Video Ad Viewability On Peripheral Internet Devices:

Insights for Future Measurement & Currency Standards

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EXECUTIVE SUMMARY

Overview/Purpose
- "Viewable" impressions are now considered the standard of aspiration for impression measurement across all media channels.
- This document seeks to advance the state of viewable video impression measurement on peripheral internet devices: i.e., tablets, smartphones, smart TVs, connected boxes and gaming consoles.

The Quest for Viewable Impressions – Recent Initiatives
- During the last five years, the Traffic Audit Bureau (TAB) and Digital Placed-Based Advertising Association (DPAA) have both migrated from traffic-focused measurement systems to capturing more "viewable" metrics by reporting whether people have actually noticed signage and video displays
- The "Making Measurement Make Sense" (3MS) initiative has created a standard for viewable impression reporting for online display advertising that is scheduled to be implemented in 2013

Viewable Video Impressions: Discussions with Industry Experts – 18 interviews were conducted to explore critical issues regarding video ad measurement and reporting on peripheral devices. Key insights:

Platform Focus:
- **It's About Tablets and Phones** – Most firms are focusing their video efforts on tablets and smart phones due to pervasive penetration, although they recognize the high-quality video potential of smart TVs and gaming consoles.

Measurement & Standards Challenges:
- **Technology Cornucopia an Obstacle for Measurement Solutions** – The diversity of operating systems, devices, screen sizes, apps, etc. combine to form thousands of video measurement permutations. The road to standardization is currently elusive.
- **Defining Video Ad Viewability** – Most experts identified percent playback completion of video as a key component of video ad impressions although there was no agreement on the minimum portion of the ad to achieve impression credit.
- **Video Advertising: Haven for Viewability?** – A majority of experts felt that video ads were virtually all viewable due to user initiation, player size and prominent position on the page, especially for app-based mobile devices. Little to no mention, however, was made of verification of audio transmission or video ad avoidance actions such as muting, pausing or scrolling.

What the Future Holds:
- **Waiting for Viewable Standards** – Virtually all respondents are waiting for the industry to create an impression standard definition:
    - Tech experts before they invest time and resources into building out measurement/reporting solutions

- **Going Beyond Impression Measurement** – Most respondents desired to understand the qualitative or impact differences between video impressions appearing on TV, the PC internet and peripheral devices.
- **Downward Pressure on Video CPMs** – Referencing the impending switchover of display to viewable impressions in 2013, experts speculated an initial downward pressure on video CPMs as an immediate reaction to the perceived price rise stemming from the potential to report fewer impressions.

What Research is Next?
Respondents chose two future research initiatives (from a list of six) that would advance the state of viewable video impression measurement:

1. **Cross-platform video dynamics -** Ethnographic research to help understand how people engage with their devices and, ultimately, video advertising and content

2. **Impact of Ad Frequency -** Gain understanding of impact of ad frequency on completion rates -- e.g., if a viewer encounters a pre-roll ad repeatedly, does that viewer take avoidance action like mute, scroll, etc.

Cross-platform video dynamics can provide clues about the strength of advertising communication that could be uncovered by observing people in a field environment. The topic of ad frequency impact came up several times during interview conversations, as both buyers and sellers were curious to know about ad avoidance or burnout.

See pp. 21-22 for the full list of research ideas

INTRODUCTION

"I think, therefore I am" is a simple yet elegant statement that Rene Descartes offered as the proof point for human existence. In this same vein, "I have the opportunity to see, therefore I can view" sets the table for consumer advertising exposure. Much has been written and said about the concept of advertising viewability during the past year, particularly in the internet display advertising space. But with the explosion of video content and advertising being consumed across myriad platforms, it also makes sense to peek beyond display advertising and focus on what measurement issues and opportunities that video has in store for the advertising marketplace.

Purpose
The goal of this document is to inform the advancement of viewable video advertising measurement on the PC internet as well as on specific peripheral video devices such as smartphones, tablets and gaming consoles. Information and insights have been gathered to foster understanding in four key areas:
- Viewability measurement/methodology within video space
  - Technical underpinnings for measurement gaps and opportunities
  - Peripheral devices vs. general internet – key differences video on-screen rendering
- Informing industry reporting standards – input on creating definitions for reporting audience impressions for video advertising on PC and peripheral digital devices
- Marketplace pricing – potential impact of viewable video currency on marketplace inventory pricing
- Additional research – suggestions for research work streams to fill measurement gaps

Study Methodology
Content for this analysis was gathered almost exclusively through personal interviews with media-industry Subject Matter Experts (SMEs) as a literature search yielded virtually no articles/content related to video audience measurement on peripheral devices:

SME interviews – 45-minute interviews were conducted among industry experts to provide the facts and insights around viewable video measurement:
- 12 Measurement End Users – combination of senior research personnel and digital placement experts at agencies, media and trade organizations provided thoughts on measurement issues as well as industry marketplace outcomes.

