

# TV DECONSTRUCTED: LATEST FINDINGS FROM THE DASH STUDY

## Full Year 2023

The ARF DASH TV Universe Study is a nationally projectable enumeration study of consumer behavior in TV and digital media. DASH records in detail how US households connect to and consume TV, use digital devices, and interact with and share streaming media and ecommerce accounts. DASH is a syndicated study fielded in partnership with NORC at the University of Chicago, a premier polling firm, and supported by multiple licensees, many of them competitors. Pooling resources produces a higher quality and more widely accepted study.

DASH 2023 was conducted online, face-to-face and by phone against a national probability sample of 10,504 U.S. adults. The panel also included a longitudinal sub-sample of 3,282 adults who took the DASH survey in both 2023 and 2022. The longitudinal data enables robust analysis of switching. Many of the findings in this report draw on that data.

Conducted annually, in two waves, DASH addresses the acute need for an unbiased standard in TV universe sizing. The digitization and fragmentation of TV, the proliferation of streaming services and video-enabled mobile devices, and rapid shifts in consumer behavior have complicated

measurement and attribution, in turn roiling advertising and TV economics. Big data streams from set-top boxes and smart TVs allow deep and nearly instantaneous examination of viewership but introduce new limitations and biases into what is already a massively complex situation.

Major measurement companies use DASH data to calibrate their big data sets and to model household demographics and persons' viewing. A highly granular, direct survey study, DASH mimics many of the signals that measurement companies collect electronically, allowing users to model data not contained in those big data sets. A technical paper on Big Data calibration with DASH, a description of common use cases and other resources are available on the [DASH site](#) and on request.

DASH also supports an array of use cases beyond measurement, in program distribution strategy, identity and advertising planning, activation and sales.

This report highlights findings from DASH 2023, the third full year of the program. We are pleased to report that the study methodology is proving robust, and the trends seen so far are logical. A more detailed explanation of methodology and content follows the findings.

# FINDINGS

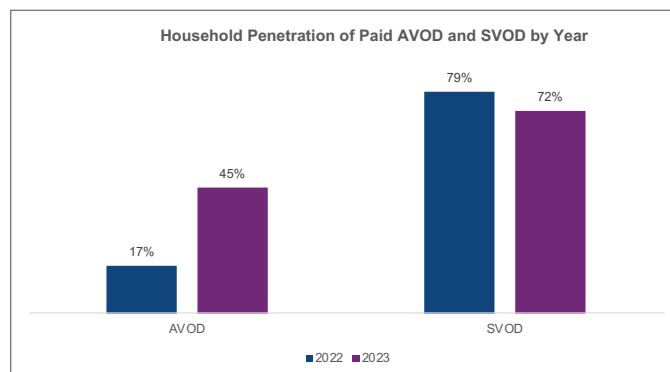
Since the program was launched in 2021, DASH data sets have supported in-depth exploration of consumer dynamics across the entire consumer TV landscape. The release of DASH 2023 made user-level longitudinal data available to licensees for the first time. That data, gathered from roughly 30% of the total respondent base, along with detailed subscription-level data on streaming services and TV access providers, enabled the analyses of growth and switching dynamics featured in this report.

As you will see, younger households – here defined as those headed by 18-54 year olds – are driving most of the changes in paid streaming and TV access, although there are some interesting exceptions.

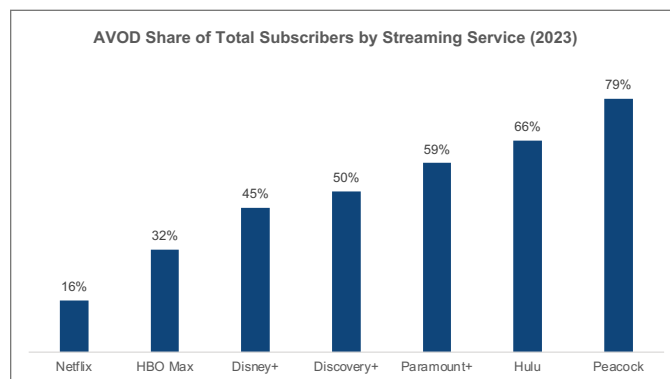
We will appreciate your feedback on this report and, as always, on the DASH program. Our mission remains simple: to produce a reliable standard for TV universe estimation that is both accessible and useful to providers across the industry.

