

AKAMAI WHITE PAPER

The Power of Media Analytics

Data-Driven Insights for Boosting
Audience Engagement



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Introduction

Online video analytics has historically been a challenging and costly endeavor, made complex by the continually evolving landscape of video formats, platforms, devices and consumption patterns. As a result, many companies are left operating without media analytics capabilities. But given the tremendous—and highly competitive—opportunity that Internet video represents today, publishers can no longer afford to fly blind.

In this whitepaper, we look at online video's dramatic growth and examine shifts in how audiences are consuming and interacting with video. In this highly dynamic marketplace, analytics can be the publisher's most powerful weapon, delivering actionable insight into audience behaviors and the forces that drive them. This whitepaper will look at some examples of how data can help publishers and provide recommendations on key criteria for evaluating and implementing analytics solutions.

The Online Video Landscape

Rapid Evolution

In just a few short years, video has exploded onto the Internet, grabbing amazing mindshare and changing the way people shop, learn, play and communicate. In 2002, the 81,000 simultaneous viewers of Steve Jobs' MacWorld keynote speech created a record-breaking online video event that peaked at roughly 16 Gbps of traffic. Just a short decade later, video consumption has increased by order of magnitude, with peak traffic rates reaching more than 1.4 Tbps during a 2012 football championship, for example. The same year, Akamai delivered an aggregate of over 1 billion videos for a global sporting event, representing roughly 9,500 years worth of video viewed in a two-week period.

Today, comScore estimates that 87% of U.S. Internet users—over 182 million people—watch online video regularly, consuming 41 billion videos — or roughly 21 hours per viewer — each month. Globally, about 74% of Internet users watch video online at least once a month. By 2016, Cisco predicts that 1.2 million minutes of video — the equivalent of more than two years' worth time — will travel the Internet every second.

GLOBAL ONLINE CONSUMERS & MULTI-SCREEN MEDIA TODAY AND TOMORROW



Trends and Opportunities

Despite its meteoric adoption rate over the past decade, we are still at the early stages in terms of the online video market, with much of the potential still untapped. Growth in this burgeoning market is currently driven by three key trends:

1. Growing availability of premium content

Today's top media producers are making more of their content available online, both live and on-demand, either through their own sites or through third-party services like Netflix, Hulu or Amazon Instant Video. TV Everywhere, Ultraviolet and other industry initiatives are facilitating the trend by making it easier for companies to monetize their assets while enabling a more seamless consumer experience. This wide array of premium offerings—delivered in high-definition video anytime,

anywhere—is changing media consumption patterns by attracting more and more people to go online for entertainment. While “cord cutters” are still a minority, “cord splitters” are becoming mainstream. From 2011 to 2012, the leading online video services saw paid viewers increase by more than 50% in just one year. Moreover, IHS estimated that in 2012, Americans would pay for and watch more movies online than on physical DVDs and Blu-ray discs combined.

2. Convergence of “lean-in” and “lean-back”

As the connected living room becomes a reality through smart TVs, game consoles and set-top boxes, the line between online and “offline” media consumption disappears, enabling publishers to engage audiences with enhanced television experiences that are more personalized and more interactive. Tablets and smartphones further contribute to this trend, offering possibilities such as alternate viewing angles, on-demand instant replays and social sharing capabilities on a second screen. Consumers are ready: a 2012 Nielsen survey found that 88% of tablet owners and 86% of smartphone owners already use their mobile devices while watching TV.

3. Explosion of mobile devices worldwide

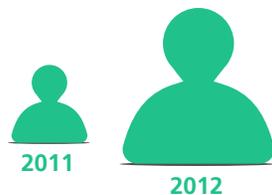
In 2012, only 5 years after the iPhone’s introduction, over 1 billion people owned smartphones— it took landlines over a century to reach that number. Tablets are growing even more rapidly, overtaking desktop and laptop shipments globally less than three years after the iPad’s introduction. Video is popular among these mobile device users, with 56% of global Internet users watching video via their mobile phone at least once a month and half that number consuming mobile video daily. This leads to estimates that global mobile data traffic will increase 18-fold between 2011 and 2016, driven in large part by video consumption.

