn’t support updates, all the major services only released updates for streaming devices, which further cemented their status as the default solution for streaming entertainment.

As their user bases grew and the market potential become more apparent (e.g., streaming TV was not just a fad), Roku and Amazon introduced **low-priced dongles**. These devices fit neatly onto the back of the TV where they were not visible, an aesthetic plus for anyone who wanted to hang a TV on a wall.



With prices as low as \$29, these dongles helped Roku and Amazon grow rapidly as streaming became more widespread. Smart TV prices were still high, with many name brands listed for over \$1,000. Given that Americans traditionally replace TVs every six or seven years, the conventional wisdom was that it made

more sense to invest in a \$29 stick that could be replaced every two or three years than to worry about a smart TV.

Even those who owned a smart TV rarely used the features. As recently as 2015, only half of smart TV owners actually bothered to connect their sets to the internet. It was just too common, convenient, and easy to access their favorite services using external devices.

Roku Introduces Advertising

The smart TV/streaming device business saw another major change in 2015, when Roku made the decision to emphasize its “platform” (or advertising) business. This proved a smart move, as advertisers were looking at ways to reach viewers who had cut the cord or were largely unreachable on linear TV.

Two years later, at around the same time as its IPO, Roku introduced The Roku Channel, a free ad-supported streaming TV service (FAST) that would become the lynchpin of the company’s ad efforts.

The Growth of ACR Data

ACR data works (roughly) by capturing pixels from whatever the viewer is watching and comparing it with a database to identify the content. Because it captures what is “on the glass” (the screen) it can measure linear, streaming, VOD and DVR viewing without concern for the originating source, providing true cross-platform measurement

As streaming services commanded more viewing activity, brands and platforms needed a way to measure that viewing. Nielsen, the traditional source of TV ratings, was slow to respond.

Fortunately, the leading smart TV OEMs had enough connected viewers to begin collecting automatic content recognition (ACR) data from their TVs.

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ACR data collection is “opt in,” meaning viewers must give consent to participate. Those who do are rewarded with more personalized content recommendations (as well as more relevant ads). As streaming viewership grows, so does the value of ACR data, which as we shall see also increases the value of smart TV advertising overall.

The Rise of The Content-Based Streaming Ecosystem

While Netflix is widely acknowledged as the company that pioneered streaming TV, it was Hulu that introduced advertising to the format. Hulu was the first major streaming service to include ads... in addition to a monthly subscription fee. While many found the combination curious, that did not stop the service from growing... especially once it began to feature its own original programming.

By 2021, the ad-supported subscription combo model had expanded to include five of the nine Flixes. In addition to Hulu, Peacock, Paramount+, Discovery+, and HBO Max all feature ad-supported subscription options.

These services provide their parent companies with ad inventory on both streaming and linear TV as a way to extend reach for brands seeking high-quality original programming.

In addition to the ad-supported newcomers, the past few years also saw the rise of the FASTs—free ad-supported streaming TV services, a term coined by TV[R]EVs Alan Wolk.

These include Pluto, Tubi, Xumo, The Roku Channel, Crackle and Amazon's IMDbTV. They initially featured libraries of older network series and movies (aka reruns) and low ad loads. They were free, however, and that seemed to be a major part of their appeal—viewers didn't always want to watch something new that required their full attention. Sometimes all they wanted was comfort-food TV, and if they didn't have to pay for it... all the better.

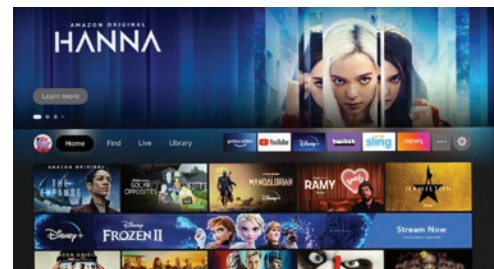
After their initial success, several of the more successful FASTs were scooped up by the various network groups: ViacomCBS bought Pluto, Fox bought Tubi, and NBCU bought Xumo, leaving Crackle as the only real independent.

In addition to the ad-supported newcomers, the past few years also saw the rise of the FASTs—free ad-supported streaming TV services.

The Smart TV OEMs Strike Back



Roku's Interface



Amazon's interface

Roku's successful entry into the ad space, coupled with their subsequent IPO, confirmed that branching out into content, data, and advertising was a smart plan. To get there though, the major smart TV OEMs all realized that they'd need to win market share back from Roku and Amazon. **Step one in that effort was improving their interfaces.**

This was critical since, as noted earlier, one reason viewers initially turned to Roku and Amazon was for their superior interface.

Roku's interface, which seems modeled on the iPhone, consists of rows of tiles laid out four across. It is ideal for viewers who know exactly which apps they want to use.

Amazon's interface, which features an array of suggested programming from the various apps the user subscribes to (including Prime), is ideal for viewers who want all their content in one place.

By rolling out their own simple, user-friendly interfaces, the smart TV OEMs are beginning to make strides in getting users to either cut back on using streaming devices or not resort to one at all.



Samsung Tizen interface

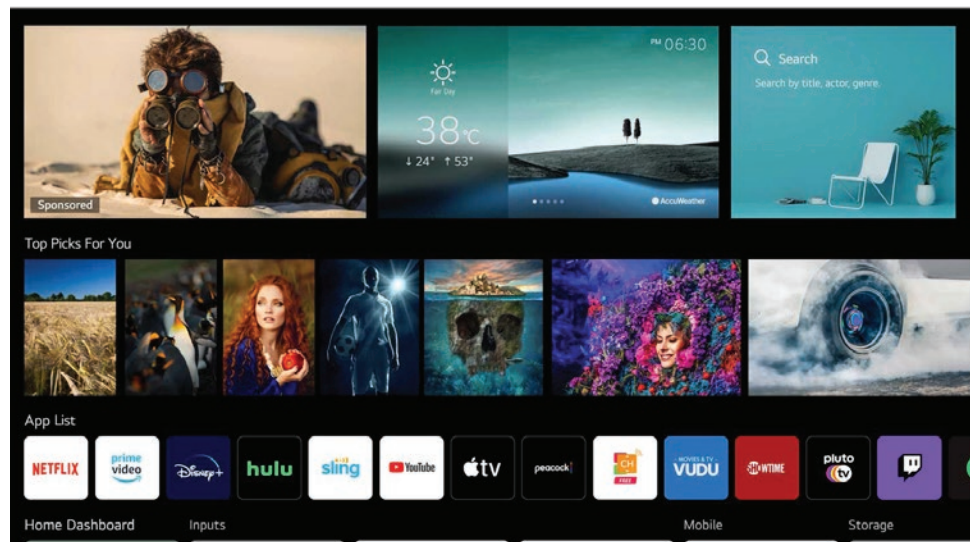
Samsung, in fact, reports that 90% of their user base does not use a streaming device.

This shift was not lost on Roku and Amazon, who have both moved to strike deals to license their interfaces to third party OEMs. Roku in particular has been very aggressive on this front, working with lower priced Chinese OEMs like TCL to bring Roku-branded TV sets to the U.S. market. It is estimated that these Roku sets now make up between one-quarter and-third of the smart TVs in use in the U.S., which makes TCL a major player.

All three (LG, Samsung and VIZIO) now have their own FASTs with hundreds of channels that allow users to watch linear-like programming, or choose from an extensive VOD library.

SIDE NOTE: We have chosen not to include Roku and TCL in the same category as VIZIO, Samsung and LG. While they are most definitely helping the smart TV market to grow, they have a different business model —the interface is licensed, which means that TCL could choose not to renew the contract and/or hand it over to a rival. Given that Roku's success is mostly limited to the U.S. market, this is a legitimate concern. The "license vs own" situation also impacts the degree to which the OEM has control over their own interface.

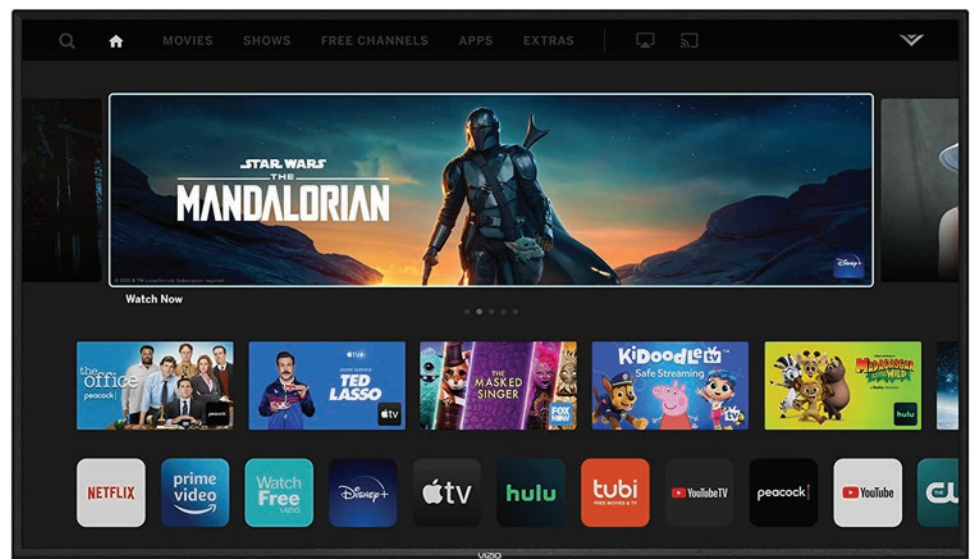
At the same time they were improving their interfaces, the OEMs were also adding content so that viewers would have something to watch right out of the box. **All three (LG, Samsung and VIZIO) now have their own FASTs with hundreds of channels that allow users to watch linear-like programming, or choose from an extensive VOD library.**



LG TV interface

At present, the programming on smart TV OEM FASTs consists mostly of popular network TV series and movies that are now in syndication, along with news channels and digital-first programming. FASTs in general, and linear FAST channels in particular, have proven very popular with consumers suffering from subscription fatigue, new series fatigue, and a desire to sometimes let someone else make the call on what to watch.

Just as crucial as the popularity of their programming is the fact that FASTs give OEMs a way into the ad game too, as they can now sell advertising that runs on these services.



VIZIO SmartCast interface

Which leads us to the third major shift the OEMs made—launching their own ACR data services.

