



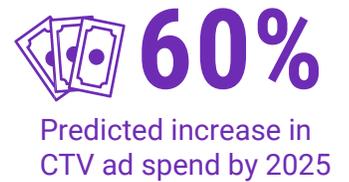
DoubleVerify



# THE ULTIMATE GUIDE TO **CTV MEASUREMENT**

# The Ultimate Guide to CTV Measurement

Connected TV (CTV) is the fastest-growing advertising channel in the U.S., with global adoption increasing rapidly as well. According to DV's 2022 Four Fundamental Shifts in Advertising and Media, 55 percent of respondents subscribed to additional streaming services within the past 12 months, globally. As CTV attracts more consumers, advertisers are dedicating additional dollars to the medium. **eMarketer** expects CTV ad spend to increase by 60 percent in the U.S., from \$21 billion in 2022 to \$33 billion in 2025.



Given the premium pricing and unique challenges that can arise with CTV inventory, it's especially important to ensure that brands are maximizing their advertising impact and ROI. Achieving this goal, however, relies on a foundation of high-quality inventory that can be viewed by a real human, in a brand-suitable environment and within the intended geography.

DoubleVerify's (DV) mission is to make the advertising ecosystem stronger, safer and more secure. And as part of that effort, DV is dedicated to empowering advertisers to measure and protect their investments on this key channel. This guide will provide you with insights into how media quality challenges can arise on CTV, as well as what actions you can take to maximize your ad spend.



## This Guide Will Cover the Following Topics

- The Difference Between CTV vs. Over-the-Top (OTT)
- The Benefits of Advertising on CTV
- An Overview of the Global State of CTV
- The Importance of Verification on CTV
- How to Measure and Protect OTT and CTV Quality
- Steps You Can Take to Increase Measurement and Protection on CTV Campaigns

# Table of Contents

**04** OTT vs. CTV:  
What's the Difference?

**18** How Advertisers Can Enhance  
Media Quality on CTV

**05** Why Advertise on CTV:  
Extend Your Audience

**19** The DV Video OmniTag

**06** CTV Overseas:  
The Global State of CTV

**07** Why Verify: The Importance  
of Authentication on CTV

**09** How DV Can Help You Measure  
and Protect Your Campaigns

**10** Fraud

**13** Brand Safety and Suitability

**15** Viewability

**17** Geo Relevance

## OTT VS. CTV

# What's the Difference?

Although the terms OTT and CTV are sometimes used interchangeably, it's important for advertisers to understand the difference between the two.



### OTT

OTT stands for “over-the-top” and is a general term used to describe digital video more broadly. OTT content can play on a variety of devices, including desktops, laptops, smartphones, tablets and other mobile devices.

OTT got its name because the devices were originally placed “over” traditional linear set-top or cable boxes.

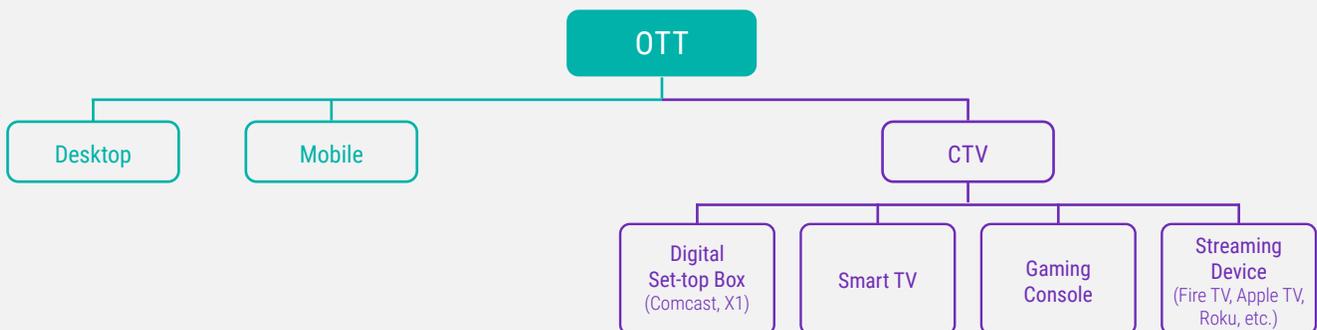


### CTV

CTV stands for connected TV and is a subset of OTT defined as a TV screen that is connected to the Internet. CTVs can be powered by various devices, including smart TVs, streaming sticks, gaming consoles, set-top boxes and more.