Given its young stature, online video currently accounts for less than 3% of the television advertising market. But the trends above highlight the massive velocity of change: online video is poised to disrupt this market and command a much larger slice of television advertising’s \$163 billion pie. To capitalize on this massive opportunity, publishers need to unlock a deeper and richer understanding of their audiences than ever before—and online media analytics is the key.

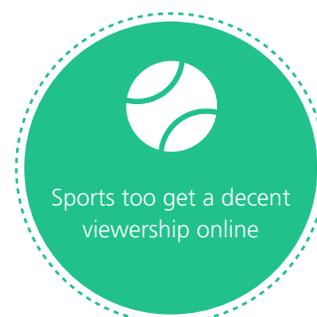
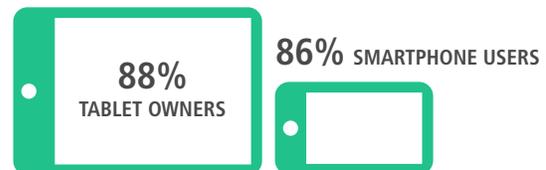
The Power of Online Media Analytics

Television programming has always been driven by the numbers. Ratings determine whether shows live or die and they control the flow of hundreds of millions of dollars of TV advertising revenue. Yet traditional TV ratings are relatively crude. The data-gathering process requires volunteer individuals to faithfully record all of their viewing activity into little black boxes. Moreover, the numbers are based on a small sampling of the overall audience and can suffer from sampling biases.

PAID VIEWERS
INCREASED BY 50%



WATCH TV ON:



In contrast, the online world enables viewer data that is both more accurate and more comprehensive. It is possible to capture detailed information for every single viewing, in real time, in a way that is seamless to the user. Publishers can capture accurate data about audiences and engagement, including where users are coming from, what content they are viewing (and for how long), and what advertisements they've watched or skipped. They can even capture data for viewing experiences that span multiple devices.

This allows publishers far more insight into their audiences than they've ever had, which in turn enables them to make better business decisions. Like the web world, where data-driven strategies inform everything from pricing and product recommendations to design, publishers who are able to effectively leverage online media analytics will enjoy substantial competitive advantages. Good data means publishers can deliver more targeted programming, improve viewer experiences and optimize ad placement—ultimately leading to larger audiences and revenue.

Measuring the Key Drivers of Audience Engagement

Whether monetization comes from advertising, subscription, pay-per-view or other models, the ability to identify and deliver what drives audience engagement is fundamental to success. By measuring and understanding drivers in three key areas—content, packaging and performance—publishers can optimize their offerings to increase audience engagement, loyalty and reach.

Content

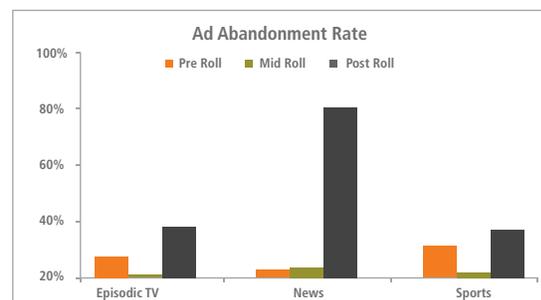
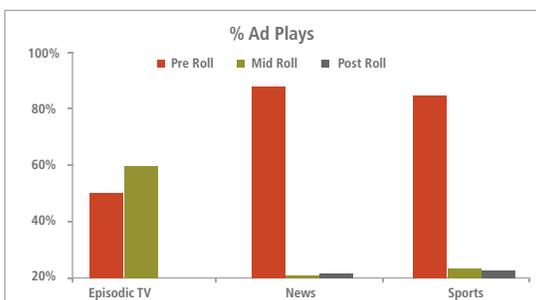
Across the Internet, news and episodic television are the two biggest drivers of online audience engagement today. Analysis of 445 million minutes' worth of data from a diverse cross-section of publishers on the Akamai network in 2012 reveals that the two categories combined comprise 82% of all online viewing. Episodic television receives an average of 10 daily plays totaling 70 minutes of viewing time per user.