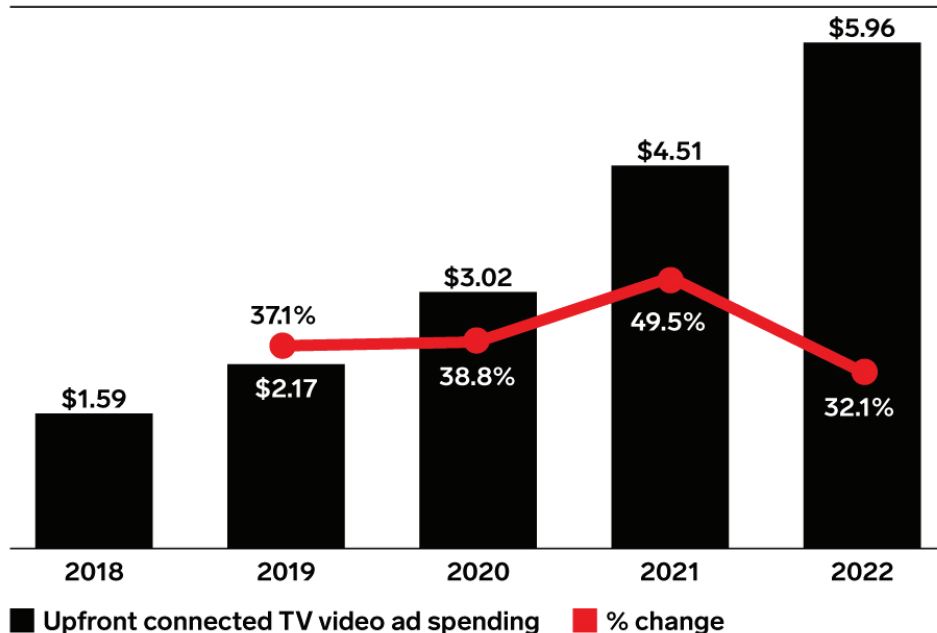
Because it measures whatever is “on the glass,” ACR data allows OEMs to provide viewership numbers across streaming, linear, and VOD. This is helpful for advertisers looking to reach those viewers they are missing on linear.

Advertising On Content-Based CTV

Ad spend on CTV has been growing at a rapid clip over the past few years and the pandemic gave it a particular boost. To wit, in the *Before Times*, CTV ad spend was projected to reach \$10.8 billion in 2021 and \$12.49 billion by 2022. But [eMarketer's latest projections](#) now have those numbers reaching \$13 billion in 2021 and \$17 billion in 2022.

US Upfront Connected TV Video Ad Spending, 2018-2022

billions and % change



Note: connected TV video ad spending that is committed in advance, including spending resulting from the TV upfronts, the IAB Digital Content NewFronts, and other events/meetings throughout the year

Source: eMarketer, May 2021

266176

eMarketer | InsiderIntelligence.com

Similarly, [TVision found](#) that time spent watching AVOD in general grew a whopping 200% from May 2020 to May 2021, versus a 100% jump for SVOD and 13% drop for linear.

In Q1 2021, 84.4% of U.S. households were watching connected TVs, up 82.4% from Q3 2020.

There are advantages and disadvantages to advertising on content-based CTV. The advantages include:

The ability to target specific audiences

This is true of all CTV ad buys and is a huge plus for advertisers. While some brands use CTV to target very specific audiences

based on their first party data, our conversations indicate that far more use CTV to target the Nielsen audiences they've been missing on linear in order to extend the reach of their advertising. As linear viewing has contracted, especially among certain demographics (younger men, for example) the need to extend reach has become more important.

The ability to run ads against high quality original programming

This feature matters more to some brands than others, depending on the type of audience they are trying to reach. Marketers we spoke with who are trying to reach very specific upscale audiences are likely to be more comfortable running ads on prestige originals on ad-supported subscription services.

The ability to reach large audiences

The ad-supported Flixes and FASTs associated with the various network groups allow advertisers to reach a much larger audience. This gives some advertisers the ability to use their first party data to target very specific audiences. Such targeting against a smaller user base is unlikely to turn up enough viewers to make the ad buy worthwhile.

The ability to get better measurement data than linear

Content-based streaming services can make use of ACR data from a variety of sources as well as data from Nielsen, Comscore, iSpot and other vendors. This gives advertisers a much more complete picture of who is viewing their ads and allows them to use streaming for incremental reach.

On the flip side, there are numerous disadvantages as well, including:

Too Many Walled Gardens

There's very little cooperation among vendors on streaming. That makes it very hard for advertisers to compile a single set of stats or to make a single buy across all of the various walled gardens. For marketers who are used to the ease of buying linear TV based on Nielsen ratings, this makes buying streaming TV seem like an unnecessary hassle and it's a large part of why many of them have not embraced it wholeheartedly.

There's very little cooperation among vendors on streaming. That makes it very hard for advertisers to compile a single set of stats or to make a single buy across all of the various walled gardens based on a common standardized audience segment

Data And Measurement Issues

This goes hand-in-hand with the issue around walled gardens. Because different programmers use different definitions for various market segments and don't pool their data, it's not easy for brands to get an accurate picture of how well their ads are doing across multiple streaming platforms and services. In the early days of streaming, the general default was to allow programmers to self-report their data. But as budgets have increased, brands are looking for more accountability, preferably from a third party. While there are several companies who can provide this data across both streaming and linear, it's not as simple as getting the weekly Nielsen ratings.

Frequency Capping Issues

Ads on streaming are sold by a variety of vendors: DSPs like The Trade Desk, SSPs like Beachfront Media, as well as directly from the programmer themselves and from streaming device and smart TV OEMs. Since none of these vendors share data, it's difficult for a content-based streaming service to understand how many Pepsi ads a single viewer may have seen in the course of an evening and to put a cap on frequency. It's a problem compounded by the fact that the viewer may have switched between linear and streaming over the course of the evening.

Tubi, Fox Broadcasting's FAST, has a proprietary product that allows it to monitor which ads a viewer has seen over the course of a week, regardless of who is serving the ad. But they are the exception, rather than the rule

What's more, it's likely the viewer is not just watching Tubi all week and thus may be exposed to the same ad on other content-based streaming providers and on linear TV.

Frequency capping is a huge issue for brands as serving too many ads to a single household can prove wasteful at best and counterproductive at worst.

As we shall see in the next section, however, the ability to monitor ad frequency is one of the greatest strengths of the smart TV OEM ecosystem.

Frequency capping is a huge issue for brands as serving too many ads to a single household can prove wasteful at best and counterproductive at worst.

Advertising With Smart TV OEMs

Smart TV OEMs offer advertisers an alternative to content based providers. Their content is available on a single device that is easily measured and controlled. And while the subscriber base may not be as large as some of the biggest content-driven providers, viewership is still in the tens of millions and the audience is national.

Many of the people we spoke with think that the OEMs will eventually have the ability to sell ad time on many/most of the ad-supported apps on their platforms, via deals that mimic the deals traditional MVPDs have with cable networks. (It was seen as a sort of quid pro quo for carrying the app on their platforms.) This is in addition to any targeted selling the OEMs currently do off of their own platforms.

Superior Frequency Capping

One of the biggest advantages smart TV OEMs have in terms of advertising is that they can implement frequency caps.

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They can do this because they have the ability to track everything the viewer has watched, regardless of whether it was on linear, streaming or VOD.

As a result, if viewers have already seen 25 Pepsi ads that day across linear and content-based apps, the smart TV OEM can make sure they are not getting hit by yet another when they get to their FAST. Instead, the OEM can replace it with an ad from a different advertiser, or with a different Pepsi commercial than the ones they've already been served.

Frequency capping via smart TV OEMs is currently limited to their own FAST programming. But a number of executives we spoke with said that if frequency capping (or the lack thereof) continues to be an unsolvable issue, they expect that both content-based apps and linear networks will look to the smart TV OEMs for data to help eliminate endless repetition.

Superior Measurement And Attribution

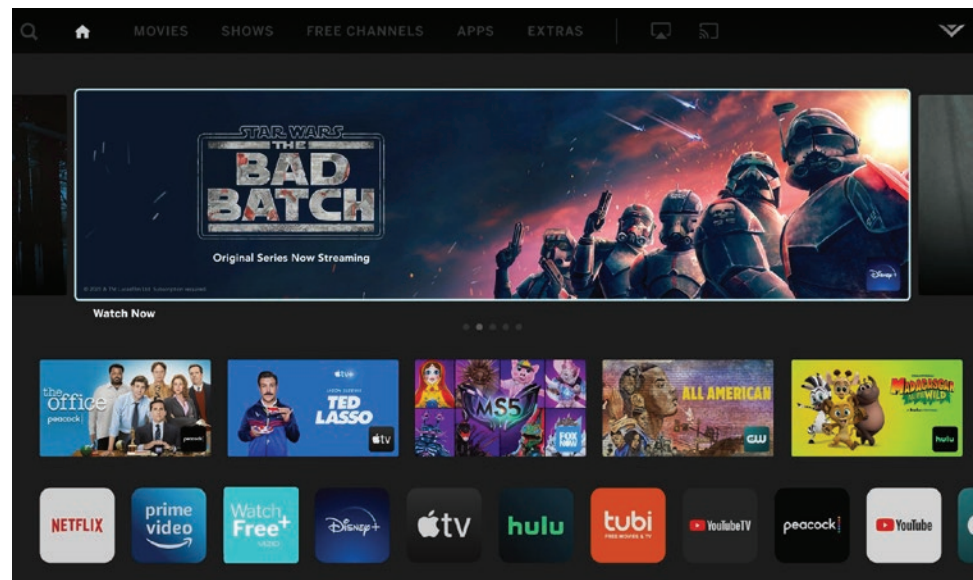
All three major OEMs maintain their own ACR data platforms, as does Roku, which recently bought Gracenote from Nielsen. This allows them to know exactly which households are seeing which ads (also known as 1:1 data). It also lets them use that data to provide attribution—understanding what the consumer did next after seeing the ads, as well as which ads, served at which times, caused consumers to take which actions.

This sort of data is very valuable to brands, many of which still operate under the notion that half the money they spend on advertising is wasted—they're just not sure which half.