- 6 Technology Experts – furnished details regarding the video ad serving process, technology platforms and the ability to provide viewable data capture

Literature search – The Advertising Research Foundation conducted a global query for all articles and papers appearing in industry and academic journals associated with the concept of viewability and its relation to advertising, including video ad/content serving technology. Virtually no journal articles surfaced; however, some content emerged about the U.S. move toward viewable-impression measurement and related industry issues. No content specific to video advertising on peripheral devices was captured.
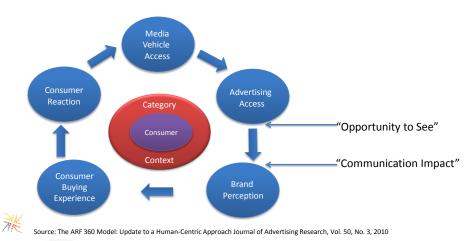
DOCUMENT ORGANIZATION

This document, first, provides an overview of viewability -- including the concept of opportunity to see -- and of recent industry experience for viewable display impressions, which sets up coverage of digital video viewability across peripheral devices. This introduction is then followed by insights culled from the industry expert discussions, focusing on video advertising carried on multiple platforms and the key challenges and potential solutions for viewable measurement across smart phones, tablets, gaming consoles and OTT units.

VIEWABLE IMPRESSIONS OVERVIEW

The Impression Metric The ad impression is the long-established metric for valuing advertising industry media transactions. In its simplest form, ad impressions represent the sheer number of people who have had an "opportunity to see" a marketers' message within a specified slice-of-time window ranging from seconds to a full quarter hour or more. When viewed within the context of the entire advertising communication continuum (Chart A), "opportunity to see," or OTS, occurs at the point where the consumer has the potential to be exposed to advertising (Advertising Access). [1] While it is the intention of every marketer to achieve some level of communication impact from advertising exposure, impressions counts provide the <u>potential</u> number of consumer opportunities for communication impact.

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[1] Source: The ARF 360 Model: Update to a Human-Centric Approach Journal of Advertising Research, Vol. 50, No. 3, 2010

Chart A - ARF 360 Communication Model

Source: The ARF 360 Model: Update to a Human-Centric Approach Journal of Advertising Research, Vol. 50, No. 3, 2010

The OTS moniker implies eyeballs of advertising communication -- however, that concept extends to the ears as well, rendering audio/visual impressions.   In a very broad sense the impression metric serves two key purposes:

1) **Currency value** – used by buyer and seller to negotiate price paid for campaign advertising weight.
2) **Plan/Schedule Building** – used by strategic media planners to estimate and schedule advertising GRP levels that will help generate brand awareness and sales.

This paper focuses mainly on the currency aspect of viewable impressions, although it is recognized that many other metrics like reach and frequency, hover, click, etc., inform media investment decisions in substantive ways.

Viewable Impressions Across Media Beyond the common-sense aspect of why OTS, or viewability, is critical to advertising impact and value, there's the notion of cross media measurement consistency that enables more informed, comparative investment decisions.   For example, enhanced viewability measures would place digital impressions on the same playing field as TV, which moves advertising closer to where real communication can take place. While there's much discussion surrounding TV viewing attentiveness, there is very little dispute about whether TV ads render on screen, or are viewable. The advertising industry has for years pursued the goal that all platform impression measurement be captured as close to the same starting point as possible, to more strongly align advertising currency across platforms.   The emergence of digital engagement metrics and advances in market mix modeling have, to some degree, leapfrogged the metric focus away from impressions toward campaign end results.   Fortifying impression metrics with viewable measures, however, will likely strengthen engagement and market mix models by providing a more accurate base to calculate, for example, online response rates and sales demand curves from econometric media mix solutions.

VIEWABLE IMPRESSIONS: RECENT INDUSTRY EFFORTS AND LEARNING

To understand the issues of digital video viewability measurement, it is appropriate to recount recent industry developmental research regarding ad viewability pursued across various media channels.   Following are three separate industry efforts that identify and examine key issues of viewability measurement and valuable lessons learned that can be applied to the various digital video platforms.

