Solving the Measurement Challenge

A lack of standardized measurement for streaming TV has made it challenging for programmers and distributors to fully realize the ad revenue opportunity of digital TV distribution. Both Nielsen and comScore have recently enhanced their measurement offerings to address these challenges by doing more census-based measurement for digital platforms and providing a combined view of audiences across traditional linear TV and digital platforms. Adobe has helped to enable these enhancements with the release of Adobe Certified Metrics, which makes implementation of census measurement easier while also tying it to the data that media companies are already collecting with Adobe products. This provides a census foundation while also filling gaps across new digital platforms.

At the same time, custom audience data advertising products are starting to gain some buzz and traction in the market. These solutions typically involve the advertiser onboarding its first-party data, which can be indexed against TV content and traditional ratings. OpenAP is a recently announced TV industry consortium that seeks to standardize parts of that process to help it scale better across media buyers and sellers. Adobe is highly supportive of the goals and capabilities expressed by OpenAP. With Adobe Certified Metrics, our focus on census-based data is both an important step forward for third-party audience measurement and a valuable foundation for supporting evolving methodologies for transacting media.

In this white paper, we'll outline approaches to solving the measurement challenge and provide an overview of when to apply different measurement capabilities depending on context. We'll also look at where Adobe's integration with measurement partners like Nielsen and comScore can help.
There are two measurement options for streaming TV that are growing in popularity:

1. Traditional ratings while delivering ads just as they are delivered on traditional TV.
2. Digital ratings compatible with delivering digital video ads with dynamic ad insertion (DAI) technology.

These two measurement options make it easier to monetize streaming TV with advertising. As a result, TV programmers and distributors can ramp up their streaming TV investments and promote consumer adoption of ad-supported streaming TV services.

Regardless of which measurement option is utilized, there are two primary reasons why implementation is easier for TV programmers and distributors that use Adobe Primetime and Adobe Analytics. First, Adobe Analytics for Video has released Adobe Certified Metrics, the certified video implementation through the Adobe SDK that can be used as the census input to audience measurement partners. This SDK fully integrates comScore and Nielsen measurement through the video enablement implementation stage in Adobe Analytics. Second, the Adobe Primetime TVSDK is pre-integrated to fully support the Adobe Certified Metrics SDK. With this, video measurement is enabled by configuration rather than code. Adobe Certified Metrics customers can use a single implementation to support both Nielsen and comScore video measurement, dramatically streamlining their ability to deploy measurement across a wide range of digital platforms.

The first step is to understand these two measurement models and decide which model is appropriate for specific digital applications and contexts.
Measuring with Traditional Ratings

The first way to measure streaming TV is to use traditional ratings while delivering ads just as they are delivered on linear TV.

**Traditional ratings can now account for streaming TV**

Traditional ratings estimate the percentage of the total audience that watches a given show or network. The ratings are generated for live viewing, live viewing plus any views that happen within three days (C3) and live viewing plus any views that happen within seven days (C7). Media buyers and sellers are very comfortable transacting with these ratings.

Traditional ratings aren’t as traditional as they used to be, because they can now factor in streaming TV viewing. This can be done by flagging digital content that follows the linear ad model. This crediting to linear measurement is managed by the inclusion of metadata that explicitly flags the content appropriately as linear or nonlinear. Both Nielsen and comScore support a method to flag content for the linear ad model for this purpose.

Nicelsen’s Digital in TV Ratings (DTVR) enables census digital measurement of linear TV content distributed on leading digital content platforms (browser, iOS, Android) where the content stream maintains the same ads as traditional TV. In other words, DAI and DTVR are mutually exclusive.
DTVR provides digital-specific measurement and the ability to roll the crediting into the Nielsen TV Rating for that content.

Implementing DTVR is easier for Adobe media customers using Adobe Analytics and the new Adobe Certified Metrics SDK. The Adobe SDK embeds the Nielsen SDK and fully supports DTVR measurement such that Adobe customers can just implement it through their Adobe Video Analytics implementation on web, iOS and Android. As noted above, Adobe Primetime TVSDK has a pre-integrated release that fully supports the Certified Metrics SDK. The Adobe Primetime TVSDK also handles surfacing the ID3 tag-based digital watermark data to the Certified Metrics SDK.