## Reflecting the shift back toward ad-supported TV, the household penetration of paid AVOD more than doubled in 2023.

Households subscribing to at least one paid AVOD subscription service rose from 17% in 2022 to 45% in 2023. At the same time, SVOD penetration fell, from 79% of US households to 72%. Analysis of the DASH longitudinal sample showed that new subscriptions accounted for most of the big increase in AVOD penetration. Among longitudinal panelists who had no paid AVOD subscriptions in 2022 and at least one in 2023, 79% added AVOD to their viewing portfolios by opening a new account, while the other 21% downgraded an existing SVOD account.



The choice of AVOD, and, for that matter, SVOD services, was clearly influenced by the “heritage” of the providers. Services founded on strong AVOD offers, like Hulu, Paramount+ and Peacock, were more likely to pick up new subscribers in one of their AVOD tiers. Conversely, services with strong SVOD heritage, like Netflix and (HBO) Max, tended to pick up most of their new subscribers in their SVOD offers<sup>1</sup>.

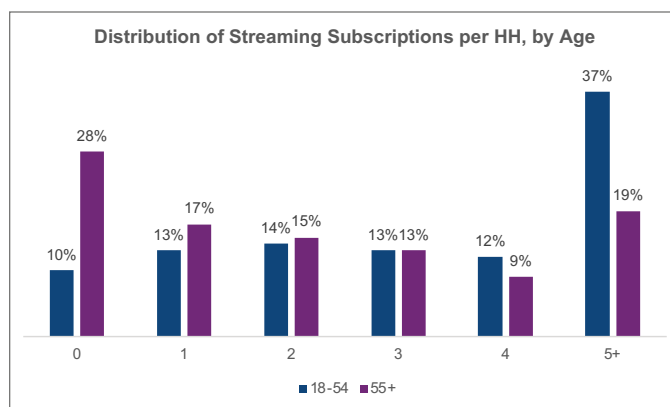


That said, although AVOD subscribers represented a relatively small proportion (16%) of Netflix subscribers, the sheer size of Netflix (63% of US HHs) played a big role in driving the overall growth of AVOD.

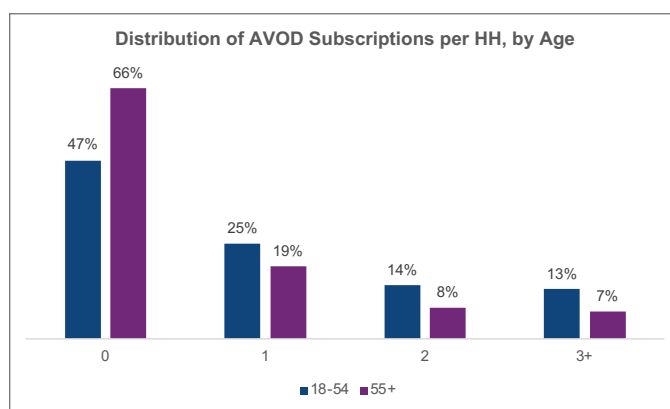
<sup>1</sup> Note: Amazon Prime did not offer an AVOD tier in 2023.

## Younger people disproportionately drove the changes in the 2023 paid streaming landscape.

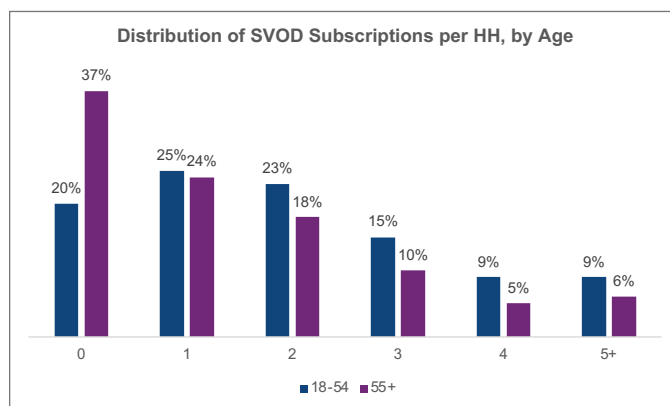
Households headed by people 18-54<sup>2</sup> are much more likely to subscribe to streaming services, and to more of them, than those headed by people 55+. In 2023, only 10% of 18-54 year olds went without a paid streaming TV service, and 62% had three or more. In contrast, 28% of those 55+ did not have a streaming subscription, and 41% had three or more accounts.



The same dynamics hold true for the AVOD and SVOD categories separately. In 2023, nearly half of 18-54 year olds had at least one AVOD subscription; in contrast, only a third of those 55+ did. Younger people were also more likely to have multiple AVOD and SVOD accounts.