It also takes much of the guesswork out of CTV ad buys. With content-based apps, it can be hard to understand where and when ads are running, because the ads are served up by a number of different sources across a number of different platforms.

With smart TV FASTs, they are measured by a single source, which provides accurate measurement and a record of where and when the ads ran. This provides a key advantage as several of the executives we spoke with for this report told us that the lack of transparency around where their streaming ads ran is a major issue for brands.

Not Just 30 Second Commercials



VIZIO Ads offers video banner placements in their SmartCast Operating System

Another advantage the smart TV OEMs have is the ability to deliver more than just standard TV commercials. They sell a range of additional options such as display ads on the device's main menu, as well as mobile and social ads that complement the TV commercial. Samsung Ads allows brands to sponsor an entire channel on Samsung TV Plus, LG Ads work with multiple other OEMs, and VIZIO Ads recently announced a deal with Verizon to use their data to create cross-platform ad buys.

This gives all three an advantage over content-based apps. Brands can expand their messaging and plan for creative units that take advantage of the multiple locations where the consumer is likely to see the ad, mixing in branding and direct response messaging for greater impact and reach.

An easy example of this is the smart TV OEMs ability to monetize search and discovery. Viewers can spend up to 40 minutes searching for something to watch, and the OEMs have the ability to run ads on the screen during that search, both for programming (the obvious choice) and for brands,

Incremental Reach

One other advantage of the smart TV OEMs having quality data on their viewers is that it helps brands who want to add incremental reach to their smart TV buys.

The concept of incremental reach has gained much traction over the past few years as a way for brands to make up for diminishing audiences on linear. In a nutshell, brands used linear TV for its massive reach—with millions of people watching, they had the ability to put their ads in front of as many people as possible.

Linear audiences are shrinking, particularly among certain demographics. In order to make sure their ads are served to those demographic groups, brands are turning to streaming.

Linear audiences are shrinking, particularly among certain demographics. In order to make sure their ads are served to those demographic groups, brands are turning to streaming. The precise measurement tools offered by the smart TV OEMs allow them to precisely target viewers in specified demos, ensuring that they are getting the reach they need for their branding campaigns.

They can then use the same ACR data from the OEMs and match it up against their first party datasets in order to target specific users with more sales or direct response style messaging. While it is possible to do this on content-based apps, the accuracy level on the smart TV FASTs is much higher as it is based on 1:1 matching data.

All that said, **there are still some disadvantages to advertising with smart TV OEMs.**

- › **Audience:** Several brand marketers we spoke to expressed concern that the audience for the smart TV FASTs was not representative of a cross-section of the audience and skewed heavily towards younger viewers. So while they saw it as a great way to reach that particular demographic, they were skeptical as to whether they could reach other viewers that way, especially if their brand's audience skewed older or less tech savvy.

While this is an issue at present, it's likely to become less of one as more and more viewers shift to streaming, where they will use the FASTs to substitute for the "lean back" viewing they are now doing on cable.

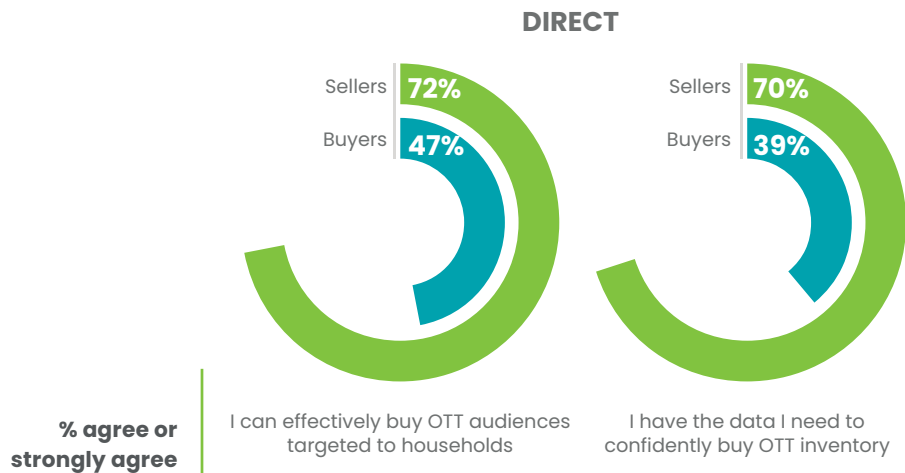
- › **Programming:** Another issue some brand marketers mentioned was that at present, all of the programming on the smart TV FASTs is library content, both movies and TV series. While it is almost all premium programming, these marketers felt that it had less value to them than the original programming found on the ad-supported versions of subscription apps and was "less prestigious."

This may prove to be a temporary problem however. While none of the smart TV OEMs are producing original programming at present, Roku has started to dip into that

well, and it is quite possible the OEMs will follow too. That said, the programming may be more in the vein of non-fiction, unscripted or game shows—all of which have lower production costs and are easily syndicated—which would still likely give advertisers looking for prestige dramas some pause.

- › **Transparency:** One of the issues we hear about from advertisers is a lack of transparency in terms of where their ads are going to run. This is of particular concern with Roku with its broad range of apps. Advertisers note that they often have no way of knowing whether their inventory ran against a premium show on The Roku Channel or on one of the lesser low-production value shows on another app.

The lack of transparency is a common complaint across the CTV spectrum, especially with buyers who are more familiar with linear TV.



[A recent study conducted by Conviva](#) pointed out the gap here: while 70% of CTV ad sellers thought they were providing enough data, only 39% of buyers agreed. When asked whether they could buy OTT audiences targeted to households, 72% of sellers agreed, while only 47% of buyers did. In terms of transparency, the numbers are even lower: just 10% are satisfied with episode-level brand visibility for programmatic streaming buys.

- › **Limitations:** As noted in the section about frequency capping, the smart TV OEMs can only institute frequency capping on their own inventory, which is a small part of many advertisers' streaming buys. This can be solved if other ad-supported streaming services and linear networks look to the smart TV OEMs for help with frequency capping. That development is still a long way off, as trust needs to be built between the various services in order for them to reach any sort of agreement that would involve giving a potential competitor information about their ad load.

Many of the executives we spoke with noted that it would be much more efficient if they could place ads on all three smart TV OEMs with a single buy.

› **Silos:** Many of the executives we spoke with noted that it would be much more efficient if they could place ads on all three smart TV OEMs with a single buy. “It’s not as if they compete with each other for viewers,” was a common refrain, and in fairness, it is a valid point. Consumers replace their TVs every six or seven years on average. There are no “must have” new features on the horizon that might push a viewer to replace a newer TV. So the major OEMs are not really competing with each other and could combine inventory.

That’s easier said than done. VIZIO-led Project OAR—which allows brands to insert addressable ads on linear—is open to all manufacturers, but thus far only VIZIO is on board. It would take a complex series of negotiations to get all three brands to agree to a common marketplace and common measurement system and there are distinct differences in how they all run their advertising and measurement divisions that would need to be ironed out.

All that said, a combined market would benefit all three players and give them more leverage with brands.

What's Next

Dongles Disappear

As noted in the introduction to this report, the main reason that external devices became popular was because the interfaces on early smart TVs were uniformly consumer-unfriendly.

That's changed dramatically over the past few years. Samsung, VIZIO, LG and other smart TV OEMs are continuing to tweak their user experiences to make their interfaces and the remote controls that go along with them as user friendly as possible.

This means viewers are likely going to start ditching their dongles and use their smart TV's native interface instead.

Roku's decision to license its operating system to other smart TV manufacturers, is helping to accelerate this trend as Roku fans no longer need to buy a dongle to get the Roku interface.

Samsung, VIZIO, LG and other smart TV OEMs are continuing to tweak their user experiences to make their interfaces and the remote controls that go along with them as user friendly as possible.



TCL TV featuring Roku operating system

Roku does have two big red flags though. While the brand is starting to make inroads in Europe, it is still largely unknown outside the U.S. That, and the underlying tech that powers its operating system is a thorn in the side of developers everywhere.

Neither issue is insurmountable. Some well placed deals could help Roku expand in Europe and Asia, especially as the interface for lower-priced smart TVs. And while U.S.-based devs may complain about Roku's application development language, they've managed to work with it thus far, as they need to reach all those millions of potential customers on Roku.

Amazon is now following in Roku's footsteps and has struck a deal with BestBuy to manufacture the retailer's Insignia TVs with the Fire TV interface baked in. Given Amazon's very deep pockets,

It is our prediction that as older Roku and Fire TV sticks wear out, users will not replace them

it's not much of a stretch to think it might buy one of the smaller OEMs as well, as a way to churn out Amazon-branded TVs.

Thus consumers are being trained to use the operating system in whatever smart TV they buy rather than resort to an external device. It is our prediction that as older Roku and Fire TV sticks wear out, users will not replace them.

This shift is coming at an unfortunate time for several players, though.



Google's latest Chromecast finally adds a remote

Google, whose Chromecast device suffered due to its lack of any sort of remote control, recently rolled out a brand new Google Home compatible version of Chromecast, this time with a remote. And while reviews have generally been good, there's not much place in a shrinking market for yet another streaming device.

Google also has the Android TV interface which engineers are quite fond of. But without a deal with a major TV OEM and no features special enough to compel a new TV purchase, there's no real way to get Android TVs into the hands of the masses in numbers big enough to make a real impact on the market. Thus, it seems destined to remain a niche product for now. Privacy, which we'll discuss shortly, is also an issue for Google and another reason why it is likely to struggle..at least in the U.S. market.

There is most definitely a scenario where Google, with its strong name recognition and easy to use/easy to write code for Android interface, is a winner outside of the U.S., which is a much bigger market overall. That said, **if we had to make a call, we'd say that privacy concerns around Google will outweigh scripting language concerns around Roku.** If anyone stands to benefit from Roku's position (or lack thereof) in Europe or Asia, it's Amazon, which has the added benefit of a massive marketing machine to push Fire TV.

Then there's Comcast, which is pushing out Flex, an Android-powered device embedded with a version of its X1 platform.

Unfortunately, the market for it seems limited to Comcast subscribers who want to keep Comcast broadband and cable TV and still watch their favorite streaming services without the hassle of switching inputs. We suspect that while the ability to avoid switching inputs may appeal to some Comcast subscribers, it's not that compelling a feature. Just as many users are going to connect to streaming via their smart TVs and not deal with the Flex box. And as the number of traditional cable subscribers continues to shrink, Flex will have even less appeal.