CTV also has a unique set of technical features – and industry-level limitations – which require unique solutions to measure and protect its inventory, as compared to other OTT platforms.

## OTT Delivers Content to Connected TVs and Other Devices



## WHY ADVERTISE ON CTV

# Reach More Audiences

The way audiences watch TV is changing. More audiences across generations are “cutting the cord” and canceling their linear cable subscriptions in favor of streaming in an effort to reduce increasingly expensive cable bills and access the wider array of content streaming provides. Some audiences have never subscribed to cable to begin with – “cord nevers.”

CTV ad spend is also climbing. In fact, eMarketer states that more than half of marketers expect to shift at least 40 percent of their ad budgets to CTV across all global regions. So, if you want to reach existing and new audiences and compete in the market, it’s essential to include CTV in your media buy.

More Than  
**1/2**   
 of marketers expect  
 to shift at least **40%** of  
 their ad budget to CTV



### Cord Cutters

Households that cancel their linear cable subscriptions in favor of streaming platforms.



### Cord Nevers

Households that never had a linear cable subscription to begin with and have only ever used streaming services.

CTV OVERSEAS

# The Global State of CTV

Global CTV impression volume grew by 62 percent year-over-year from 2021 to 2022, DV findings show. Although the U.S. carries the largest volume of CTV ad impressions, DV recorded the most significant impression growth within the LATAM, EMEA and APAC markets.

**APAC**  
**+158%** YoY increase in DV's impression growth in APAC

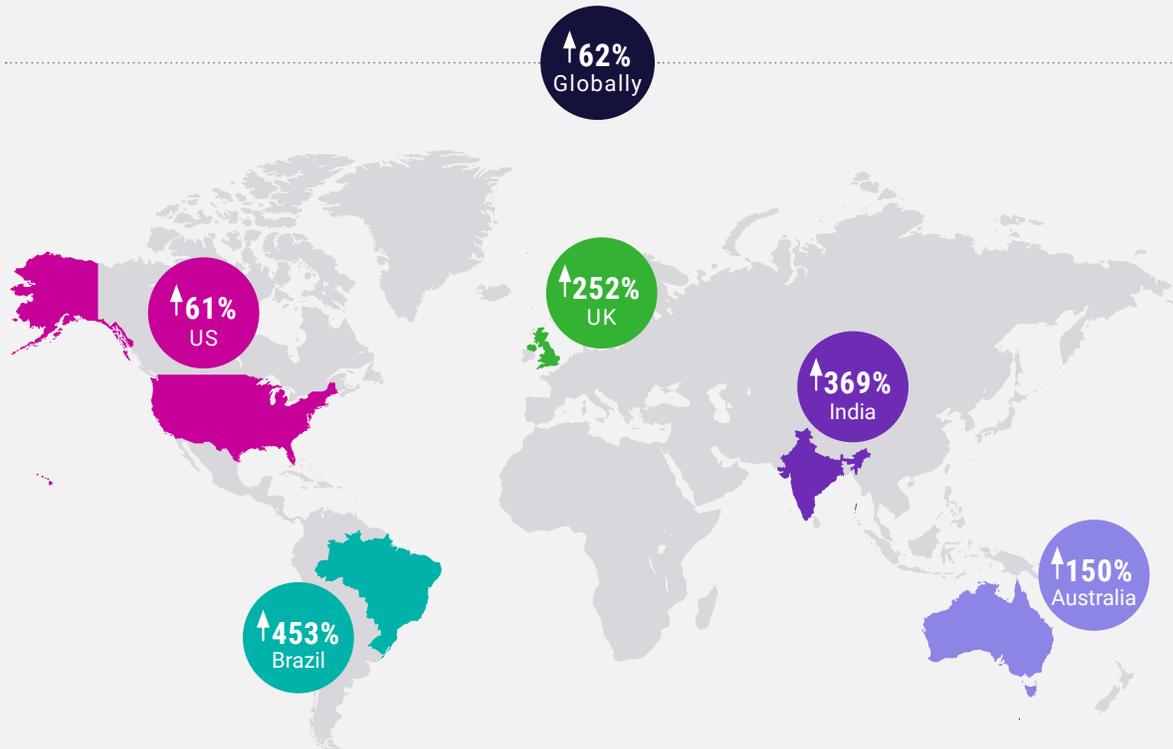
**EMEA**  
**+79%** YoY increase in DV's impression growth in EMEA