1) Traffic Audit Bureau (TAB)

The Traffic Audit Bureau is a trade organization that supports the outdoor advertising industry, encompassing billboards and posters displayed on roadways and major transit conduits. Until recently, outdoor organizations exclusively used the TAB's automobile and foot traffic counts to estimate the number of people that had the potential to view the signage they encountered in their daily lives. For advertisers, the critical missing element from the TAB metrics was what portion of people actually made eye contact, or noticed the signage.   Advertisers and media agencies were in unanimous agreement that the TAB's impression estimates overstated the number of people that actually noticed/viewed the signage.

In 2010, the TAB took action to address the outdoor metric discrepancy between automobile traffic estimates and actual viewing counts.   The TAB designed a system that used full-motion simulations of people driving on roads and highways, varying the speed, distance to signage, weather conditions and size of signage. Eye tracking recorded the sweeping, side-to-side scans that the test respondents engage in during what would potentially reflect their typical driving experiences.   Using 1/10 of a second as their threshold for viewing, the TAB research found the portion of people noticing the signage ranged between 6% and 99% out of total opportunities to see. These factors were then used to adjust the total traffic estimates for signage impressions on a weekly basis.

While the TAB solution addresses the measurement needs for "static" billboards, where signage rotates monthly, the emergence of digital billboards that rotate every 6-8 seconds posed a more significant challenge. Recognizing the dynamic nature of digital signage, the TAB is now developing an in-market pilot test that provides richer data capture than the video simulation method used for static units. The in-market approach tracks the actual driving experience whereby subjects wear camera headgear to record the span-of-roadway view and is corroborated and supported by a control camera that sits on the dashboard.

The TAB devised two creative solutions to advance the state of measurement within its industry and surpassed the viewable impression level to whether people have actually noticed advertising on outdoor signage. During the process of building their simulation model for noticing estimates, they were able to uncover vital insights about the probability of people viewing (distance, speed, weather

conditions, etc.) that could potentially pose a valuable example for digital devices like phones, tablets and gaming consoles. The digital industry has focused on the abundance of data being generated from all of these platforms, however, not enough is publicly known about the physical/proximal aspects of how people interact with their digital companions; this insight may open up a fresh view about the viewability and actual viewing of video ads/content on these devices.

2) Digital Placed-Based Advertising Association (DPAA)

The DPAA concentrates its efforts around supporting media companies that provide content and advertising in venues outside the home. For example, Captivate screens in elevators or in-store videos that provide how-to instructions for using product and services. Similar to the TAB's experience, the DPAA was challenged with advancing audience measurement beyond traffic-based metrics to estimates of "noticing" or "seeing." In order to achieve this goal, the DPAA created measurement guidelines to be followed by companies offering digital placed-based advertising opportunities. The guidelines cited three qualifying characteristics for OTS – "Presence," "Notice," and "Dwell Time." "A person must be present in a location from which the vehicle is both visible and, where appropriate, audible," the DPAA notes. [2]

Dwell time and proximity to the advertising video/signage represented significant enhancements to basic traffic estimates for digital placed-based advertising. Capturing dwell time proved essential because the metric provides the ability to report audience estimates for multiple advertising units within time-based rotation cycles. Proximity is a key aspect as well, as it accounts for a person's ability to see and listen to a video that may be competing with environmental background conversation, music, general noise, etc. DPAA member companies now contract with independent research firms to engage in custom measurement that meet the guidelines discussed above, providing a greater level of confidence about how many are exposed to advertising in the digital placed-based environment.

3) Internet Advertising Bureau (IAB)/Media Rating Council (MRC)

Perhaps the most far-reaching industry effort in recent years to advance viewable audience estimates has been for internet display advertising. In 2011, the Internet Advertising Bureau, the American Association of Advertising Agencies (4A's) and the Association of National Advertisers (ANA) created Making Measurement Make Sense (3MS) designed to streamline metrics in the online space. The 3MS initiative produced guiding principles for advertising currency that included: viewable impressions, demographic audience reporting and classification of ad formats, all designed to make digital metrics more comparable to other media.