Viewers are likely to either stick with the Roku or Amazon devices they already have, or just make use of their smart TV's native interface—there's just not any reason for them to learn how to use yet another streaming device.

Walmart too seems to be entering the market. In June 2021, they accidentally posted a listing for a streaming device (well-priced at just \$25) on their website. Here again, while the price is low, the \$4 difference is not really going to be much of a lure absent a host of unique features, and it's unlikely viewers will trade in a perfectly serviceable Roku or Amazon streaming device for one with no new breakthrough features. If and when they need to replace an existing device, those same viewers are likely to either stick with the Roku or Amazon devices they already have, or just make use of their smart TV's native interface.

Finally, **there's Apple, whose \$180 Apple TV will continue to appeal to a small subset of hardcore Apple fans... and no one else.** While there is an argument to be made that some features of the latest iteration (the remote in particular) are an improvement over other devices, it's hard to make an argument that those incremental improvements are worth spending an extra \$150 on. So we're seeing the market for the Apple TV device slowly but surely shrinking, especially in the U.S.

(And while there are [persistent rumors](#) that Apple is actually going to roll out a TV set—after all, they certainly have the cash reserves to buy any OEM they want—those rumors have circulated for a good 15 years and seem to be mostly wishful thinking.)

The Importance Of Marketing The Smart TV Interface

If the smart TV OEMs want to make more viewers aware of their improved interfaces, it is our opinion that they will need to significantly step up their marketing as consumers are unlikely to discover those improvements on their own. These marketing efforts will need to include traditional methods as well as social and influencer marketing along with a heavy PR effort.

Many consumers have likely looked at smart TV interfaces in the past, decided they were awful, and are at a point where they automatically take the Roku stick from their old TV set and put it in their new one.

That's a habit that needs breaking, and increased marketing is the best way to do it.

Easier Importing Of Log-Ins

Once they've convinced users to make the switch, the OEMs need to make it easy for them to do so by simplifying how viewers import all of their logins from one device to the next. **It is a huge advantage for Roku and Amazon that a user can just take the stick from their old TV, plug it into the new one, and all of their apps are there, in the same order, with nothing to do but point the remote, given that the logins are already stored on the Roku stick.**

Convincing consumers that the interfaces have improved will not be easy, as many users still have older TVs that can't be updated. So educating consumers and reassuring them that more recent models can be easily updated will be key here too.

However memories of smartphone and laptop upgrades that wound up slowing down older devices may make gaining acceptance a challenge.

Hence the need for more robust marketing efforts.

The Power of the Remote

The latest generation of smart TV remotes seem to have learned a lesson from Roku, Apple, and Amazon. They have significantly cut down on things like numerical keypads and a confusing array of buttons.

They've also added buttons that allow the user to go directly to one of as many as a half dozen streaming apps. And while the buttons are designed to be a convenience for the viewer, they're also a revenue source for the OEMs, as programmers will pay handsomely to have their apps featured on the remotes.

Voice is another area where OEMs have been making great innovations. Their remotes now feature voice activated controls as well as Alexa and Google Home integrations. VIZIO has even developed its own voice-activated search function.

All these innovations send a clear signal to viewers that the smart TV interface has been updated for a streaming-only world and is in the same league as those peripheral devices long designed exclusively for streaming.



The latest remotes from LG, Samsung and VIZIO send a clear signal to viewers that the smart TV interface has been updated for a streaming-only world

The Case For Joining Forces

More than a few people we spoke to for this report noted they hoped the smart TV OEMs would join forces and create a unified marketplace.

As we'd noted earlier, more than a few people we spoke to for this report noted they hoped the smart TV OEMs would join forces and create a unified marketplace.

The rationale is fairly straightforward: it's unlikely that they compete with each other, in that people don't replace their TV sets all that often, and that together they could sell and measure a sizable chunk of the streaming TV audience.

This would, in turn, help brands achieve the type of scale they've been looking for on streaming and to get the sort of measurement they've previously only gotten from digital.

Were the OEMs to combine forces further and incorporate Project OAR into their new venture, they'd give brands the ability to run ads across both streaming and linear and track viewership across both platforms as well.

This is going to be critical over the next decade, as **we believe that the road to streaming-only viewing will be a slow-but-steady one, with 5% to 10% of viewers cutting the cord each year.**

At some point that will mean there are more viewers on streaming than on linear. But it won't be a clean break. Some networks and demographics will remain heavily linear, others will be heavily streaming, so brands will need to continue looking to both for some time.

But is this all just a pipe dream?

Comcast tried something very similar years ago, to get other MVPDs to join forces with them so that they could use their set top box data as an alternative to Nielsen. Granted, Comcast, as the largest MVPD, had the most to gain, but they were unable to find any takers.

If smart TV OEMs do join forces, it will have a significant impact on the industry.

The Future Of Smart TV OEMs

Viewers will increasingly shift to using new smart TV interfaces rather than rely on a peripheral device as they trade in their TV sets for new ones.

We predict that viewers will increasingly shift to using new smart TV interfaces rather than rely on a peripheral device as they trade in their TV sets for new ones.

This will have a snowball effect in that the various apps, vMVPDs, and platforms will roll out updates to their smart TV apps first—or at least at around the same time as the peripherals—and that most of the major apps will make having a strong presence on the smart TVs a goal as well.

We're also likely to see some form of what we've been calling "The Great Rebundling". As fixed 5G broadband to the home becomes more of a reality (it's still a good three to five years out) there will be increased competition for broadband customers. So it's likely that some of the broadband providers will strike deals with OEMs, in essence recreating the double play, where viewers get broadband and programming as a package deal. It's likely that the various OEMs will play a part in this too, offering some combination of SVOD services to their viewers for a fixed price, provided they take a one-year contract.

Both scenarios would require OEMs to start selling subscriptions to customers the way Amazon and Roku do. A major shift, but one we think is very much within the realm of possibility.

If nothing else, it will allow them to capture both email addresses and credit card data, which when combined with ACR data, will make advertising on their platforms far more valuable to advertisers.

As a result, we predict **advertisers will shift more money to smart TV OEMs, as they can provide better data, more effective frequency capping, and more control over inventory.**

If, as we predict, OEMs can provide advertisers with more eyeballs on a more consistent basis, they'd join Amazon and Roku as the gatekeepers of the streaming world... steering viewers to programming they might like while providing them with advertising for products they might want to buy.

The OEMs' ability to provide complementary ad units, both on the main menu and off, will also factor into advertisers' decisions by combining the branding ads many feel TV is made for alongside more strategic and sales-oriented messages both on TV and on mobile and digital devices.

By The Numbers: Sizing The Market

While there is, of course, no official source to quantify the size of the smart TV market, we can make educated guesses based on a number of assumptions.

The Television Industry Changes Very Slowly

Other media industries changed fairly quickly when confronted by digital technology. The television industry did not and that is not going to alter.

That's not to say that things won't change more rapidly over the next few years than they have in the past. But **if you look back five years, the industry was talking about many of the same things it is talking about today.**

The industry's gradual shift means there will be no "massive wave" of cord cutting, but rather a more accelerated shift. What had been two or three percent of all pay TV subscribers cutting the cord each year will become five to 10 percent, until there are more viewers without traditional pay TV subscriptions than with them.

Adoption Of Smart TV Interfaces Will Pick Up Over The Next Five Years

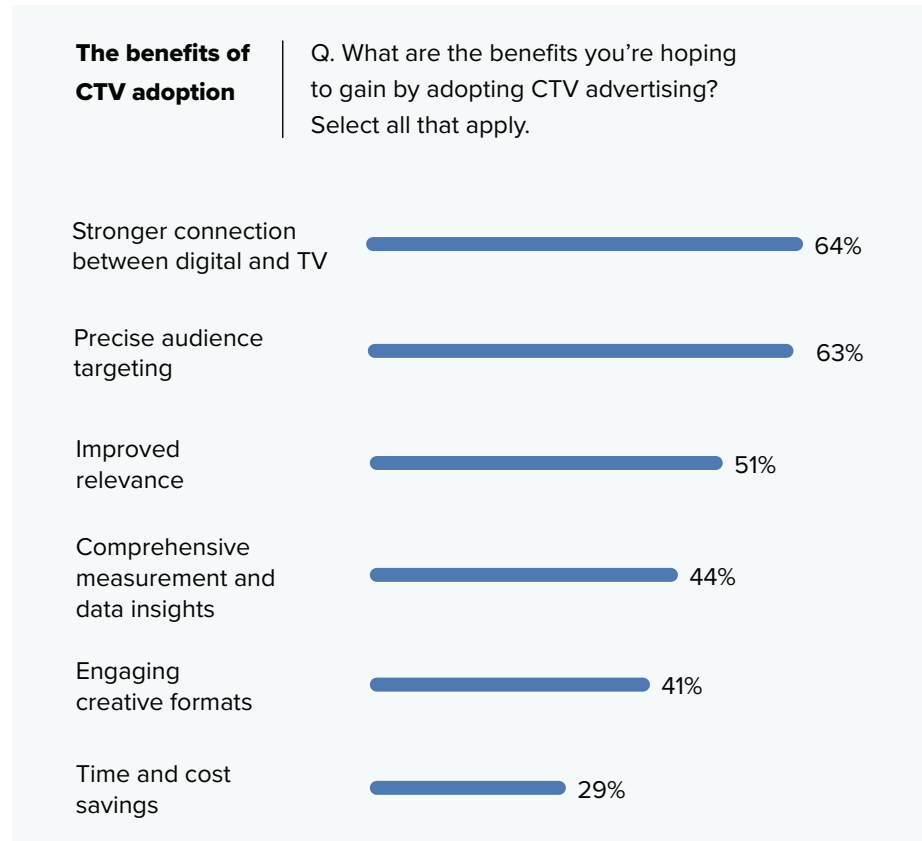
There are two related reasons for this. The first is that smart TV interfaces have gotten noticeably better. They are increasingly designed for streaming viewers rather than cable viewers and, as such, they are on par with peripheral streaming devices in terms of user experience.

The second reason is that **older smart TVs, those with less hospitable interfaces, are steadily being replaced by newer models with better interfaces.** Americans replace TVs every seven years or so on average, and many of those older TVs will come to the end of their lifecycle over the next three to five years.