Households headed by 18-54s accounted for 62% of US households in 2023, but an estimated 71% of the more than 400m paid streaming subscriptions in the US. Given that the young account for a disproportionate share of streaming subscriptions, it came as no surprise that younger people also accounted for a disproportionate share of streaming subscription *changes* in 2023 (over 2022), be those changes new accounts, cancellations or tier switches within existing accounts.



### Distribution of Paid Streaming Subscriptions and Changes, by Age

US Totals (2023)	Projected Count (mm)	Share of Total	
		18-54	55+
Households	131.3	62%	38%
Streaming Subscriptions	427.5	71%	29%
Subscriptions Changed (vs. 2022)	271.5	73%	27%

<sup>2</sup> The age breaks 18-54 and 55+ were chosen because the distribution of streaming subscriptions within these groups is relatively homogenous, but the difference between groups is significant. Throughout the report, age refers to the age of the head of household.

But sheer numbers alone do not entirely account for the effect. Examining churn on a subscription-by-subscription, rather than household-by-household, basis controls for the impact of account volume.

Shown below are longitudinal analyses of switching between AVOD and SVOD tiers of the seven major hybrid streaming services (Netflix, Hulu, Max, Disney+, Paramount+, Peacock, Discovery+) from 2022 to 2023. These subscription-level analyses reveal that younger people are still more likely than older people to upgrade or downgrade tiers within specific streaming services. Older people are more likely to stay put at a given subscription level once signed up, but are also more likely to cancel a streaming subscription, especially SVOD.

Twelve percent of all SVOD subscriptions to hybrid services in 2022 were switched (“downgraded”) to the AVOD tier of the same streaming service in 2023. Younger people switched 13% of their SVOD subscriptions to AVOD, and older people switched 10% of theirs, yielding indices of 108 and 83, respectively. Both indices were statistically significant, as the shading of the cells indicates (teal for above average and purple for below average).

**SVOD Streaming Subscription Changed, by Age**

<b>Changes in Existing SVOD Accounts (2023 vs. 2022)</b>	<b>Share of Total SVOD Accounts</b>	<b>18-54 (Index)</b>	<b>55+ (Index)</b>
<b>Downgraded to AVOD</b>	12%	108	83
<b>No Change</b>	45%	100	101
<b>Unsubscribed</b>	18%	89	139

Similarly, both age groups switched from AVOD to SVOD (“upgraded”) in 2023 at statistically significant rates. Younger people upgraded more, and older people less.

**AVOD Streaming Subscription Changed, by Age**

<b>Changes in Existing AVOD Accounts (2023 vs. 2022)</b>	<b>Share of Total AVOD Accounts</b>	<b>18-54 (Index)</b>	<b>55+ (Index)</b>
<b>Upgraded to SVOD</b>	19%	110	67
<b>No Change</b>	40%	96	114
<b>Unsubscribed</b>	27%	95	118

As if more evidence was needed that younger households represent core acquisition targets for streaming services, an analysis of new accounts shows that younger people were also far more likely than older people to add services in 2023 to which they were not subscribed in 2022.

**Streaming Subscriptions Added, by Age**

<b>New Accounts in 2023</b>	<b>Share of Total Accounts Not Subscribed to in 2022</b>	<b>18-54 (Index)</b>	<b>55+ (Index)</b>
<b>Subscribed to AVOD Tier</b>	10%	117	77
<b>Subscribed to SVOD Tier</b>	6%	125	65

In contrast, older households were less likely to change tiers within services, but more likely to cancel services altogether. These dynamics have implications for retention marketing to this segment.

All the dynamics aside, households headed by 18-54 year olds represent the majority (62%) of the population. As advertising on linear television becomes more fragmented, a growing AVOD base represents a logical addition, or, perhaps, alternative, to linear in many brand media plans.

Because DASH enables account-level analysis, our 2024 data should give licensees insight into the churn effects of account age, as well as subscriber age.

**Household income significantly affects demand for SVOD, but far less so for AVOD.**

Income plays a big role in the adoption of SVOD accounts. These are generally the most expensive streaming offers, and the indices to income reflect intuitive effects of affordability. In 2023, low-income households (<\$30K) were 67% more likely than the average household to have no SVOD account. Conversely, high income households (\$100K+) were far more likely than lower-earning households to have three or more SVOD accounts.