**LATAM**  
**+375%** YoY increase in DV's impression growth in LATAM

**NAM**  
**+61%** YoY increase in DV's impression growth in NAM

## CTV Consumption and Quality Verification Grows Globally

Year-over-Year Growth in CTV Ad Impression Volume



## WHY VERIFY

# The Importance of Verification on CTV

Advertisers hold several common misconceptions about CTV.

“CTV is a naturally brand safe environment.”

“Ads are viewable by default.”

“Upfront campaigns are always safe.”

“CTV is fraud free.”

“CTV’s ads always play in the intended geo.”

However, this is far from the reality. In fact, DV discovered:



### Bot Fraud

Bot fraud incident rates grew 69% in 2022 across CTV impressions.



### TVs May Be Off

More than 1 in 3 impressions serve into environments that fire ads when the TV is turned off.



### Suitability Issues

In a sample of 2022 upfront campaigns, one-half of advertisers ran on properties outside of their buying parameters, including low-quality sites and apps.

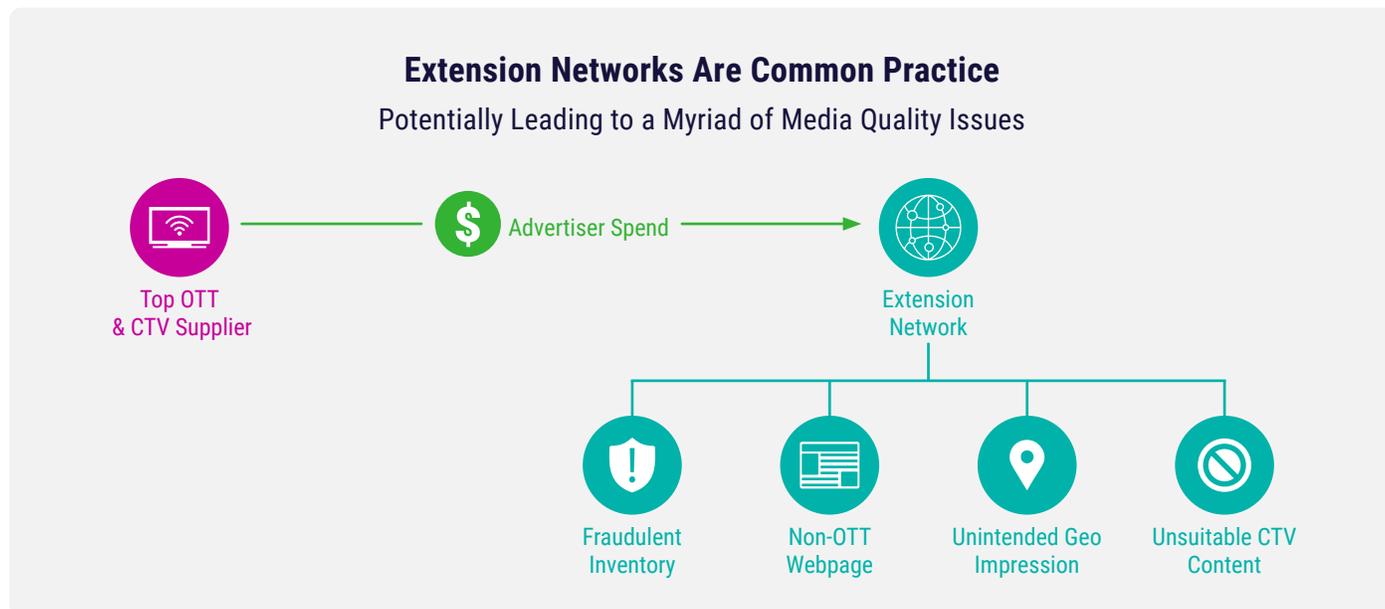
## Ensure Your Campaigns Are Protected No Matter How You Buy