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[2] Source: DPAA Audience Metric Guidelines, August 8, 2008

The 3MS viewable-impression effort deployed a two-stage process for implementation:
1. Establishing a viewability standard – the group determined an impression to be viewable when at least 50% of the creative asset is within view for at least one second. [3] So, ads obscured below the fold or eclipsed by rapid page exits would not be counted.
2. Ensuring a measurement solution for the standard – Numerous measurement companies emerged offering viewable impression measurement solutions but their reported viewable levels varied all over the lot due to differences in approach and technology.

The 3MS industry group called upon the MRC to serve as the impartial industry body to evaluate viewability measurement processes across multiple market place solutions. To that end, the MRC conducted a 22-campaign viewability test during May/June 2012 that produced viewability rates ranging from a high 78.6% to low of 7.8%[4]. These findings motivated the MRC to issue a November 2012 industry advisory warning not to use viewable impressions for transacting business until there was a more complete understanding of the causes of these discrepancies. The MRC indicated that cross-domain iFrames pose the key barrier to viewability measurement, while misfiring of viewable decision tags contribute to a lesser extent.   iFrames are sections on a publisher page that separate content from other assets appearing on a page, including advertising.

The MRC has planned additional learning and analyses to be produced through Q2 2013 that will include issuance of a revised set of viewability guidelines and testing the Safe Frame solution for cross domain iFrames.   Safe Frame is an IAB-developed specification for website publishers to safely manage content served from external sources, such as ads, while enabling the viewable advertising measurement. [5]

Lessons Learned The TAB and DPAA experiences demonstrated measurement innovation that included two very critical advertising/content exposure metrics:
1) physical proximity/distance
2) amount of time exposed
Both organizations conducted field research to refine and validate the measurement instruments used for their capture that has implications for estimating video audiences on peripheral devices. The position, angle and distance from the person when videos run on smart phones and tablets has immediate impact on OTS which is complemented by the amount of time spent with eyes on the devices during video run time. This suggests the need for ethnographic and/or eye-tracking research for peripheral video devices.

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[3] "Guiding Principles of Digital Measurement," 3MS, IAB, 4A's, ANA; September 19th, 2011

[4] "Viewable Impression Advisory," Media Rating Council, November 14th 2012

[5] "Safe Frame 1.0," Internet Advertising Bureau, November 19th 2012

The IAB measurement scenario is considered more closed-loop in nature compared to the TAB and DPAA opportunities in that display impressions can be electronically tracked on a continuous basis through third-party and publisher ad servers as well as research panels such as comScore and Nielsen NetRatings. While the 3MS effort focused almost solely on establishing an impression currency standard and technological solutions for measuring to that standard, it's likely that the initiative could further benefit from the ethnographic and eye tracking work suggested above; in fact all media, including TV, could be included in this effort.

EXISTING PAPERS/INTERNAL RESEARCH

The Advertising Research Foundation conducted a global search for all papers/articles and presentations relating to viewable video impressions on peripheral devices. This effort yielded no professional journal articles, but several trade press items emerged regarding the measurement issues and changeover to viewable impression currency for digital display advertising.   These articles are synopsized and included in the Appendix.   The search was conducted using the following criteria:

1) Viewability rates by medium/platform,
2) Technological solutions for viewability measurement and methodology and
3) Implications for media currency valuations

The above parameters were searched within the context of digital internet video platforms:
- Mobile phone
- Tablets
- PC-based
- Connected gaming consoles
- Connected boxes such as Rokus and Blu-ray players
- Connected television sets

The following sources were used:

- Industry and academic journals (ARF, WARC and AdMap,)
- Trade articles
- Conferences

VIEWABLE VIDEO IMPRESSIONS: END USER/TECHNOLOGY EXPERTS

This section provides core insights offered by industry experts and fills the sizable information gap encountered from the literature search effort. It is arranged in order of the questions administered during the interview process and includes key quotes that capture the essence of responses and implications for viewable video measurement. The section starts off with insights gained by speaking to both sets of industry SME's (End User and Technology) on measurement and reporting, the challenges of cross-platform measurement, input on viewable impression definitions/standards and eventual impact on the video advertising marketplace.

Both End Users and Technology SME's were asked a battery of the same questions. However, Technology specialists were queried on additional drill-down points relating to the specifics of their measurement and reporting platforms. Included also are the types of research they would like to see implemented to advance the understanding and measurement of viewable impressions on video platforms. A stand-alone section is then provided for Technology expert insights.

Video Platforms: Which Ones are Receiving the Most Attention?
To help set the stage for discussion on viewable impressions, SME's were asked to provide general information regarding platforms on which their respective organizations are currently focusing their time, perceived quality of consumer experience and general measurement and reporting practices. For each question asked, respondent quotes highlight the essential takeaways that are followed by insights and interpretation.