**Distribution of SVOD Accounts by Income**

Number of Accounts	Distribution Of All HHs	<\$30k (Index)	\$30k to <\$60k (Index)	\$60k to <\$100k (Index)	\$100k+ (Index)
0	27%	167	128	86	55
1	24%	102	107	107	90
2	20%	80	92	113	108
3	13%	48	74	96	146
4	7%	58	65	97	147
5+	8%	41	79	107	141

The affordability effect is far less stark in AVOD, even though AVOD subs also require payment (if generally less than SVOD). In fact, the indices of accounts to income in 2023 were generally flat, suggesting that providers have been successful in finding price points that “democratize” AVOD (and thus its ad base).

**Distribution of AVOD Accounts by Income**

Number of Accounts	Distribution Of All HHs	<\$30k (Index)	\$30k to <\$60k (Index)	\$60k to <\$100k (Index)	\$100k+ (Index)
0	55%	115	104	98	91
1	23%	88	96	101	108
2	12%	78	91	105	115
3+	11%	71	95	104	116

## Amazon Prime edged closer to a “co-anchor” position alongside Netflix.

Last year, we published a chart showing the household penetration and co-occurrence of subscriptions for the top streaming services. We observed that Netflix was not only dominant in size, but enjoyed an “anchor” position in the streaming TV “portfolio” of most US households. That chart, updated for 2023, appears below.

### Penetration and Co-Incidence of Streaming Services

Streaming Services	HH Penetration	Share of subscribers (columns) with a second service (rows)							
		Netflix	Amazon Prime	Hulu	Disney+	Max	Peacock	Paramount+	Apple TV+
Netflix	63%	--	73%	55%	49%	37%	31%	31%	22%
Amazon Prime	57%	80%	--	55%	51%	39%	33%	35%	24%
Hulu	40%	86%	78%	--	65%	46%	40%	39%	26%
Disney+	36%	85%	81%	72%	--	49%	41%	42%	29%
Max	26%	88%	84%	71%	68%	--	44%	46%	35%
Peacock	24%	83%	80%	67%	63%	49%	--	55%	30%
Paramount+	23%	84%	86%	67%	65%	52%	56%	--	34%
Apple TV+	16%	88%	88%	67%	68%	59%	45%	51%	--

Read the chart across each row to see the household penetration of that service and its co-occurrence with the services in each column. For example, of the 63% of households that have a Netflix subscription, 73% also have Amazon Prime. (Multiplying the household penetration of a service times its co-occurrence with another produces the household penetration of the pair: 46% in the case of Netflix and Amazon. Of note, the data shown here is limited to pairs, but granular DASH data exists to size any conceivable service combination, or “bundle.”)

Netflix continued to enjoy “anchor” status in 2023, but Amazon Prime edged toward a “co-anchor” slot. While Netflix penetration fell to 63% in 2023 from 65% in 2022, Amazon Prime held steady at 57% of US households. Further, Amazon Prime joined Netflix as the only provider with an 80% or higher co-occurrence with most other major streamers (read down the Amazon Prime and Netflix columns). This dynamic is worth watching carefully in 2024 as Amazon Prime now offers an ad-suppression tier.

### Trend in Penetration of Streaming Services

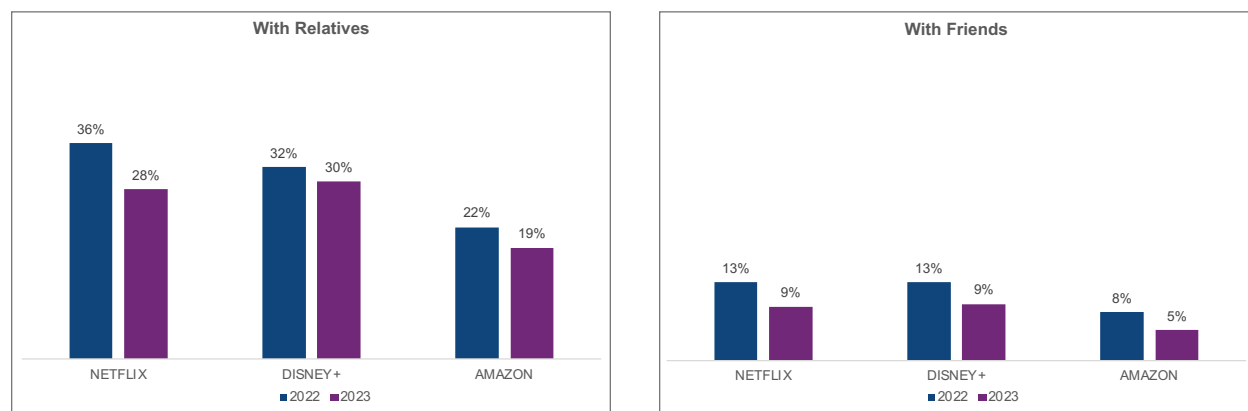
	2022	2023	P.P. Change
Netflix	65%	63%	-2
Amazon Prime	57%	57%	--
Hulu	41%	40%	-1
Disney+	39%	36%	-3
Max	28%	26%	-2
Peacock	14%	24%	+10
Paramount+	17%	23%	+6
Apple TV+	14%	16%	+2