A common misconception is that only programmatic CTV inventory poses media quality challenges. In reality, direct buys come with their own set of challenges, which is why it’s essential to measure and protect campaign quality across all types of media buys.

### How Media Quality Challenges Occur on Direct Campaigns

How can you have media quality challenges if you only bought inventory from a specific publisher or distributor? It’s true that many of your impressions are likely to run alongside a supplier’s inventory; however, many publishers leverage “extension networks” or “audience networks.” These networks allow publishers and distributors to run campaigns outside of their owned and operated inventory so that they can deliver all of the impressions they committed to as part of Upfronts and Newfronts agreements.

Using extension networks is a common industry practice that is included in most Upfronts and Newfronts contracts and can even benefit advertisers by growing their campaign’s footprint or decreasing CPMs via lower-priced inventory. However, impressions that run in these networks are, unfortunately, more likely to include fraudulent, unsuitable, non-viewable and out-of-geo impressions.



Even though some advertisers may edit their contracts to exclude inventory from extension networks, DV discovered that, many times, impressions serve on these networks regardless. In a sample of 2022 upfront campaigns, DV found that half of the advertisers ran on properties outside of their buying parameters, including low-quality sites and apps, such as screensavers and email tools. Additionally, more than 20 percent of the advertisers ran on adult or extremist environments. The impression volumes on these environments were generally minor; for many brands, however, even a single impression in an unsuitable location can cause major challenges.



A top telecom advertiser uncovered that their upfront campaign – which was only contracted to run in a leading broadcaster’s inventory – ran across more than 250 unrelated mobile apps, some of which contained adult and inflammatory news content, in February of 2022, according to DV’s data.

### Key Takeaway

**Wasting ad spend on fraudulent, non-viewable or unsuitable impressions results in inefficiencies, lower returns on investment and harmful brand associations.** The good news is that there are ways to measure and protect the quality of your campaigns to help you drive impact and yield positive results. Advertisers should ensure that campaigns are measured and protected from media quality challenges, no matter how they purchase their media or where their ads run, to drive maximum impact.

## MEASURE AND PROTECT

# How DV Can Help You Measure and Protect Your Campaigns

DV Video Complete® offers the industry's most comprehensive set of video verification solutions that enable brands to authenticate the quality of their media across devices, including CTV. DV's solutions offer pre- and post-bid measurement and protection on direct campaigns across platforms, channels and formats.

DV's CTV solutions are consistently first-to-market and feature many MRC-accredited metrics and protections, so you know they're capabilities you can trust.



### Complete

Offering extensive coverage on video campaigns globally via **DV Video Complete®**



### Accredited

**MRC-accredited video** and CTV solutions across fraud, brand suitability, Fully On-Screen, DV Video Filtering and more



### Industry-Leading Solutions

DV is consistently first to market with innovative solutions, including:

- **Tagging:** Via the DV Video OmniTag
- **Fraud:** DV's CTV Fraud Lab and deterministic fraud capabilities
- **Viewability:** Scaled CTV viewability metrics and protection solutions
- **Brand Suitability:** Numerous suitability categories and app store data
- **Active Protections:** DV Video Filtering and pre-bid activation

## Achieve Clarity and Confidence in Your Digital Investment

The DV Authentic Ad™ is a proprietary metric that ensures both media quality and media effectiveness. To be counted as Authentic, an ad must be fully viewable by a real human in a brand-suitable environment and in the intended geography.

DV offers brands and advertisers comprehensive coverage on CTV – giving you clarity and confidence in your digital investment.