Which peripheral internet devices do you consider most important for measuring video content/ads?

> "Focus on Tablets and iPhones" **Publisher**
> "Expanding to tablet and mobile and mainly tablet because it is a larger screen" **TV Network-Publisher**
> "IPTV OTT on the horizon" **Publisher**
> "Not ready for the viewability conversation for digital devices; still trying to solve for PC. Don't yet have same foundation on peripheral devices." **Media Agency**

- **Smart phones and tablets take precedence.** Among end-user SMEs the bulk of attention focused on smartphones and tablets, due to their pervasiveness of consumer usage. Most favored tablets over smartphones, citing the larger screen size and superior video experience. Looking ahead, some voiced a strong fascination for OTT, referencing the video streams from Netflix, Hulu, Amazon, et al., and screen size as a dominating consumer presence. Video environment for Gaming consoles was met with mixed reviews: on the plus side the devices were recognized for their extraordinary video quality but

were perceived as somewhat cumbersome for playing of short- and long-form video in a conventional advertising environment.

- **Fixing PC video measurement first.** Despite the strong interest in smartphones and tablets, many cited the need to concentrate more in the PC- and laptop-based internet with the thinking that video playing and measurement hasn't been perfected on these platforms. Sentiment appeared strong to "get this right first" then move on to the more portable media.
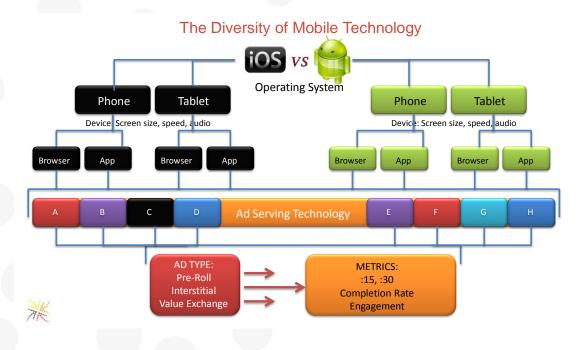
Measurement Challenges Across Devices

"#1 priority is cross-device integration, consolidated reporting." *Publisher*
"Diversity of apps and technology; unless you partner with a publisher, you're out of the loop." *Measurement Company*
"How to measure non-encoded content -- all content, not just your own." *TV Network - Publisher*
 "Measurement across devices, i.e., cross media." *Media Agency*

Technology Tower of Babel - Diversity of technology was tagged as the root cause fueling the challenge for measuring audiences within and across digital devices (See Chart B). One media agency participant portrayed internet desktop measurement in a mature phase but characterized mobile as a "fractured marketplace with multiple operating systems, devices and ad formats lacking true across-the-board measurement."

The Diversity of Mobile Technology

Source: Pre-Meditated Media, 2013

Server vs. Panel: measurement conundrum revisited - The debate on whether to use server-based or panel solutions for industry currency has raged since the early days of the "traditional" PC-based Internet.   Today, this issue resurfaces in the mobile space as media companies and agencies pursue accurate impression counts and richer descriptions of audiences across all platforms. For the most part, respondents felt that mobile measurement panel-based solutions fell short for audience reporting due to low sample size, which is especially challenging for video fare, since inventory is limited.

Out of necessity, nearly every company in the digital space engages in tagging solutions to furnish their own internal audience estimates to fill the void in syndicated product offerings.   One TV Network voiced the desire for transparency by asking permission to read all market participants' tags to determine share of voice.   Other media companies mentioned the sizable labor-intensity of tag management across all their properties and platforms.

Impressions seen as "Switzerland" metric - For many participants, the conversation about measuring within each platform ultimately morphed into the industry-popular topic of cross-platform tracking. Perhaps the most meaningful take-away emerging from cross media discussions was the challenge of harmonizing metric definitions to create a least common denominator for tracking across all platforms. To that end, impressions or OTS surfaced as a pretty straightforward choice while interactive metrics such as hover, touch, dwell time, etc. presented more ambiguity for multi-platform dashboard reporting. The confirmation of impression as the universal cross-platform tracking metric was supported by its simplicity and use as the primary metric for industry currency. From a media planning and scheduling perspective, there was a strong tendency to touch upon the capture of unique audiences across all platforms to inform media scheduling (Media Agencies) and inventory management (TV Networks/Publishers) through single-source reach and frequency.