Two other noteworthy changes in 2023 – consistent with the rise of paid AVOD – were the big penetration gains for Peacock and Paramount+.

## The crackdown on password sharing worked – and not just on Netflix subscribers.

In May 2023, Netflix introduced restrictions designed to limit password sharing outside of subscriber households. The impact was significant: the percentage of Netflix accounts shared with relatives fell from 36% in 2022 to 28% in 2023, and sharing with friends dropped from 13% to 9%.

Percentage of Subscribers Sharing Passwords, by Service and Year



Not only did the measures drive down Netflix sharing, but the news of new and planned restrictions appeared to drive down sharing of other services. Disney+ introduced sharing curbs in Canada late in 2023, but did not roll the restrictions out in the US until early 2024. Still, sharing of Disney+ among relatives and friends fell in 2023, as did sharing of Amazon Prime, which made no such announcement.

## FASTs sped onto the scene in 2023.

A year of massive changes in the TV ecosystem, 2023 was also the year of FASTs (Free Ad-supported Streaming TV services), which expanded and further fragmented the ad-supported ecosystem. DASH gathered data about stated HH usage of 14 major FASTs representing a mix of OEM offers, like Samsung TV Plus, which come with the smart TV, and standalone (non-OEM) offers, like Xumo.

Breakdown of FAST Services Reported Used by Household

Number of FASTs Used	Total HHs	All Non-OEM	All OEM	Mix
1	22%	84%	16%	--
2	12%	79%	2%	19%
3	7%	69%	<1%	31%
4	4%	64%	0	36%
5+	4%	47%	0	53%

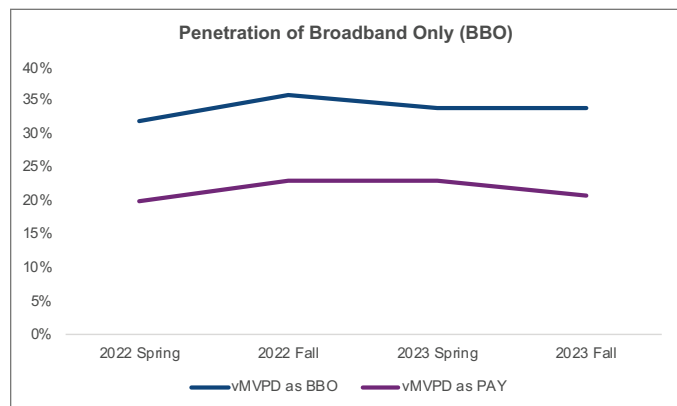
Roughly half (49%) of US HHs reported using at least one of the 14 FASTs in our survey. The fewer the FAST services a household claimed to use, the more likely those services were non-OEM standalone services, not the services included with the smart TV, despite the significant “footprint” advantage of the OEMs. The data suggest that respondents may think of (and count) the standalone services differently than the OEM services.

FASTs challenge self-reporting in ways that other TV services do not. Each service may in fact represent many FAST channels, making accurate enumeration difficult. In addition, viewers – and especially those using audio controls to access programming – may be unaware they are watching FASTs.

Our 2024 data set will include a more comprehensive list of FASTs, and our technical team, made up of representatives from our licensee base, is working on improving capture of user data in this complex, growing area. This effort may require supplementary passive data.

**Broadband Only (BBO) penetration may have plateaued.**

The share of US households classified as Broadband Only for TV reception has grown two to three points every year since DASH was launched. However, for the first time, there was no growth in BBO between the Spring and Fall waves of 2023. As the blue line shows, BBO penetration held at 34% among all households regardless of whether they have a TV set.