While general trends like these are interesting, for publishers it is more important to be able to identify patterns like these with respect to their own content and content categories. Media analytics can enable publishers to understand not just how many views each title attracted and how long viewers watched each video, but also how the viewings break down across different dimensions such as geography, device or time of day. In addition, it can help publishers see which titles are best at driving repeat viewership and which are helping them grow their audiences.

Ultimately, media analytics allows publishers to test programming strategies and identify what is and isn't working—enabling them to design compelling and relevant programming that maximizes revenues, increases their reach and drives greater audience loyalty.

How does ad placement affect engagement?

- Viewers watched an average of **8 ads** per play
- Pre-roll abandonment is **5X** mid-roll abandonment.
- Pre-roll abandonment is particularly high for **sports** (roughly 3X other content)



Packaging

Packaging represents the different factors that are critical to the successful distribution and monetization of online video content. This includes deciding what devices and platforms to support, what distribution and syndication strategies to employ, and how to optimize pricing or ad placement. Analytics can help publishers make the right choices in these strategic decisions.

For example, media analytics can help publishers answer questions about how their content is being discovered, which of their distribution channels are most effective, and whether their social media or search marketing campaigns are paying off. This allows publishers to prioritize resources between different distribution, syndication and marketing strategies. Similarly, analytics can help publishers decide which devices and channels to optimize for by providing insight into what types of devices and network speeds their audiences have.

Media analytics can also help optimize monetization strategies. For example, it can help publishers determine how many ads to show in a video and where to place them by revealing how these factors affect bounce rates and revenue. Across the Akamai data set, for example, audiences viewed an average of 8 ads per play. While pre-roll ads were most common, they also drove an abandonment rate that was five times higher than mid-roll advertising. Not surprisingly, post-roll ads had the highest abandonment rates.

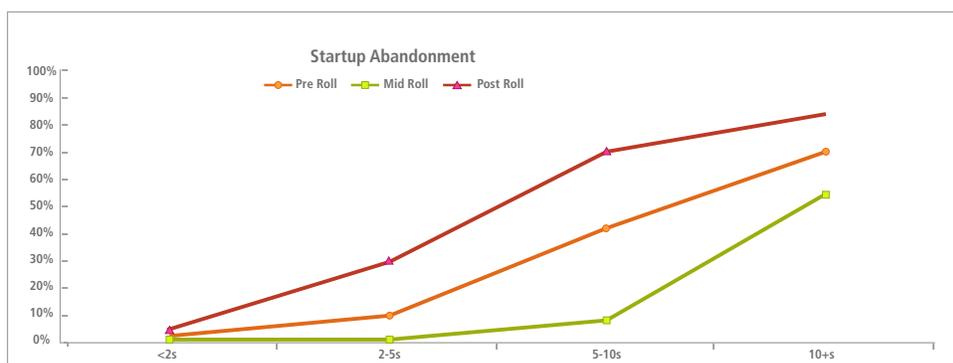
A closer look at the data also shows that ad placement effects vary across different types of content. In sports content, pre-roll abandonments were roughly three times the average, with a 17% abandonment rate. But only 2% of viewers abandoned during sports mid-roll ads, indicating high levels of audience engagement with the content once they had begun to watch. On the other hand, news videos had low pre-roll and mid-roll abandonment rates, but a very high 86% post-roll abandonment rate in contrast to a 25% abandonment rate for post-roll sports ads. This suggests revenues can be maximized by using different ad placement strategies for different types of content.