Advertisers Will Spend More Money on Streaming TV and Streaming TV Ads, and the Smart TV Ecosystem Will Benefit

As more viewers shift to streaming, more advertising opportunities will open up. Advertisers, who are an extremely conservative and risk averse lot in general, will begin to see that their ads on streaming are working, and that lower ad loads are indeed beneficial and worth paying more for, as are more targeted audiences.

A [recent study from Innovid and Digiday](#) found that even now, brands are sold on the charms of CTV, with 64% digging the stronger connection between digital and CTV, 63% enchanted by more precise targeting options, 51% charmed by greater relevance and 41% sold on CTV advertising's more engaging creative formats.



Advertisers will favor the smart TV ecosystem because it is more easily measured, because it can provide better control over frequency, and because smart TV OEMs will have more inventory.

One effect of the shift to streaming is that by 2026 some (but far from all) advertisers will find more of their target demo in the streaming-only camp. They will need to switch the nature of their buys, using linear as a way to add incremental reach and help them reach viewers they are otherwise missing on streaming.

We predict that advertisers will favor the smart TV ecosystem because it is more easily measured, because it can provide better control over frequency, and because smart TV OEMs will have more inventory... both their own and from apps running on their platforms.

Predicting The Next Five Years Of Smart TV Advertising Growth

So with that explanation out of the way, here's what we're predicting:

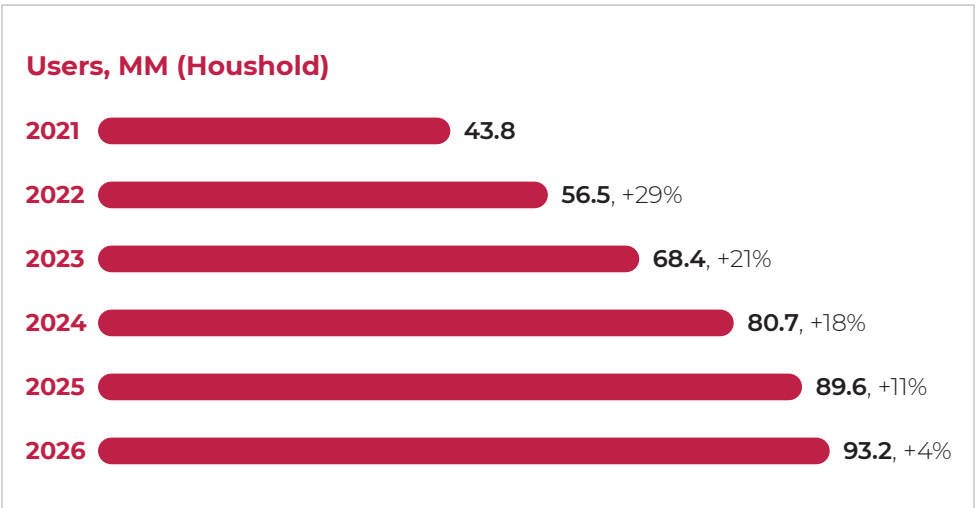
User Growth

We looked at the overall number of households here, based on the fact that most U.S. households have more than one TV. (Three is the generally accepted average, and given the low price of TV sets, that number is only likely to increase.)

As noted, we expect the number of people using the smart TV interface as their primary interface for streaming to increase over the next five years, though there will be some switching between devices as viewers seek out services that are not yet available on their smart TVs, or simply cast from their smartphones.

Thus we are looking at an increase from 43.8 million households in 2021 to 94.1 million in 2026, **an overall increase of 116%.**

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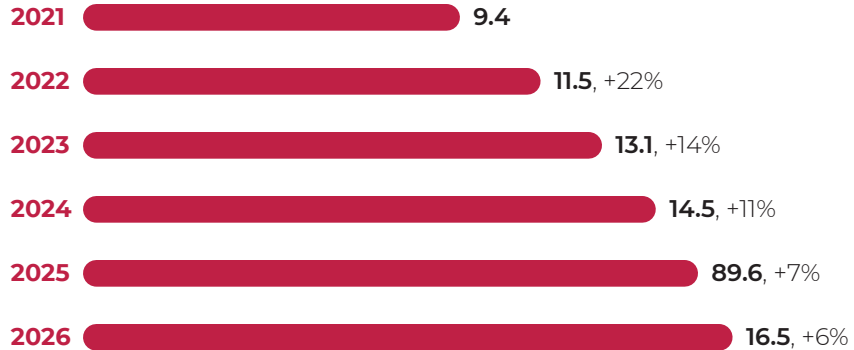


Hours Streamed

We expect the number of hours users spend streaming directly to their smart TVs to increase fairly dramatically over the next five years, as even those viewers who don't fully make the switch to streaming will increase the amount of streaming they watch. Overall, we see an increase from 9.4 billion hours in 2021 to 16.5 billion in 2026, **an increase of 76%**.

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Hours Streamed, B

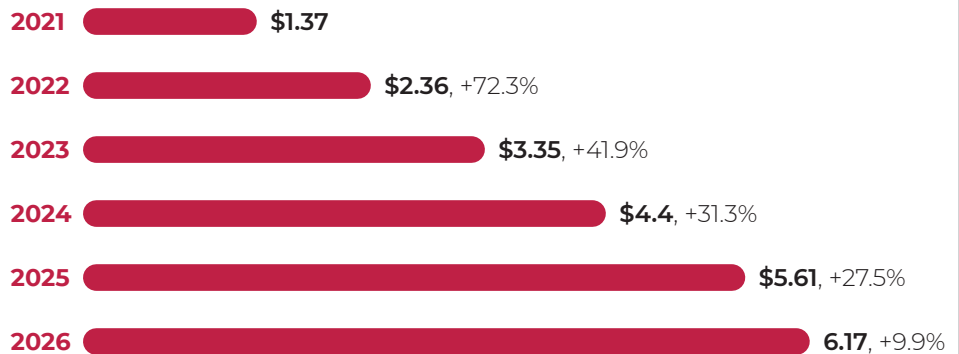


Revenue Growth

Revenue is where we expect to see the greatest leap, as advertisers begin to pay more to reach streaming viewers in general, and smart TV viewers in particular. So not only will advertisers spend more money on streaming, they will pay higher CPMs for targeted streaming ads. Thus we predict **an increase of 4.5X** from \$1.37 billion in revenue in 2021 to \$6.17 billion in 2026. This amount also reflects the increase in the number of users and the number of hours viewed.

We predict a 4.5X increase in ad revenue for the smart TV OEMs, from \$1.37 billion in revenue in 2021 to \$6.17 billion in 2026.

Revenue, \$B



Summary



A new ecosystem is forming around the major smart TV manufacturers, Samsung, LG, and VIZIO.

All three have vastly improved interfaces that are on par with streaming devices like Roku and Amazon Fire TV. They have their own FASTs with thousands of hours of programming and hundreds of linear-like channels. They also have their own ACR-based data and measurement systems.

This is a big part of why more and more viewers are making use of the native interface on their TVs and why advertisers are sitting up and taking notice.

This is a big part of why more and more viewers are making use of the native interface on their TVs and why advertisers are sitting up and taking notice.

One big advantage of the smart TV OEMs is that their ACR data allows them to track what's been seen on any platform, so they can enforce frequency capping on their inventory that takes into account ads the viewer has seen on other services and on linear.

The shift to using smart TV interfaces is likely to be gradual. Many users still have older sets that are not compatible with the updated interfaces and/or they are so used to using external streaming devices like Roku that the habit will be hard to break.

This is why we suggest that the OEMs become more aggressive in marketing their updated interfaces and in letting consumers know they can access all their favorite apps on them as well.

TV[R]EV predicts that the smart TV ecosystem will see notable growth over the next five years, with a 116% increase in the number of users and a 76% increase in the number of hours streamed, which will lead to a 4.5X increase in total revenue.

Roku and (to a lesser extent) Amazon have been smart about striking deals to license their operating systems to other smart TV manufacturers. But players like Google, Comcast, Walmart and Apple are likely to be squeezed out by the growth of the smart TV OEMs, who will assume the role currently played by the MVPDs on cable. They will be the key gatekeepers to content for the streaming ecosystem, while playing a major role in selling, serving and measuring advertising across multiple platforms.

These changes will not happen overnight, but they are happening. Brands and agencies would do well to prepare for them and to learn more about how the advertising divisions of the various smart TV OEMs operate.

► **TV[R]EV predicts that the smart TV ecosystem will see notable growth over the next five years, with a 116% increase in the number of users and a 76% increase in the number of hours streamed, which will lead to a 4.5X increase in total revenue.**