Complicating the BBO definition is an emerging convention in the industry that considers a previously BBO household that has a vMVPD (like YouTube TV or Hulu + Live) to be a Pay TV household. Proponents argue that vMVPD services provide cable, network and local programming on a subscription basis, much like traditional Pay TV services from cable, telecom and satellite providers, and should be classified accordingly. The purple line on the chart, depicting BBO penetration without vMVPDs, shows a significant drop of that measure in penetration in 2023.

**Cord cutting outpaced cord reattaching, and vMVPDs gained traction among older viewers.**

Like the movement among streaming tiers, there was also considerable churn among the different modes of reception as measured through the DASH longitudinal panel.

Once seen as a one-way migration from Pay TV to BBO is now a far more nuanced picture. Reading down the columns of the table below, we see that 21% of households classified as Pay in 2022 switched to BBO in 2023 and 6% switched to OTA. Conversely, 18% of those with BBO in 2022 switched to Pay in 2023. Of note, two thirds of OTA households stuck with their antennas in 2023. The other third switched, roughly half each to to Pay TV and BBO.

		2022		
		Pay TV	BBO	OTA
2023	Pay TV	73%	18%	16%
	BBO	21%	73%	17%
	OTA	6%	9%	66%



Another way to express (and size) defection from Pay TV is to use the more familiar term “cord cutters,” who represented 15% of US households in 2023. In a similar vein, “cord re-attachers” (9%) moved the other way: to Pay TV, from BBO or OTA. For perspective, a third category, “vMVPD migraters,” captures the 10% of households that joined the ranks of vMVPD users in 2023.

Segments of Reception Change, by Age

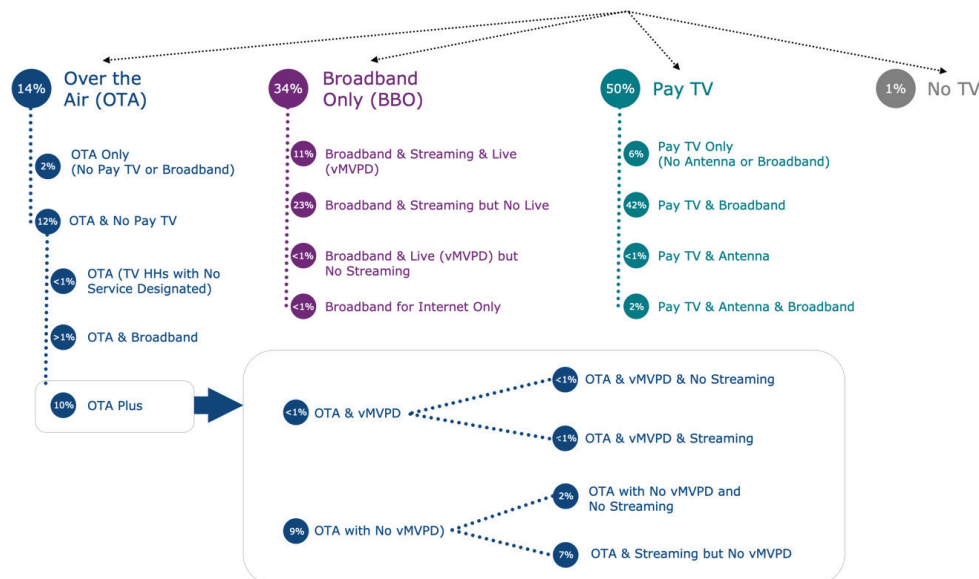
	Share of All HHs (2023 vs. 2022)	18-54 (Index)	55+ (Index)
<b>Cord Cutters</b>	15%	113	76
<b>Cord Reattachers</b>	9%	104	92
<b>vMVPD Migraters</b>	10%	88	123

Once again, age played a role: younger households (18-54) were more likely than older households to change in *both* directions: away from Pay TV and toward it.

At the same time, older households were more likely to adopt vMVPD service, a finding that suggests that the mainstreaming of those services as the “long tail” of the adoption curve pushes through.

**The traditional TV access construct (Pay/BBO/OTA) is blurring.**

The concept of BBO is increasingly an oversimplification. As the DASH 2023 reception tree for all TV-accessible households shows, reception today is much more complicated than the three traditional access segments can capture. (Note that this reception tree includes vMVPDs in BBO for illustration, but the DASH data is sufficiently granular to allow users to apply whatever definition they prefer.)