The ability to slice data across multiple dimensions underscores the power of an effective media analytics solution. By giving publishers the ability to evaluate the ad placement strategies across different types of content, devices, geographies, times of day or any combination of the above, media analytics enables them to place ads in a way that maximizes revenues while retaining their audiences. In a truly data-driven environment, these ad placement policies can even be automatically driven in real time, through programmatic access to an analytics feed.

Quality

Playback performance quality is the final key component in driving viewer engagement. There are four key performance metrics for quality: availability, startup time, rebuffering delays and video bit rate. Media analytics can help publishers identify their audience's tolerance threshold for each metric—that is, the tipping point at which audience engagement behaviors begin to change.

How do startup delays affect abandonment?



Sports viewers have the least patience when it comes to startup delays and pre-roll advertising.

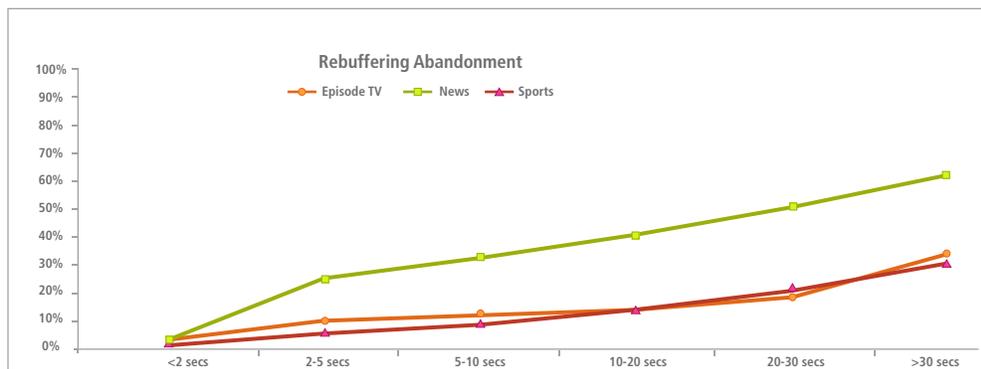
- Abandonment jumps **5X** for sports content when startup takes more than **2s**.
- Abandonment rates for sports are roughly **60% higher** than for other content.
- Startup delays are least likely to affect news viewers

These thresholds may be different for different types of content or devices. Akamai's data shows, for example, that sports audiences are the least tolerant when it comes to startup delays. With sports, abandonment is five times higher when delays are longer than two seconds, underscoring how critical it is to minimize startup time for this type of content. News viewers, on the other hand, tend to be the most patient when it comes to startup delays. These results echo those of the pre-roll ad data: when it comes to delaying the start of content — either with an ad or with buffering, news viewers are the most patient while sports viewers are the least.

News viewers' patience does not last, however. When it comes to mid-stream rebuffering delays, those watching news content abandon three times more often than other audiences. When rebuffering lasts more than two seconds per minute of content, news viewer abandonment jumps 13 times higher.

By enabling publishers to pinpoint key performance thresholds for their own categories of content, media analytics helps quantify the business costs of inferior performance and assess the ROI of providing a better viewing experience through advanced capabilities like adaptive streaming — which is designed to deliver the highest quality, interruption-free stream possible based on real-time conditions. With advanced real-time performance analytics, publishers can also monitor end user performance levels and proactively avoid potential problems. This helps them grow their audiences by delivering the most compelling quality of experience possible.

How do rebuffering delays affect abandonment?



- Abandonment jumps **13X** for news content rebuffering lasting more than **2s** per minute.
- Abandonment rates for news are roughly **3X** the rates for other content.

Maximizing Engagement through Media Analytics

While data holds tremendous potential for helping publishers execute successful online media strategies, the reality is that media analytics can be complicated. There are a tremendous number of different platforms, devices and technologies to support—and the list is continually evolving. Moreover, the online video market is young, and many solutions are still immature. For publishers evaluating media analytics platforms, there are number of key questions to ask.