Panel-based ratings have long been the foundation for linear TV measurement. Panels are also employed by both Nielsen and comScore’s TV measurement. Panels comprise individuals and households recruited and compensated by ratings companies to permit detailed measurement of content consumption and collection of demographic information.

The panel-based approach to measurement can be improved with a hybrid approach that uses both panel and census data. This solves for a weakness of the panel-based approach whereby the sample for a specific target audience may be too small to impart statistical significance. The more granular the desired audience, the less likely it is that the Nielsen panel will be statistically significant. As such, panels can miss consumption of some niche or region-specific content. Adding census data to the mix improves the overall accuracy of measurement, especially for more niche content, because it captures all digital viewing. Thus, the hybrid (census + panel) approach continues to be the foundation of the methodology for digital audience measurement by providers like Nielsen and comScore. comScore’s linear TV measurement, now enhanced through the acquisition of Rentrak, also includes a census component. comScore licenses set-top-box (STB) data sets from pay-TV operators, showing how census data can help traditional STB TV ratings as well.
Integrated measurement uses the same watermarks in traditional linear and digital linear streams

To get linear ratings credit from Nielsen, programmers deploy digital content that includes the Nielsen watermark in the HLS digital stream. The watermark is a series of sounds that play within each TV program being measured; the sounds are inaudible to the human ear but audible to Nielsen People Meters. Similarly, comScore has historically licensed components of Nielsen’s Portable People Meter data set and used that with proprietary metadata harmonization systems to augment this TV panel data.

When deploying the watermark, programmers encode it into their digital linear streams just as they do with their traditional TV distribution. However, they also add a digital specific ID3 tag representation of the watermark that can be tracked by the digital player. The system works on two levels:

a) By using Nielsen People Meters to listen for the watermark audio tones across digital and traditional TV to produce a unified, panel-based rating.

b) By augmenting the scale of measurement with census digital data collection from digital devices (except for those opted out) instrumented for DTVR that encounter the ID3 tag-based watermark. With this option, digital views in live, C3 and C7 windows can be included within traditional TV ratings.

In short, watermarks allow the Nielsen People Meters to pick up on streaming TV viewing the same way it would pick up on traditional TV viewing. At the same time, the ID3 tag component of the watermark expands measurement beyond the panel-based capabilities of the People Meters to the census-based capabilities of Nielsen digital measurement, which is now easy to implement as part of Adobe Analytics.

Adobe Federated Analytics creates transparency on measurement of ads

Within Adobe Analytics, there’s a very useful capability called Federated Analytics that works well in the context of Nielsen DTVR. Federated Analytics enables a TV programmer to have their distributors, such as pay-TV operators, share census data from digital devices directly into the TV programmer’s analytics reports. Federated Analytics puts configuration controls in the hands of the owner of the site or app so they can enable data sharing and apply rules that align with their partnership agreements.

In the context of Nielsen DTVR, TV programmers can encourage their distribution partners to implement DTVR measurement while also implementing Adobe Federated Analytics. The result will be more complete census coverage in the Nielsen DTVR ratings data, giving the content programmer direct visibility into the census data distributors are providing to Nielsen. That direct census data can be used to analyze what’s being reported to Nielsen while also augmenting the audience profile insights in Adobe Analytics to include all the digital distribution endpoints where content is consumed. The data can be especially valuable for the planning, transacting, and executing of the latest data ad products.

Resources for measuring with traditional ratings

Nielsen Announces MRC Accreditation of Digital in TV Ratings
Content Coding Technology That Includes Carriage of Watermarks
Measuring Video in Adobe Analytics
DTVR – Implementation Guide via Adobe Video Analytics
OpenAP announcement news
comScore to Participate in OpenAP Initiative through Use of Its Advanced TV Audience Ratings Data
Why measure streaming TV with traditional ratings?