FRAUD

# Protect Your Investments Against Fraud

## How Fraud Affects Your Campaigns

For advertising to perform, it must be seen by real people. But CTV’s rise in popularity has attracted more fraudsters to the channel than ever before. CTV inventory is currently the number one target for fraud. In fact, DV’s 2023 Global Insights Report found that CTV fraud schemes have tripled between 2020 and 2022. DV also discovered that CTV bot fraud increased by 69 percent from 2021 to 2022.

Fraud can present a costly challenge for advertisers, especially if their campaigns are unprotected. This results in wasted ad dollars and lower efficiency in media spend.



**TRY THIS!**

To better understand the potential impact even a small amount of fraud can have, calculate 2 percent of your overall digital media spend. Now imagine losing that money from your advertising budget, as those impressions will never reach real humans.

## How Fraud Occurs

Fraud can take on many forms in CTV:



**Fake Traffic**

Fraudsters create servers that generate fake traffic from fraudulent devices to pass off as premium impressions.

**DV detects 1.7 million+ Fraudulent devices per day.**



**Fraudulent Apps**

Fraudulent apps will manipulate their environment in one or more ways by:

- Creating automated, fabricated ad calls coming from non-existent devices.
- Playing non-stop ads.
- Spoofing the “app name” parameter to appear as if they are CTV ads.

**DV has detected 4,000+ fraudulent CTV apps since 2020 that generate millions of impressions.**



**Spoofing**

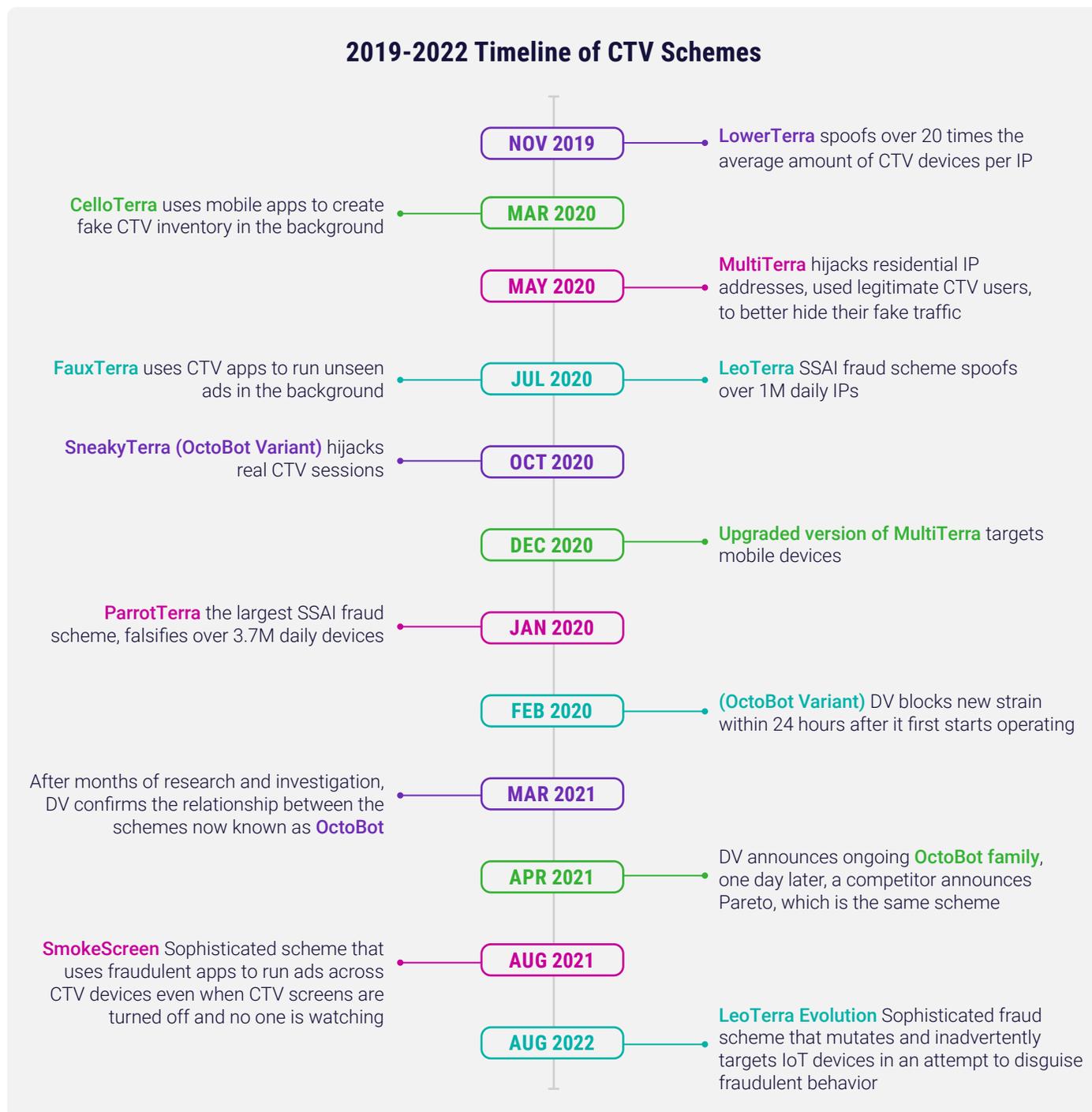
Fraudsters buy low-priced inventory and resell it as premium CTV video inventory at high CPMs.