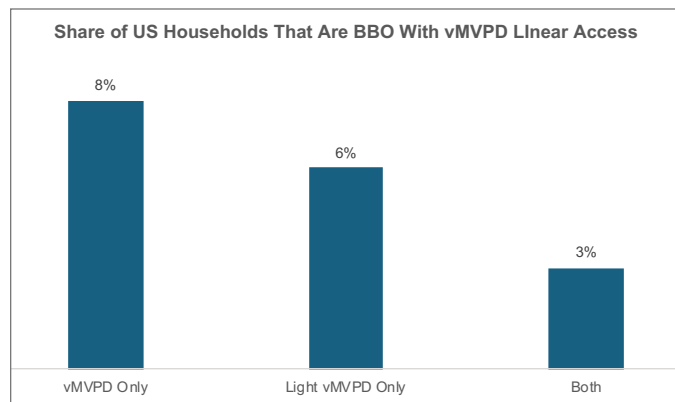


Modes of Reception (2023)

One-third of BBO households have access to linear programming through vMVPDs, but vMVPDs are also blurring the traditional lines in OTA. Among households classified as OTA, 1% have a vMVPD attached to one or more sets, and 3% of homes classified as Pay also have an antenna on one or more TVs.

## And while we're on the subject of blurring, say hello to the "light" vMVPD.

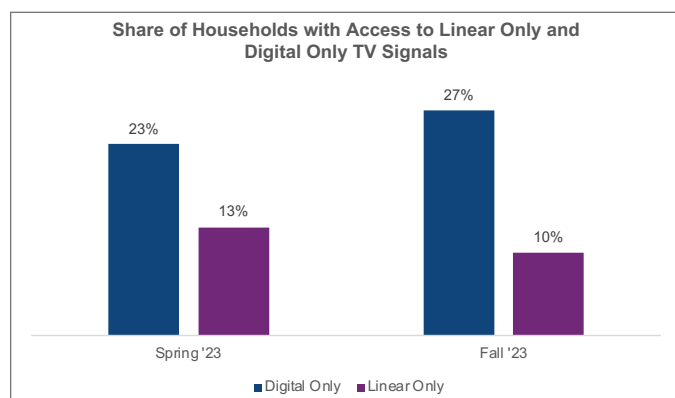
Another interesting development is the recent launch of live television through network-affiliated streaming services. We consider Paramount + and Peacock Premium to be "light vMVPDs" because they deliver the network and local station programming from CBS and NBC, respectively, but not the complete linear menu offered by full-bodied vMVPDs. In 2023, 17% of all households were classified as BBO and had access to at least one linear channel. Six percent of homes gained linear access through one of the two "light" vMVPDs. The rest had access to linear TV through vMVPDs.



All in, 51% of BBO households had access to at least one linear channel in 2023.

## The inexorable shift to digital continues.

TV reception comes down to modes of access (pay, broadband and antenna) and signals received (linear and digital). Digital signals are winning. In Fall 2022, the percentage of households with access to digital signals only was 21% and to linear only, 15%. The shift to digital only and away from linear only continued across both waves of DASH 2023, although the share of homes with access to both linear and digital signals remained steady at 63%.



## The Young and the Setless: The Rise of the Device-Only TV Household

In March 2023, we published an opinion urging the measurement industry to include in the universe "denominator" all households with access to TV, not just households with a TV set (the traditional basis of "TV Households"). In the interest of accuracy and commerce, we called for "TV-accessible" households (which include device-only TV viewers) to replace "TV Households" as the industry standard, and we cited data from DASH 2022 in support. Reinforcing the urgency of that recommendation, the number of households that watch TV only on devices grew larger in 2023.

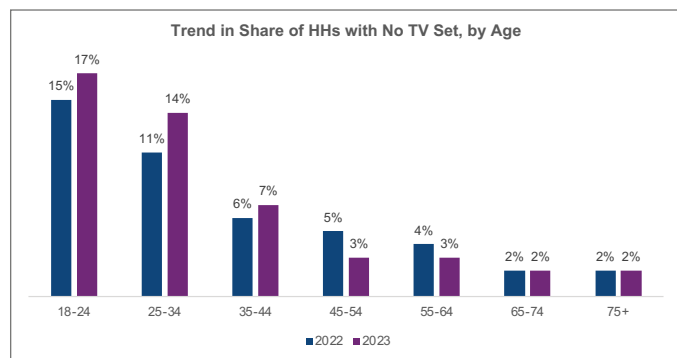
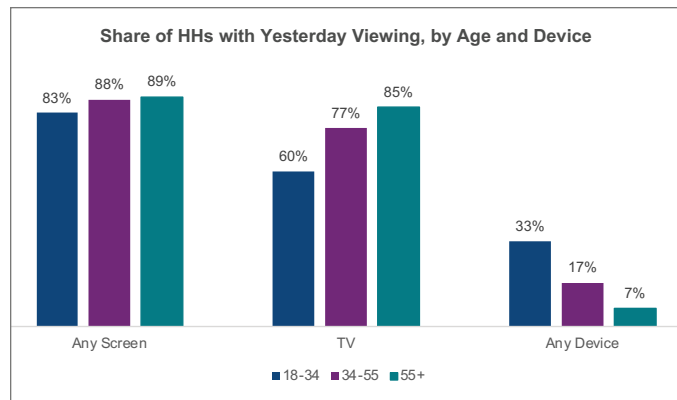
Households without a TV set grew from 7% in 2022 to 8% in 2023, an increase of more than a million homes. Of note, three-quarters of TV-setless households, or 6% of all US households,