There are several reasons to measure streaming TV with traditional ratings:

- Traditional ratings have fit into how advertisers have bought and measured TV inventory for decades.
- It ensures that live audiences on digital content are additive instead of competing against your ratings.
- Implementation is very easy to accomplish.

That said, traditional ratings aren’t the only way to measure streaming TV viewing. It can also be measured with digital ratings.

Measuring with Digital Ratings

The other way to measure streaming TV is to use digital ratings, which can be used when delivering digital video ads with DAI technology or beyond the linear crediting window, typically three or seven days after the original air date.

Digital ratings now can credit streaming TV content

Nielsen Digital Content Ratings (DCR), powered by Adobe, is Nielsen’s digital ratings system that gives ratings credit to streaming TV content, whether that content is monetized via DAI or ad-free and monetized through other models. It provides a common currency for media planning against digital ad inventory and allows media buyers to scale their investment in targeted advertising consistently across media publishers for wide-reach campaigns. Since it is comparable to traditional ratings in format, it provides advertisers with a familiar way to value content inventory.

Nielsen DCR, when deployed via the Adobe-Nielsen joint solution, uses Adobe Certified Metrics as the single source of truth for census metrics of digital video consumption. Adobe customers benefit from a higher level of transparency on the census metrics behind their Nielsen rating. This builds more trust and understanding in the data while also aligning with data used for analysis, targeting and optimization in the Adobe Experience Cloud and beyond.

Adobe Certified Metrics is also integrated with comScore’s Cross-Platform and Digital Video Products, which include comScore Video Metrix Multi-Platform, Xmedia and Extended TV, so that the Adobe Certified Metrics SDK can be the single implementation that is powering the comScore ratings. The Adobe-comScore integration also supports connected devices such as Apple TV, Roku, Fire TV and Chromecast. For the comScore integration, the Certified Metrics SDK sends “postback” data directly to comScore on a regular interval from the client while also sending Adobe Certified Metrics summary data in a backend data feed. Because the comScore integration doesn’t rely on an embedded comScore SDK, customers can configure the comScore integration using the normal Adobe Analytics for Video SDK. Customers interested in doing both comScore and Nielsen would use the Adobe Certified Metrics SDK.
Note: The comScore integration using Adobe Certified Metrics is currently still in active beta testing with several leading media companies.

**How does a digital content rating differ from a digital ad rating?**

Digital ratings providers have previously produced ratings specific to the ads themselves, such as Nielsen Digital Ad Ratings (DAR) and comScore validated Campaign Essentials (vCE) so that they can be tracked and credited independent of the content. Because digital video developed around audience targeting and DAI, ad-specific ratings were the first to be established as a means to validate on-target delivery of ad campaigns against the target audience. What’s been missing is a comparable measurement currency for publishers that can be used in media planning and forecasting against the anticipated audience. Without content ratings, it’s been harder to plan large ad campaign investments. Nielsen DCR and comScore’s Cross-Platform and Digital Video Products are designed to solve that media-planning currency gap for digital content that uses DAI for monetization. With consistent audience measurement across media publishers, advertisers will be able to make larger-scale ad buys against standard audience metrics on digital TV content and thus grow the overall scale for ad-supported streaming TV.

**Dynamic ad insertion drives targeted digital video ad experiences**

DAI technology makes it possible to target video ads to very specific, custom audience segments on behalf of advertisers. DAI makes ads more relevant and more impactful, thereby increasing the value of each ad. As a result, programmers and distributors have more room to balance the need to monetize with the need to provide a great user experience with minimal ad loads. With DAI, advertisers benefit from the specific audience segments they can now target—in an ad buy with minimal waste. DAI is also good for viewers because it matches ads to a person’s interests.

DAI can be implemented with Adobe Primetime via its support for client-side and server-side ad insertion into live, linear and VOD content across a wide range of digital devices. Customers of Adobe Primetime and Adobe Analytics also benefit from Adobe’s partnership with Nielsen and comScore, which provides digital ratings measurement for content monetized with dynamic ads. This partnership allows publishers to power their digital ratings with the same data that is collected into Adobe Analytics.
Complete census data insights with Adobe Experience Cloud and Federated Analytics

Gaining census data insights is one of the benefits of implementing digital content ratings via Adobe. This census data becomes actionable on Adobe platforms. For example, it can be used for ad targeting with other activation solutions within Adobe Marketing Cloud, including Adobe Primetime. Audience targeting can then ensure relevant ads are served to each individual to improve the end-user ad experience while optimizing impact and revenue for the ad buyer and ad seller.