## How You Can Mitigate Fraud in Your Campaigns

As a leader in CTV fraud detection since 2018, DV has worked diligently to reduce the impact of fraud on the CTV ecosystem. By 2019, CTV fraud began to take off.

Our solutions consist of sophisticated AI and machine learning technology, plus a dedicated team of fraud specialists, the DV Fraud Lab, that are highly trained to identify fraud schemes and stop them in their tracks. Together, this powerful combination allows clients to accurately measure and protect their campaigns against fraud, no matter what form it takes or how they buy media.

### 2019-2022 Timeline of CTV Schemes





**DID YOU KNOW?**

DV has teamed up with top CTV app stores and platforms to help eliminate thousands of fraudulent apps from the ecosystem.

**DV's Fraud Solutions for CTV Offer:**



**Scale**

- Extensive coverage where third-party measurement is accepted (which is nearly all of CTV inventory in the U.S.), plus active protections via pre-bid avoidance and DV Video Filtering.



**Expertise**

- DV's dedicated Fraud Lab has been protecting brands for over 10 years.
- Our solutions offer MRC-accredited technology.
- AI-driven models — honed over time — identify fraud at scale.
- Partnerships with leading CTV device manufacturers minimize fraudulent apps.



**Accuracy**

- Advertisers experience fewer false positives in head-to-head tests.
- Deterministic methodology ensuring accurate measurement and protection against GIVT (general invalid traffic) and SIVT (sophisticated invalid traffic).

**What Is the Difference Between GIVT and SIVT?**

According to the MRC, ad fraud is a subset of "invalid traffic" (IVT), which does not come from a human user. There are two main types of IVT: general invalid traffic (GIVT) and sophisticated invalid traffic (SIVT).

**GIVT:** Can be identified through standard means of detection and is not always malicious. This can take the form of bots/used by the IAB or search engines, unknown browsers, known fraud sites and data-center traffic and other similar non-human activity.

**SIVT (what we mean by "ad fraud"):** IVT that is difficult to detect and requires advanced analytics and/or significant human involvement to identify. This activity tries to mask its behavior and is driven by malicious, non-human actors.

## BRAND SAFETY & SUITABILITY

# Ensure Brands Appear in Safe and Suitable Environments

### How Brand Suitability Challenges Affect Your Campaigns

You may have heard the terms “brand safety” and “brand suitability” used interchangeably. While they’re related, they’re not exactly the same.

**Brand safety** helps brands identify and protect their ads against the riskiest content online — this is content that is considered unsafe for most brands.

**Brand suitability** on the other hand, enables advertisers to identify and avoid content that is specifically unsuitable to a brand’s unique preferences and settings.