have access to linear and/or streaming TV and watch exclusively on their devices.

Once again, younger households are driving the trend. Stated levels of yesterday viewing on any screen are relatively flat across age groups, but younger people are far more likely to watch on devices, and far less likely to watch on TV sets, than their older counterparts.

Still, it's interesting to note that TV-setless households (and device-only viewing) are not the exclusive province of the young.

The data speaks loudly. In the age of video-capable mobile devices, it's essential to measure all households to get an accurate picture of the total TV audience.



## Conclusion

Digitization and the behavior of viewers, especially those under 55, are creating an ever more dynamic and fragmented TV ecosystem. Younger households are more likely to cut cords (and re-attach them), switch plans within and among streaming services, and use devices other than TV sets to watch TV. At the same time, older viewers are embracing virtual MVPDs and cutting streaming services at higher rates than the young. The complexity and pace of change in television show no signs of letting up.

DASH licensees contribute ideas and technical expertise drawn from the fields of media, measurement, identity and advertising to help ensure that we measure this changing landscape accurately and in useful depth.

The findings published here barely scratch the surface of what's possible with the DASH data. To discuss your use cases and learn more about licensing, contact ARF Chief Research Officer Paul Donato and DASH General Manager Jim Meyer at [DASH@theARF.org](mailto:DASH@theARF.org). You may also visit our public [website](#) for more information.

# METHODOLOGY & CONTENT

DASH 2023 comprises a national probability sample of 10,504 persons, ages 18 and over. Data was collected online, face to face and by phone to achieve balanced representation and to allow for an analysis of interviewing modes. A complete description of methods, as well as sample composition and response rate analysis, is available on request.

The chart below illustrates the broad content of the study. Granularity makes DASH a uniquely robust source of signals for modelers. For example, the study gathers, for each television and device in the household, *who owns it, who uses it, what it's used for, and what its usage was yesterday*.

<b>Demographics</b>	<b>TV sets</b> Locations, brands, smartness, service modes and connections	<b>Connected devices</b> Game consoles, video players and streaming devices	<b>Mobile devices</b> Owners, sharing, uses
<b>ISPs</b> Internet connectivity by device	<b>Streaming TV</b> SVOD/AVOD tiers and sharing FASTs	<b>Live TV</b> Modes of access, including casting from devices	<b>Yesterday viewing</b> Daypart, TV/device, genre, outlet, co-viewing, OOH
<b>Streaming audio</b>	<b>E-commerce</b>	<b>Email accounts and apps</b>	<b>Social media</b>

Importantly, DASH creates an opportunity to standardize measures of coverage bias across the industry. Many companies have access to a limited number of TV datasets, such as Vizio and one or two MVPDs, or to transactional data from a set of ecommerce sites, which generally does not include the biggest players, like Amazon. DASH is a comprehensive source — a full view of the universe — to help users understand the differences in behavior across these channels and make corrections for the limited coverage.

Each DASH survey includes “infrastructural” questions that are core to the study, but evolves to stay on top of the market and to respond to the needs of licensees. Added in 2022 were signals to help demographic and viewer assignment, including frequency of viewing by genre; ad-supported (AVOD) and premium (SVOD) subscription tiers within the major “hybrid” streaming offers; and more precise ways of isolating vMVPDs. The 2023 survey features a much deeper examination of daypart-level viewing, including viewing devices, specific broadcast and cable genres and properties, local television, streaming services and user-generated content, as well as an expanded batteries on out-of-home TV viewing.

A complete history of wave-over-wave changes to the DASH survey since the inception of the program is available on request.