The Platform Shoe Is On The Other Foot

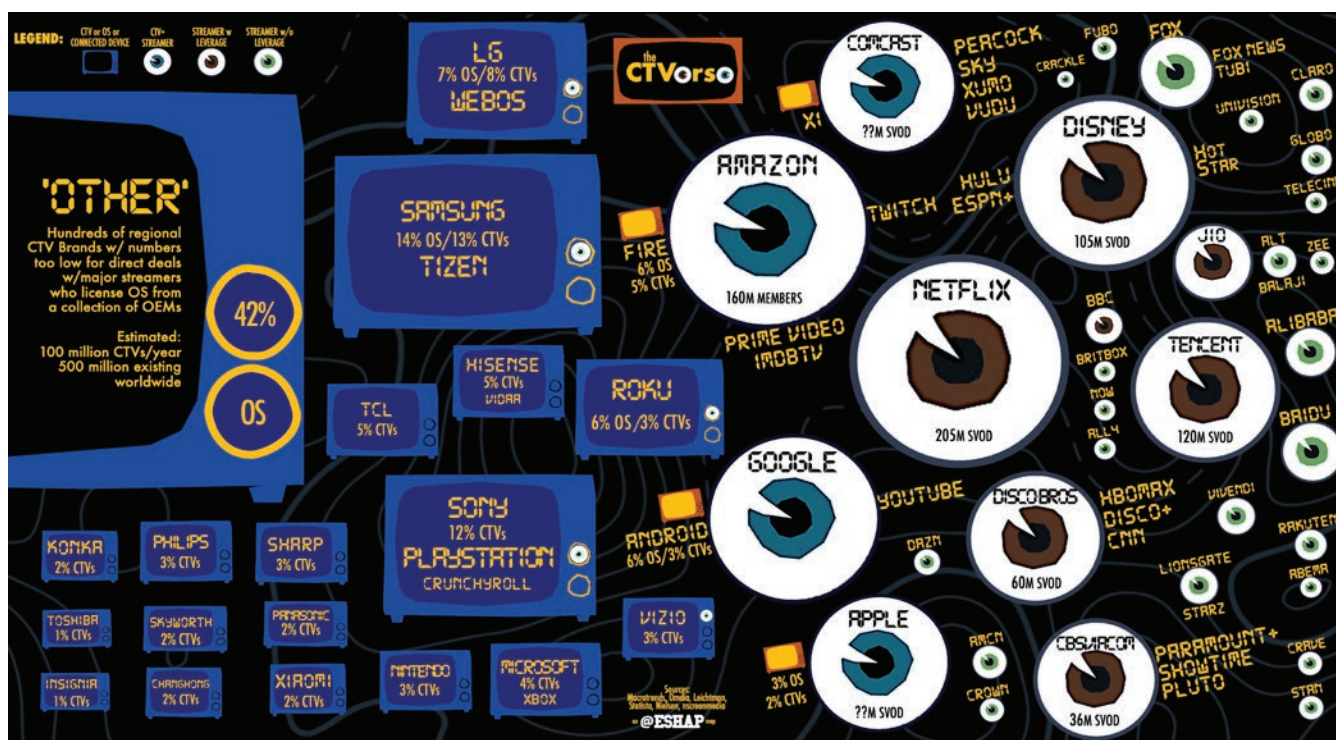
Evan Shapiro's media universe maps are legendary, and we're thrilled that he's agreed to create one for us to explore what he calls "the CTVerse." What follows is Evan's explanation of the thinking behind the map and his thoughts on the CTVerse overall

Mapping an ecosystem as fast-changing as media means you are literally never done.

Mapping The Smart TV Ecosystem

Over the past year, I have embarked on a painstaking avocation-turned-vocation of mapping the universe of media and entertainment. It's painstaking for a few reasons: first, mapping an ecosystem as fast-changing as media means you are literally never done; second, there are no agreed upon metrics for the proportionality or range of these maps, so no matter how often I update them, someone is always dissatisfied; third, within each region of my original Media Universe Map, if you zoom in, there is always another map to make.

Hence, at the request of my friends at TV[R]EV, **my newest map: The CTVerse.**



[Download](#) the CTVerse map

This is a zoom-in on a region of the Media Universe I have visited often of late, and one in which anyone in TV, film, gaming, and advertising will be spending an increasing share of their time, over the coming years of their careers – at least if they want those careers to be successful.

As has been detailed elsewhere in this publication, a large portion of TV viewing is now on Connected TVs (CTVs) and Connected TV Devices, and audiences will continue to migrate to these

platforms rapidly over the next five years. In fact, according to Nielsen's latest Total Audience Report, the ONLY TV viewing devices that saw an increase in usage in 2020 were internet Connected TV Devices (connected or "smart" TVs and dongles).

When I was asked to map the CTV Universe, I assumed it would simply require an update of my existing Media Universe Map – just add some planets for LG, VIZIO, etc., and call it a day.

This did not turn out to be the case.

When you embark on a journey to the CTV world, you find yourself immersed in an expansive and global realm, involving not only a host of manufacturers in China, but also local TV sellers in every region on earth, controlled by myriad regulations, countless local streamers in every local language, and an emerging, heated war, among the biggest companies in media and tech, for control of the next great entertainment frontier – the CTV Operating System.

The emergence of "Smart TVs" has been a slow, plodding evolution, invented in fits and starts.

Unlike smart phones, which emerged suddenly as a whole new category of consumer electronics, with brand-new operating systems in place (even before there was content for them), the emergence of "Smart TVs" has been a slow, plodding evolution, invented in fits and starts by companies like early innovators Philips and LGE, furthered by Original Equipment Manufacturers (OEMs), then invaded by Connected Device Makers, becoming a mishmash of Operating Systems for TVs, different Operating Systems for streaming on TVs, dongles and consoles, which circumnavigate CTV streaming OS by providing streaming OS externally. In short, as described elsewhere in this publication: it's a fucking mess. And it's about to get messier.

In creating the CTVerse Map, I hoped to visualize the following:

- › The current CTV ecosystem is chaotic – for consumers, programmers, and advertisers
- › Despite conventional wisdom, there are no truly dominant players in the device space. Yes, Samsung sells the most TVs – yet they still only command 14% of the worldwide market. Sure, Roku and Fire TV are HUGE, in the US. Yet both are relatively small when you truly zoom out worldwide
- › A relatively small handful of content providers wield an enormous amount of leverage
- › But they are not the only story – the regional programmers shown on the map are ONLY the largest in their countries, and just a fraction of the real options
- › There is a looming battle between content streamers who also make CTV devices (e.g., Amazon and Google), and CTV device makers who are also now programming channels (e.g., Roku, VIZIO, Samsung), game console makers with large install bases AND access to capital and IP (e.g., Sony and Microsoft)

- › Globally, there is an enormous underserved and potentially lucrative market of Connected TVs called 'Other' – currently representing 42% of the worldwide CTV market
- › The next big global war for eyeballs will actually be for dominance of the crucially under-discussed and seemingly unsexy part of the ecosystem: The CTV Operating System.

With all that in mind, I constructed the map, and sized the various players on it, using a combination of three factors:

- › **Install Base:** The number of users the service, system, or device maker serves
- › **Business Model:** CTV OEM (including dongles, consoles, and TVs), CTV OS, SVODS, AVOD
- › **Power:** An approximate representation of the leverage each player has in the market and firepower they have for the coming battles.

In short, the CTVerse is designed as a Game of Thrones-y heat map of power. Important facts to consider when consuming the map:

The vast majority of CTVs are manufactured outside the US. There are literally billions of people who don't live here, most of whom watch TV.

- › **Nearly all conversations about the CTV business focus on the US only.** Stop doing that. The vast majority of CTVs are manufactured outside the US. There are literally billions of people who don't live here, most of whom watch TV. The biggest area of growth for nearly all the players on this map will come from regions not named America.
- › **Netflix and Disney have the power to make or break a new device maker or operating system.** Netflix refuses to grant access to their app to OEMs who make fewer than one million units per year. Disney has a similarly rigorous qualifying process to grant access to their apps. Imagine trying to sell a device that does NOT have those two services right now. Prime is nearly at this level of power and HBOMax is headed in that direction with international rollout of their SVOD, but no one commands near the leverage of the Flix and The Mouse.
- › That said, **Amazon has many powerful fingers in many leverage pies**, (CTVs, AVOD, SVOD and consumer electronic sales), and uses them to poke everyone else in the eyes.
- › **Today's biggest players may not be tomorrow's, and very few companies are able to dictate their own fates.** Five years ago, Google Chromecast was the #2 CTV device maker in the US with 20% market share. By 2020, they had been replaced by Amazon's Fire, who combined with Roku to control 75% of CTV Devices in the US. TCL had 0% market share of Smart TVs in the US in 2017. They are now at 15% and got there by licensing TV Operating Systems from Roku and Google. In 2017, Hisense had 0% share of CTVs in the US. They now have 5%, and similarly got there by licensing CTV OS from Roku and

Android. Recently though, Hisense has focused on their own OS, Vidaa, demonstrating a move away from partnering and towards battling for their own share of the OS market.

- › **Samsung is huge. But they are not growing.** Samsung has a 32% share of Smart TVs sold in the US – basically identical to what they had in 2017. However, their share of Connected TV devices sold worldwide has dropped from 23% in 2015 to approximately 14% in 2020. They have begun to move into other areas of revenue, such as licensing their CTV OS, Tizen, to other OEMs and TV brands, but have met with resistance since they are seen a humongous competitor to these companies. Like Roku, Samsung has launched their own programming platform, Samsung TV Plus, as a way to generate advertising dollars.
- › **For all the talk about Roku and Fire TV, LG is the second largest CTV company on earth, and is incredibly powerful outside the US.** They too have launched a programming platform for ad sales, and are also licensing their CTV OS, WebOS, to smaller OEMs and CTV brands – and have met with similar hesitation as Samsung, for the same reason.

Samsung, VIZIO, LG, and Roku have all moved fastly into the FAST business. Data and ad sales are the two most important areas of revenue growth for them.

- › **TV sales are entirely about price, not features.** As such, being an OEM – for both TVs and dongles – is a very low margin business. That is why Samsung, VIZIO, LG, and Roku have all moved fastly into the FAST business. Data and ad sales are the two most important areas of revenue growth for them. This is also why OEMs worldwide are exploring new types of partnerships with CTV OS Platforms. Amazon is reportedly paying \$10 per unit for OEMs to use their Fire OS. Google has reportedly done the same for Android TV.

Think about that for a second – 250 million TVs sold per year. And, as the CTVerse Map shows, 42% (100m) do not have a locked-in TV OS. Who has the resources to pay for access to those screens, even if it means losing money per transaction for years? Trillion-dollar tech companies, whose primary businesses are NOT TV sales, but rather access to data and eyeballs.)

- › **Amazon has two services that wield nearly as much programming leverage as Netflix and Disney: Prime and Twitch.** Google has one in YouTube. Both these Trillion Dollar Death Stars also have other powerful leverage over OEMs – search and shopping – which they use to “convince” manufacturers to use their OS.
- › **Apple has ceded the CTV battle to others – at least for now.** Their high-priced devices did not meet the market need. However, between AppleTV+, their OS and their unlimited cash, do NOT count Apple out.

Roku controls more than 35% of the CTV device market, and about 20% of TV streaming in the US. BUT... they are nearly nonexistent outside the US, and do not seem able to gain a toehold internationally.