Additional benefits of Federated Analytics

Programmers can encourage their distribution partners to implement measurement for the DAI ad model, as well. The benefits of Federated Analytics also apply here by enabling content programmers to evaluate census data shared to measurement partners like Nielsen and comScore while also retaining that data for their own audience insights.

Resources for measuring with digital ratings

Nielsen DCR
comScore Video Metrix
comScore Xmedia
Adobe Federated Analytics
Adobe Primetime’s client-side and server-side DAI
Nielsen Digital Ad Ratings (DAR)
comScore validated Campaign Essentials (vCE)

Why measure streaming TV with digital ratings?

There are many reasons for publishers to measure streaming TV with digital ratings:

- It provides measurement for targeted advertising so that DAI can thrive with standard metrics to enable buying/selling of inventory.
- It unleashes the benefits of DAI, including greater control over the ad experience, more relevant ads for viewers, optimized ad impact for the ad buyer and optimized ad revenue for the ad seller.
- It provides measurement for content viewed beyond the linear crediting window (seven days), which is especially important when tracking how content is consumed digitally.

That said, digital ratings aren’t the only way to measure streaming TV viewing. It can also be measured in the same way that linear TV is measured. In fact, programmers and distributors can use both measurement options by matching the method of measurement for each stream to capture a more complete picture of the total audience across screens.
How Will You Measure Streaming TV Viewing?

You’ve learned about two measurement options for streaming TV that are growing in popularity:

1. Traditional ratings while delivering ads just as they are delivered on traditional TV.
2. Digital ratings compatible with delivering digital video ads with dynamic ad insertion (DAI) technology.

For both approaches, Adobe has productized the client-side integration to streamline implementation and deployment using a combined Certified Metrics SDK to help customers more easily deploy Nielsen and comScore measurement. For Nielsen DCR, Adobe Certified Metrics are used to provide a single source of truth in the census data that powers the audience ratings.

You’ve also learned about using Adobe Federated Analytics to aggregate census digital measurement from your affiliate partners directly for yourself.

Here’s a quick snapshot of these standardized measurement options for streaming TV:

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<th>Compatible with DAI</th>
<th>Uses watermarks</th>
<th>Compatible with Adobe Federated Analytics</th>
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<tr>
<td>Measuring with Digital Ratings</td>
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<tr>
<td>Measuring with Traditional Ratings</td>
<td>No</td>
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If you provide TV Everywhere or OTT service, and sell advertising, your next step is to implement the measurement methodologies that align most closely with your revenue model. This may vary by the specific application, content or crediting window. At Adobe, we’re excited to work with you to discover how better measurement can help you grow your revenue by providing you with the flexibility to align with new and established models for measurement and monetization.
Glossary of Ratings

Currency for buying and selling advertising inventory

Ratings measurement is used for media planning and media transactions on TV content. Because it’s standardized across all TV content, media buyers can make investments across media publishers to achieve their campaign objectives. This allows investments to scale to large national audiences. We went over some of these above, but want to provide you with a glossary of ratings terminology to show how the digital measurement problem is being solved.

- **Nielsen TV Ratings** is the traditional audience measurement currency for TV advertising. It’s based on panel measurement, which produces audience ratings for reach and frequency, as well as GRPs with detailed demographics. Nielsen TV Ratings measures content and ads together because historically dynamic ad insertion was not possible for traditional linear television. TV Ratings also includes VOD and DVR measurement on the STB when content is viewed within the live, C3 or C7 distribution window.

- **Nielsen Digital in TV Ratings (DTVR)** is the digital component of Nielsen TV Ratings that enables census digital measurement of linear TV content distributed on leading digital content platforms (browser, iOS, Android) where the content stream maintains the same ads as traditional TV. DTVR provides digital-specific measurement and the ability to roll the crediting into the Nielsen TV Rating for that content. Reported demographics are derived through integrations with leading data providers in addition to Nielsen’s digital panel data.