Some advertisers hold the misconception that all CTV impressions are safe or suitable for their brand, but this frequently isn’t the case. In reality, anyone can create a CTV app, just as anyone can create a website on the open web. As a result, there is a wide variety of potentially harmful or inappropriate content, even in top CTV apps, including Inflammatory Politics & News and Children’s content. Unfortunately, this can result in ads playing in environments that damage a brand’s reputation.

#### Why Brand Suitability Matters: Example

A children’s clothing brand may not want an ad to show up next to content related to drugs and alcohol; though this may not necessarily be considered “unsafe” for all brands.

According to a 2019 DV-Harris Poll study, **two-thirds of consumers** would likely stop using a brand or product if they viewed the brand’s digital ad next to false, objectionable or inflammatory content. It is essential for advertisers to understand the source and quality of the inventory they are buying and leverage the proper brand safety and suitability controls to protect their brands and investments.



of consumers would likely stop using a brand or product if they viewed the brand’s digital ad next to false, objectionable or inflammatory content.

## How Brand Suitability Challenges Occur

DV has classified thousands of CTV apps across DV's 90+ brand suitability categories and tiers. Many of these apps include content that most brands would categorize as unsafe or unsuitable such as:

- Inflammatory Politics & News
- Alcohol and Illicit Drugs
- Adult and Sexual Activity
- Pirated Content
- Children (which may not be suitable for adult-related brands)
- Screensavers (meant to be played when no one is watching TV)

## How You Can Keep Your Brand's Reputation Safe

DV offers solutions to help measure brand safety and suitability violations, as well as protect your brand's reputation on CTV at scale.

DV's brand safety and suitability solutions for CTV offer:



### Coverage

- 90+ brand safety and suitability categories and tiers – more than any verification provider – aligned with GARM standards at the app level
- Uniquely developed for scale, covering over 93 percent of all CTV impressions that provide app transparency
- App store data, including app store categories, star ratings and age ratings
- Inclusion/exclusion lists to give you granular control over where your ads run
- Access measurement and protection solutions with pre-bid avoidance and DV Video Filtering



### Leadership

- The first to align with 4As/GARM brand safety floor and brand suitability framework
- The only MRC-accredited brand suitability solution
- First-to-market with a brand suitability solution in CTV



### Expertise

- Led by a team of classification and linguistic experts
- Content classification at scale leveraging AI-driven semantic science
- App transparency and universal app names, which allow for more consistent measurement and protection across environments

## VIEWABILITY

# Ensure Your Campaigns Can Make an Impact

### How Viewability Challenges Affect Your Campaigns

How does an ad reach its full potential if no one ever sees it? Ads are crucial for raising customer awareness of a new product or service to change someone’s perception of a brand. But if the ads are never seen, they never get the chance to make that impact for your business. That’s why viewability is an essential metric for advertisers to track across all digital media.

### How Viewability Challenges Happen on CTV

Many advertisers believe that CTV ads are viewable by default, but that is not the case. In fact, DV discovered that CTV ads frequently play when the TV screen is turned off, ads can play partially off screen and viewers can drop off and exit out of the program as an ad begins to play. Furthermore, DV was the first to uncover that more than one in three CTV impressions serve into environments that continue to fire ads when the TV is turned off. This means that advertisers who serve into these environments are wasting money on impressions that never got the chance to be seen.



MORE THAN  
**1 IN 3**

CTV impressions serve into environments that continue to fire ads when the TV is turned off.

### How to Ensure Your Campaigns Are Viewable

#### CTV Viewability Measurement

DV’s CTV Viewability measurement solution allows advertisers to make better-informed campaign optimizations and increase budget efficiencies by unlocking measurement parity across devices.

**To be considered viewable, CTV ads must play:**



in environments that are  
**Fully On-Screen certified**



**for 2 or more seconds,**  
as determined by quartile measurement

## Fully On-Screen Certification

Fully On-Screen Certification identifies which environments, or app and device combinations, display ads 100 percent on-screen only when the TV is turned on.

### CTV Fully On-Screen Pre-Bid Activation

To complement CTV viewability measurement, DV offers Fully On-Screen pre-bid activation to help advertisers align their programmatic campaigns with Fully On-Screen certified inventory. This means that impressions are certified to be from CTV environments that deliver ads fully on-screen when the TV screen is turned on.