- › **If anyone out there knows how many paying subscribers AppleTV+ and Peacock have, please submit them to my anonymous tip-line.** The Pentagon can now tell us about Area 51, yet these numbers are still Top Secret intel.
- › **Roku is the darling of the US CTV market.** They control more than 35% of the CTV device market, and about 20% of TV streaming in the US. BUT... they are nearly nonexistent outside the US, and do not seem able to gain a toehold internationally. The big reason for this: Brightscript, Roku's application development language, which is quite complicated and relatively expensive to develop for. If you are a major content programmer in Europe, Asia, South America, or Africa, with relatively full distribution to CTVs such as Samsung, LG, Fire TV, or Chromecast/Android, there is little incentive to create an expensive and difficult-to-design app for Roku who commands a very small (and shrinking) share of viewing. And there are no indications that Roku is open to adapting Brightscript to be more developer-friendly in other territories. In fact, just the opposite.
- › **Those big four – Samsung, LG, Amazon, and Google – have mountains of cash on hand to spend or lose reaching scale.** THIS is why Roku is going all-in on the Roku Channel, original programming, and ad sales in the US: It's the best place for them to score growth in the next few years.
- › **Netflix, Disney, and Amazon have enormous leverage as programmers worldwide.** BUT in each market, the leading LOCAL TV networks (remember those) retain tremendous loyalty as well as regulatory support, and the leading LOCAL SVOD/AVODs hold significant leverage as well. There, they can draft off kingmakers Netflix and Disney to determine which CTV players win in their region.
- › **Both Sony and Microsoft hold not insubstantial places in the CTV markets,** with products not primarily intended to be CTVs, for now.

So, with that context, here are my Top Ten predictions for where the CTVerse Map will take us in the next five years:

1. **THE NEXT BIG BATTLE IS NOT OVER SUBSCRIBERS, TVs OR DONGLES... IT'S OVER OS.**
2. **The next big stage of growth in ads worldwide will be CTVs.** Control the operating systems and you can control the ad dollars. Google and Amazon are two of the three biggest ad platforms on earth. They have major CTV OS platforms and billions to spend. They both WILL go all-in on CTV OS.

3. **Apple, Microsoft, Facebook (not on the map... yet), Tencent, and Alibaba will all also likely get into the OS game, and will improve the ecosystem for the combination of TV and gaming.** With dollars shifting to CTVs quickly – and 42% of the ecosystem at play – there are a LOT of spoils for this war. Watch for major acquisitions, deals, and tricks from these seven Trillion Dollar Death Stars in the coming years. However, as Hisense has proven of late, relationships with smaller OEMs and CTV brands are remarkably transactional in nature. Which is why...
4. **Somebody is gonna buy Roku.** They have had several amazing years in a row. I can also argue that their CTV interface is the most user-friendly in the market. But that differentiator is disappearing quickly. And the OS War will have many fronts, especially overseas, where Roku is not fortified. The war will take tens of billions of dollars to fight, and, as highlighted above, these are dollars Roku seems uninterested (at least for now) in spending to adapt their developer language. With Microsoft, Apple and Facebook gearing up to fight for the world's living rooms against Amazon and Google, it is just a matter of time until one of these companies (or the recently rumored Comcast, or sleeping SVOD giant Tencent) is going plunk down enough of a premium to make it worth Roku's while.
5. **Samsung will have some decisions to make in all this context.** It is unlikely regulators would allow them to buy Roku. Nor do they seem interested in such a move. BUT, buying a content company like NBCU, Lionsgate, ViacomCBS, or AMCN would be a game-changer for them and help them flip the leverage switch the other way. Don't be surprised if they do.
6. **Consolidation will also rumble through programming as well.** I cannot foresee a world five years from now where ViacomCBS, Lionsgate, JIO, Fubo, DAZN, AMCN, Crown, or Univision all remain independent companies. I am not saying all of them will be acquired in the next sixty months. I am also not not saying it.
7. **With oligarchical, monopolistic companies like Google and Amazon focusing their photon lasers on TV OS, many smaller OEMs may look to more independent, less-threatening partners for their OS.** While I don't see a global CTV alliance forming, I do believe the industry will seek out OS providers NOT connected to programmers or Death Stars (trillion-dollar tech companies), to find user-friendly platforms designed for the next generation of TV viewing. Two such examples are Germany-based Netrange and Foxxum. While neither have the install base or market cap of Amazon, Roku

The industry will seek out OS providers NOT connected to programmers or Death Stars to find user-friendly platforms designed for the next generation of TV viewing.

or even Fubo, both are currently providing elegant, intuitive, white-label CTV OS to numerous OEMs in hundreds of territories. Foxxum's OS and interface are a true advancement in UI and UX, which many TV brands outside the US are currently using as a differentiator, giving the company a market share in Europe that is below only LG and Samsung. If Hisense (5% of CTVs worldwide) or TCL (5% of CTVs worldwide) decided to make them their OS vs Android or Roku, it would give them leverage in the market, while de-leveraging direct competitors. If BOTH companies went with Foxxum, Netrange or some other small white-label OS, it would change the worldwide OS War overnight. Now, imagine if those two companies plus 20% of 'OTHER' in the CTVerse chose to align with a small white-label OS – if just to stave off Google and Amazon. Will it happen? I can't say. But IF it does...

8. **No one company has more than 14% of the TV OS market right now.** There is a ton of upside for that changing. For programmers, it means fewer app updates. For advertisers it means more reliable data and a far easier system to generate the kind of reach they seek. For consumers, it means substantially easier translation of services from one location to the next. In my humble opinion, within the next five years, at least one company, and likely two companies, will consolidate share on this scale. One path is via acquisitions. The other is coalescing smaller players and the 'OTHER,' either by paying them, or by providing a better solution. The downside: fewer, rich, powerful companies (aka Trillion Dollar Death Stars) could wind up with a controlling stake in CTV OS the way they do in digital advertising. But that has not seemed to be problem in the past.
9. **The most likely outcome is that Google, Amazon, and Samsung will each find ways to get there.** And in doing so, they might improve the CTV experience for all. My hope, however, is that neither Amazon nor Google accomplish it, as they both have far too much power already.
10. **Whatever your opinion of the CTVerse Map or my previous predictions, know that this is 100% true: The CTV Universe is about to see a frenzied level of adoption and evolution.** As Generation Z moves out on their own by the millions every year, many will be buying their first new TV. I have studied this generation enough to know they do not do anything like the generations before them. They are in the market for one thing: Change. New brands, new platforms, and new ways of consuming content will find fertile ground with these new heads of households. So be prepared for updates to this map often.

As Generation Z moves out on their own by the millions every year, many will be buying their first new TV.

INTERVIEW

LG Ads

How LG Ads Helps CTV Buyers Get The Targeting They're Looking For

"If you are just looking to buy inventory, then you can do that directly from the various programmers and you can buy that inventory very cheaply. But you are not getting any sort of targeting," notes **Raghu Kodige, CEO of LG Ads**. "Whereas when you buy directly from LG ads, you are buying a specific audience based on a very strong layer of data. We can give you data about viewers across linear TV and across all the other apps, because we can capture what is on the glass.

Q: Let's start with some quick background about you, Raffi, and how you ended up trying to fix the streaming-video world.

A: They are very similar to both other streaming services and to broadcast. To begin with, there's a lot of overlap-- our viewers aren't necessarily cord cutters--many of them have MVPD or vMVPD subscriptions and LG Channels Plus is just one of the ways they watch TV.

That's why we don't just sell inventory on a particular channel--we sell audiences. We go to a brand and say "tell us who you want to reach and we can help you find that audience on our channels." That is the advantage of having the sort of granular viewership data that comes from owning the device, which in our case, is the actual TV.




Q: Do you work with advertisers who come to you to try and get incremental reach?

A: We recently did a webinar called "You Can Have Your Cake And Eat It Too" and that sums up our approach to incremental reach, which is it doesn't have to be "you can only get reach" or "you can only get precise targeting." Because the reality is, you can actually get both.

I think when brands first start running a CTV campaign, they see it purely as a reach extension mechanism, but then, if they work with one of the three or four major players in this market, they very quickly understand that you can do more, and then they start to apply things like audience targeting and measurement.

What that means in practice is that if you want to use CTV to reach people you may have missed on linear, you still want to qualify that CTV audience and target them more precisely. Then what you'll do--because you're likely willing to pay a higher CPM if you're going to get a more qualified audience--you measure your linear TV yield and you measure your CTV yield, and in almost every case, you'll see that even though CTV seems more expensive, it's actually getting you a better return on your ad spend. That's the direction we are advising brands to go in right now and we see it happening more and more.



Q: Given that you own the interface, how much emphasis are you putting on things like recommendations and content discovery?

A: I think it is very important and owning the interface means that when people give us permission, we are able to see what they are watching on linear, on VOD, on streaming and even on their DVR.

It's important to us that users see value from that data and one way to show value is to provide them with better discovery and recommendations. When you look at what made Netflix or Amazon special, it was their ability to correctly anticipate what a consumer might want. We want to be able to provide the same experience for TV.

Right now there are just so many options, so many places you can watch TV and people are always talking about how they forget which networks shows are on and how they can't find a movie they wanted to watch.

This is where having all that data really comes into play, because if you can create a personalized experience via the content you recommend, then you're also going to create an environment that's more conducive for advertising, one where viewers are more likely to want to see your ads.

Q: Given the many new streaming services out there, how are you using data to help them grow their audiences and retain subscribers?

A: If you are a broadcaster and you want to drive tune-in, you can use our data to target people who have watched your previous seasons or who are watching competitive shows that have similar audiences. That's going to be very valuable.

But it's the streaming services who have very specific targeting needs right now, as they are all competing against each other for audiences and subscribers. In the past, their audiences tended to be small. But now they've got much more scale and we can run really effective campaigns for them because the larger your data set, the more precise you can get with your targeting.

Q: What about excess frequency? How does being an OEM help on that front?

A: As an OEM we have access to what viewers are watching on streaming and on linear. And we can help them to understand where they are running too many ads-- which networks and which dayparts are giving you excess frequency.

At the same time, we can help you find those apps where your target audience is, but where you're only reaching them four or five times a month. These aren't niche apps either, but apps where you can reach something like 50% of the population. And so if you shift your money to them, you can begin to eliminate excess reach.

SAMSUNG Ads

Smart TVs Are Having A Moment Right Now And Samsung Is Ready To Take Advantage Of It

"One of the reasons smart TV OEMs are having a moment is that streaming is having a moment," says **Justin Evans, Global Head of Analytics & Insights at Samsung Ads.**

"There's so much adoption of streaming as a new way to engage with television, that the advertisers who are trying to reach those audiences are favoring the streaming platforms and Samsung TV Plus is one of those key streaming platforms."