- **Nielsen Digital Content Ratings (DCR)** enables census measurement of digital devices (PC, smartphone, tablet, connected devices) for video and text content. DCR measures content developed for digital-only or linear TV content with dynamic ad model or no ads. Nielsen demographics are assigned the same as with DTVR.

- **Nielsen Total Audience** is Nielsen’s measurement framework consisting of products to measure consumer media exposure across all platforms, making sure they have comparable measurements, measuring content and ads separately and providing ratings for all media types. Nielsen Total Content Ratings is the content component of the Nielsen Total Audience Framework, which provides deduplicated content measured through Nielsen TV Ratings (including DTVR), with DCR to provide one number for content across all linear and digital platforms regardless of the advertising model used within the content.
• **Nielsen Digital Ad Ratings (DAR)** is digital advertising measurement across PCs, tablets, smartphones and connected devices. DAR measures ads independent of content, which is essential for the dynamic ad insertion model where video ads can be inserted into content in real-time. DAR is typically deployed via ad-server tag integration. Nielsen demographics are assigned in the same way as described above for DTVR. DAR was actually the first product to introduce Nielsen's hybrid census/panel audience measurement that uses data enrichment partners to improve the accuracy of demographics with additional scale of census-level integration with partners such as Facebook. This methodology is now used across Nielsen digital products (DTVR, DCR and DAR).

• **comScore Video Metrix Multi-Platform** delivers a single, unduplicated measurement of digital video consumption across smartphones, tablets, desktops and OTT devices. Premium video content and advertising can be planned, bought and sold across platforms using TV-comparable GRP metrics that measure audience engagement. Measure the Total Digital Video Reach for your video content. Understand audience engagement across platforms. Benchmark against competitors. Adobe Certified Metrics supports sending census video advertising and content data to comScore to power digital metrics in these comScore products when an Adobe customer enables the integration.

• **comScore Xmedia** is the industry's first-ever cross-platform measurement tool that delivers unduplicated audience reach, engagement and consumption overlap across both TV and digital media for cable and broadcast networks, digital publishers and agencies. Xmedia addresses the TV everywhere measurement challenge and fills in the current measurement gaps by counting TV viewing on digital platforms and reporting unduplicated audience reach alongside traditional TV audience metrics. It also brings together TV/video content with websites & apps for a unified view of audiences across both video and display based content.

• **comScore Extended TV** is a TV-centric cross-platform measurement tool from comScore that delivers unduplicated reach and ratings for all video consumption. Extended TV helps broadcast and cable networks to know their true cross-platform reach and prove the value of their audiences across linear, DVR, video on demand, desktop, mobile and OTT platforms.

• **comScore validated Campaign Essentials (vCE)** is online advertising measurement. vCE measures ads independent of content, so it supports the dynamic ad insertion model where video ads can be inserted into content in real-time. vCE is typically deployed via ad server tag integration. Adobe Certified Metrics supports sending census video ad data to comScore that is used to help power vCE metrics when an Adobe customer enables the integration. comScore demographics for vCE are modeled in the same way as described above for Video Metrix.

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**About Adobe Analytics**

Adobe Analytics lets you discover high-value audiences and power customer intelligence for your business. The platform on which Analytics is built eliminates data silos, making key data insights available to all stakeholders.

**About Adobe Primetime**

Adobe Primetime is a multiscreen TV platform for live, linear and VOD programming. Adobe Primetime’s engagement, personalization and monetization capabilities include TVSDK for multiscreen playback, recommendations, hosted multi-DRM, authentication, dynamic ad insertion (DAI), concurrency monitoring and the TV media management (TVMM) ad planning platform. Customers can deploy Adobe Primetime’s modular components in flexible configurations that support a broad range of business models while providing audiences with amazing viewing experiences. Adobe Primetime delivers greater revenue from ad sales and subscriptions, lower operating costs and loyal, engaged audiences.