What is the breadth and depth of data available?

A comprehensive media analytics solution provides rich, multidimensional and highly detailed views that enable publishers to deeply understand their audience and audience behaviors, as well as how content, packaging and quality impact their business. This means not only providing the ability to quickly identify high-level trends and performance thresholds, but also enabling publishers to drill down in granular detail—for example, examining frequency distributions instead of simple averages, or analyzing data across different, customizable dimensions. Here are some key metrics and dimensions that are useful:

- **Audience Engagement Metrics:** Viewers, Visits, Plays, Play Duration, Play Percentage, Completion Rates, Abandoned Plays
- **Quality Metrics:** Play Attempts, Startup Time, Video Availability, Connection Speed, Bitrate, Rebuffering, Dropped Frames, Errors

- **Viewer Diagnostics:** Viewer Profile, Visit History, Visit Summary, Play History, Play Summary, Connection Summary, Activity Summary, Quality Summary
- **Dimensions to Filter By:** Geography, Device, Connection Speed, ISP, Video Length, Content Category, Player Domain, Referrer, Error Code
- **Customized Dimensions:** based on your own business rules and content taxonomy

How quickly can I get the data?

While historic data represents a significant component of media analytics, real-time monitoring and analysis play an increasingly critical role in today's highly competitive marketplace. More and more, business decisions such as ad policies, pricing strategies or marketing campaigns are made in real time, requiring accurate, up-to-date data.

In addition, media analytics solutions with real-time quality of service (QoS) monitoring capabilities can provide valuable and actionable feedback on the user experience, particularly during live events or promotional campaigns. With live audience metrics like delays, bitrates, errors, play duration and connection speeds, publishers can proactively address potential problems and maximize their audience experience. Advanced QoS monitoring that provides fine-grained data can even be leveraged to help support-staff troubleshoot individual performance problems.

Does the solution support all the devices and platforms we need?

Businesses need an accurate understanding of their audiences, wherever they go and whatever devices they choose to use. And when it comes to analytics, incomplete data can be worse than having no data at all. This means solutions need to provide a unified view of audience engagement that supports all devices and platforms (e.g. Flash, Silverlight, iOS apps, Android apps and HTML5), in both live and on-demand formats.

How will I make the data actionable?

In order for a media analytics solution to deliver value, it needs to be not only comprehensive, but easy to integrate into your workflow. On the front end, it needs to be easy to deploy universally and seamlessly to the end user, with simple integrations pre-packaged for each player platform. On the back end, it needs to offer analytics that are both flexible to use and easy to consume. Customizable reports, multiple delivery options, real-time alerts and quick sharing tools enable publishers to convert their data into actionable intelligence. API access takes this one step further, allowing integration into existing business intelligence tools as well as providing programmatic access to facilitate automatic, data-driven decision making.

Summary

In today's fast-paced marketplace, having visibility into the performance of your live and on-demand video offerings is no longer optional. Without it, publishers are flying blind when it comes to key business questions—ranging from what type of content to offer and which distribution channels to use to whether their audience experience meets expectations.

In order to drive engagement, businesses need to understand how the key factors of content, packaging and quality impact their audience's behaviors. However, these are not straightforward questions. The answers may vary across different types of content, different devices and different audience demographics—and they will most certainly change and evolve over time.



As the global leader in Content Delivery Network (CDN) services, Akamai makes the Internet fast, reliable and secure for its customers. The company's advanced web performance, mobile performance, cloud security and media delivery solutions are revolutionizing how businesses optimize consumer, enterprise and entertainment experiences for any device, anywhere. To learn how Akamai solutions and its team of Internet experts are helping businesses move faster forward, please visit www.akamai.com or blogs.akamai.com, and follow @Akamai on Twitter.

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