TV[R]EV sat down with Evans recently to discuss the massive changes in the way people watch TV and the surprisingly rapid rise of AVOD.

Q: For a long time streaming seemed to be dominated by ad-free or SVOD services like Netflix. Is that changing?

A: If you look at the percentage of time people spend watching television on Samsung TVs, the amount of time that's spent watching streaming is hovering at around 60 percent to 63 percent. Which means that a clear majority of time spent on our platform is spent in a streaming environment. So that's one inflection point that we've seen happen over the last year or so. And I think it happened much more quickly than anyone would have anticipated.

But now we're seeing an even more interesting shift, as our data shows that SVOD and AVOD are now more or less at parity.




One of the things we saw in processing our most recent numbers is that 72% of our users are watching SVOD and 72% are watching AVOD—obviously many are watching both. Even more interesting is that AVOD and SVOD have reached parity in terms of time spent, which is a

big surprise. Viewers are spending about an hour and 20 minutes per day watching each format, some more on one, some more on the other, but on average they are at parity. So first we had the inflection point where streaming surpassed linear. And now we're having another inflection point where AVOD has caught up to SVOD. What that means is that streaming has become a scalable ad environment for advertisers.

Q: Why do you think we're seeing such a surge in AVOD viewing?

A: I think it's a combination of better content and the fact that it's free. The amount of content has certainly increased—our FAST service, Samsung TV Plus now offers more than 160 channels. And the quality of what's available on AVOD is continuing to improve. Ditto the experience: we have made Samsung TV Plus available not just on the televisions, but on our mobile devices. So it's now available on 100 million devices globally. And it is free. And the experience is really strong. There's a lot of personalization: if you sit down in front of your Samsung TV, all the navigation, the choices you have in terms of streaming content, between one genre or another, all the highlights based on



your preferences in movies and TV shows-- they're all there in the dashboard. That's not gone unnoticed either-- we've now got 1.5 billion hours being spent each quarter on our FAST service, Samsung TV Plus, alone.

Q: For an advertiser, what are some of the benefits of working with a company that supplies both the programming and the hardware?

A: One of the key benefits is around the fact that advertisers can leverage CTV identifiers on our platform, which is a huge plus for TV in general, as advertisers are concerned about the demise of cookies in the digital ecosystem.

The CTV ecosystem has been built on IAB standards for CTV identifiers. And these were built principally to allow users to opt in or opt out of targeted advertising.

It also becomes a great platform for advertisers to gather insights. That's because all these linear viewing behaviors are happening on the same platform as the streaming viewing behaviors. And that becomes really valuable in a number of different ways. The one we speak about

most frequently to our clients is incremental reach. By having ACR data that tells the advertiser which groups of people are being exposed to their linear ads, they can then use our platform to find the people they're missing with linear via targeted streaming ads. That's a great reach opportunity.

There's also a response opportunity, lower funnel opportunity, where clients can understand how their linear and their streaming are working together to drive conversions

That gets really interesting when you work with media and entertainment clients. Just think about how that ecosystem has evolved. Everyone in the smart TV ecosystem had a robust business with TV networks, because we were able to understand who was converting on a tune-in basis. But now every TV network is not just a linear TV network, they're also an app publisher. So for them, the data they get from smart TVs about both their linear activity and their streaming activity and how they feed off of each other, that's really the lifeblood of their business, and for them to be able to leverage some of these insights is incredibly valuable.

INTERVIEW

VIZIO

VIZIO's Well-timed Entry Into The Ad Business Is Just The Latest Iteration For The Brand

"The way I look at it is that this is the next phase of what has been a 19-year journey for VIZIO. We came to market as a scrappy American start up offering the first connected TV that consumers could afford. We kicked ass in picture quality and price and steadily held roughly 20% of device sales for the last seven years.



Fast forward to today and we're offering consumers an integrated software solution with hundreds of free channels, easy integrations with platforms like Apple, Google and Amazon and we are partnered with every major media company as a key driver of tune in and commerce." explains **Mike O'Donnell, Chief Revenue Officer of VIZIO's Platform Business.**

"In 2015, we created our own operating system, and over the past six years, we've spent a lot of time and effort towards making that a great user experience. For us that meant making it quick to respond, easy to use, and providing the user with great content right out of the box—that's where WatchFree+, our FAST comes into play."

Q: What factors made VIZIO decide it was time to get into the ad business?

A: It's always been on the roadmap and we were able to sell ads before SmartCast, our currently operating platform. But in late 2018 the market finally reached a point of maturity where we had the scale of activity across AVOD and FAST to make investing in a full-fledged, next-generation advertising operation a reality.

We launched VIZIO Ads in 2019, and that gave us a powerful new revenue stream. We already had a best-in-class ACR-based

data business in Inscope, so the combination of the two has proven very attractive to brands. That's generated new revenue that we're plowing back into content, so we're able to offer more and better programming along with a continually evolving and improving interface.

Q: What advantages do consumers and advertisers get from working with a company that owns both the programming and the hardware?


A: Two words: integrated experience. What I mean by that is integrating the hardware and the software creates the best consumer experience possible. We don't rent our operating system or the hardware that carries it. So when we invest in the consumer experience we can think and act based on what will be the best experience possible.

We're able to source all the right content, the shows people want to see, and using data, we can start to optimize what people discover, when and how.

When you can provide the consumer with a huge benefit like that, it also becomes a huge benefit to the advertiser, because you have a more engaged viewer who is watching more TV.

We've got over 160 free channels and even more free content available across a really wide range of genres. And we have the ability to marry that with our ACR data. And that enables great addressable targeting which in turn creates an even better user experience and an even better ad experience.

For advertisers, there's an additional advantage to the direct-to-device strategy—



we can help marketers reach consumers not just on the TVs but across all devices in the home. The combination of a unique inventory footprint coupled with data that you can only get by going direct to device is a huge plus for advertisers, as it gives them more precise targeting that is easier to buy and easier to measure.

Q: One of the biggest complaints you hear from both consumers and advertisers is that there's no frequency capping on CTV, that the same ads play over and over. How can owning the hardware and software help solve that?

A: In order for us to continue to focus on building a great user experience, we need to be able to manage frequency. It's important that consumers are seeing an advertiser's message at the right time in the right environment, but it's also important to manage how many times that consumer is going to see that ad on a daily basis.

Owning the hardware and the software gives us the ability to look at everything that hits the glass, regardless of where it comes from. So we can see what ads people are seeing on linear, on streaming, even on a gaming console, and then determine how many times they're seeing them that week, that day or that hour.

We recently rolled out a product called universal frequency, which is an opportunity for advertisers to manage frequency by user or by device across both the linear and streaming environments. We can do that precisely because we own the hardware and the software, so we can track exactly what they are watching and which ads they've seen.

Most brands don't reach households enough, however. Linear isn't delivering the saturation and reach it once did, which is why CTV has taken off. We are the best possible solution for hitting the millions of consumers that turn on our products — every day for 7 years.

Q: You recently launched something called Household Connect, what is that?

A: I mentioned earlier that we aren't just selling access to a unique audience and inventory on our TVs, we are offering advertisers to use the biggest screen in the house as the anchor to reach VIZIO audiences across mobile, desktop, and tablets both inside and outside the home.

And when you do that, the Household Connect product that the VIZIO ad team sells now becomes one of the largest audience extension platforms in the market. That is a huge, huge advantage to advertisers and agencies who are looking to extend the reach and frequency of their linear and streaming campaigns onto personal digital devices.

So maybe the consumer was exposed to an ad at seven o'clock last night in primetime. And tomorrow when they're taking their morning walk and browsing the web, they can actually then receive a secondary message from that same advertiser, along with other relevant ads. That's going to help with reach and awareness and help create multiple touchpoints for the brand in a way that doesn't seem overly aggressive the way many cross-platform campaigns can seem. So we see it as a huge advantage for our advertisers.

About TV[R]EV

TV[R]EV captures the voices and insights of executives in the TV, digital and advertising industries. Our insights, reports, newsletters, videos and events are guideposts for everyone in the greater television ecosystem, from programmers and distributors to advertisers and adtech companies.

Written in the engaging colloquial style that's become our trademark, TV[R]EV's articles and newsletter are proof that there's no law that says reading about business, even the technical aspects of business, has to be dull. Especially in a business as entertaining as ours is.

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No one knows the changing media business like we do. We can help you shape your business strategy, make introductions to potential business partners, research new technologies and keep you abreast of the latest trends and how they will affect your business.

About The Authors



Alan Wolk

"If you know anything about television, you probably know Alan Wolk." That's how Adweek describes the best-selling author of *Over The Top. How The Internet Is (Slowly But Surely) Changing The Television Industry*. As co-founder, editor and lead analyst of TV[R]EV, Wolk has created one of the media industry's go-to-sources for understanding the changes coming from Hollywood, Silicon Valley, Madison Avenue and beyond. A contributing writer at *Forbes* and other industry news sources, Wolk has been interviewed and quoted by everyone from NPR to the *Wall Street Journal*, and is a regular guest on Cheddar TV, offering expert opinion on breaking stories in the media industry.



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Special Thanks

Special thanks to Kyle Antioian, Reed Barker, Adam Bergman, Allen Bush, Christiana Cacciapuoti, John Cassillo, Juliet Centino, Ashish Chordia, Jane Clarke, Denise Colella, Colin Dixon, Justin Evans, Amy Jane Finnerty, Tom Fochetta, Justin Fromm, Mike Gasbara, Adam Gaynor, Aaron Goldman, Casey Greene, Lizzy Harris, Travis Hockersmith, Melissa Hourigan, Rick Howe, Jessica Page Ivy, Geoff Katz, Raghu Kodige, Paul Kontonis, Claudio Marcus, Serge Matta, Jodie McAfee, Yessenia Morales, Brian Morrissey, Sean Muller, Lance Neuhauser, Zeev Neumeier, Ken Norcross, Mike O'Donnell, Will Offeman, Tim Peterson, Andy Plessner, Xhemile Poley, Jesse Redniss, Will Richmond, Mark Rotblat, Eleanor Semeraro, Frank Sinton, Matthew Slagle, Tom St. John, Jonathan Steuer, Deborah Stambaugh, Tracy Swedlow, Brittany Tibaldi, Katelyn Tumino, Jon Watts.



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