DV's suite of solutions that solve for viewability challenges offer:



#### Coverage

- DV's automated Fully On-Screen testing process allows for scaled certification, covering 88% of CTV impressions that provide app transparency.



#### Innovation

- DV has consistently been first to develop solutions to solve for viewability challenges with the releases of Fully On-Screen measurement, Fully On-Screen pre-bid activation and CTV Viewability measurement at scale.



#### Reliability

- DV's Fully On-Screen solution, including quartile measurement, are MRC-accredited.

**GEO**

# Ensure Your Campaigns Serve into the Intended Geography

## How Geographical Relevance Challenges Affect Your Campaigns

Have you ever been served an ad meant for a different geographical location, knowing that the services weren't available to you? Alternatively, have you seen an ad in an entirely different language from the one that is most commonly spoken in your region? In either of these cases, you would have likely ignored the ad or navigated away from the content on which it was displayed entirely. Either way, the impression would have been wasted because it didn't reach its intended audience.

## How Geographical Relevance Challenges Happen on CTV

Much like other media quality challenges, ads can appear in an unintended geography for a variety of reasons, including fraud. It's possible that some impressions from unintended geographies are bought in error, but they may also be disguised as impressions from intended geographies by fraudsters. This can occur on campaigns purchased on the open market, as well as direct campaigns – especially those that run on extension networks.

## How to Ensure Your Campaigns Are in the Intended Geography

DV offers a suite of solutions that allow you to verify whether your CTV campaigns are appearing in the intended geography. DV's geo solutions offer:



### Coverage

- Measure globally at the country, region and DMA/MMA level and within the U.S. at the state and zipcode level.



### Precision

- Combine entities to create custom geo fences.



### Protection

- Use DV Video Filtering to protect against geo infractions on CTV.

MEDIA QUALITY ON CTV

# How Advertisers Can Further Enhance Media Quality on CTV

Although DV’s solutions can help clients improve quality for the vast majority of their CTV impressions, there are still industry-level limitations that pose a threat to inventory quality overall. The good news is that there are steps advertisers can take to increase transparency in CTV.

## Here’s How You Can Further Improve Your Media Quality On CTV

**1 Get Full CTV App and Video-Level Transparency**  
 Request app and video-level transparency across programmatic and direct campaigns from publishers, enabled through third-party verification providers.

**2 Use Advertiser-Side Protections**  
 Request that all publishers permit advertiser-side protections, such as DV Video Filtering, and be supported as table stakes across campaigns, whether purchased programmatically or directly.

**3 Resolve the TV Off Issues in CTV**  
 Encourage publisher partners to proactively ensure that their apps pause themselves after the TV screen is turned off and provide app bundle IDs to DV for viewability measurement.

**4 Retain Independent Third-Party Measurement**  
 To ensure a fair value exchange in CTV campaigns, DV recommends only partnering with truly independent third-party measurement providers.

## DV'S TAGGING TECHNOLOGY

# The DV Video OmniTag

The DV Video Omnitag is DV's proprietary VAST tag that enables most of DV's measurement and protection solutions.

### The DV Video OmniTag Enables



#### Measurement Across:

- Across all formats and devices, including CTV, desktop and mobile
- Fraud
- Brand safety and suitability
- CTV viewability and Fully On-Screen
- Geo



#### Protection via DV Video

**Filtering**, which protects campaigns everywhere, even where blocking is not supported



### Our VAST tag also offers a host of unique technical features, such as:

- Integrating into multiple verification methods and not requiring VPAID
- Being compatible with any VAST-supported environments and environments that don't support VPAID
- Working no matter how you buy your media – whether directly or programmatically

## LEARN MORE

If you'd like to learn more about DV's solutions please contact [Sales@DoubleVerify.com](mailto:Sales@DoubleVerify.com).



We Make the Internet **Stronger, Safer** and **More Secure**

---

[www.DoubleVerify.com](http://www.DoubleVerify.com)