Defining Viewability
How would you define viewability of video content and advertising?   Portion of screen that video occupies? Length of time the video has run?

> "Video is designed to be a story so time measure should be longer (than display)." *Media Agency*
> "In-motion story line vs. static display real estate." *Digital Network*
> "Haven't been getting this question asked for video advertising." *Publisher*
> "Go off of 3MS because there's nothing else." *Media Agency*
> "Need MRC to develop standards" *Measurement Company*

Most respondents chose to kick the can down the road when asked to precisely define viewability for digital video. More than half deferred to the industry for a consensus definition for a number of reasons:

- **Limited exposure to video -** they appeared to have invested very little time exploring video viewability measurement compared to display advertising on PC's and laptops and even less thinking had been devoted to tablets, smart phones and gaming consoles;
- **Lack of video mechanics –** Not aware of how online video works, so not equipped to offer a measurement threshold for viewability;
- **3MS initiative** – they felt that a video measurement standard would be "taken care of" by the industry, deferring to 3MS as the solution.

Video ad threshold: needs to be longer than display - Despite the tendency to punt for a viewability definition, most everyone mentioned that time viewable was a critical criterion by which video measurement standards would be constructed. Many felt that the exposure duration for a video standard must be longer than display (one second) for the combination of sight, sound and motion to trigger meaningful communication, or at least noticing of the ad. One media agency SME admitted to "struggling with video viewability in general because if the play is too short a time, it's not enough to convey the message." For the minority who ventured at least a spark of standard definition, their answers ran the gamut of time-spent, starting with "saw beginning of ad, at least" to "number of people who view a video to completion." The most current IAB guideline in place offers the following measurement threshold, but without time specificity: "Measurement should occur when the ad itself begins to appear on the user's browser, closest to the opportunity to see." [6]

Video metrics: focus on playback time but audio and ad avoidance neglected
Making the leap from the definition of video viewability to the measures currently being captured in the marketplace, the % time-viewed quartile was most often referenced as the metric for assessing video ad and content performance. Irrespective of whether a video ad is 15 or 30 seconds in length, respondents felt comfortable with the quartile concept, many who intuitively quoted the four basic playback measures: 25%, 50%, 75% or 100%. Implicit in this acceptance of quartiles is that the essential messaging for the advertising unit is conveyed regardless of commercial length. There was some discussion, however, around the notion that standards must reflect the ability to impart communication and that an acceptable time threshold would likely vary by commercial length (e.g., 75% for 15 seconds, 50% for 30 seconds).

Oddly enough, while time was repeatedly referenced as a key factor in defining video viewability, there was virtually no mention of the importance of a video ad being in-view during the time of playback. Another metric that was for the most part in-absentia was audio, most likely because respondents assumed that if the video loads, so does the audio. The next section provides insight into why the elements of in-view time and audio were of low prominence during the viewability definition discussion.

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[6] Internet Advertising Bureau, "IAB Digital Video Ad Impression Measurement Guidelines," December, 2009

In-View Portion Across Platforms

What is your sense for what portion of content and advertising is currently viewable on peripheral internet devices?

> "For video, much higher, upwards of 75% viewable." **Publisher**
>
> "Roughly 80% because of deliberate nature of video consumption." **Media Agency**
>
> "Most peripheral devices exceed internet viewability, less scrolling." **Digital Network**
>
> "Considering the screen, the majority is viewable because no scroll." **Media Agency**
>
> "Mobile apps are optimized to be less cluttered so it would be higher." **Publisher**

Respondents resoundingly stated that video ad viewability tended to be higher than display advertising on all platforms, whether peripheral devices or PCs and laptops. The key rationale for this bullish position on video stems from four factors:

1. **User initiation** – Viewers most often choose to watch a video because they have a vested interest in the content which facilitates an in-view video experience
2. **Unit size** – Video units command more screen real estate than standard static advertising
3. **Page position** – Video units are usually featured prominently on center page for browser environments and full screen for mobile applications
4. **Pre-emptive transition** – Much of a consumer's internet and app experience is carried out in silent mode, consuming content in a predominantly visual manner -- reading articles, posts or texting friends and colleagues. When a video is activated, it demands users' attention, snapping them into focus.

When asked to define viewability in the previous section, it's no wonder that most respondents neglected to talk about the amount of in-view video or the audio playback for that matter. There appears to be an intuitive assumption that the video experience comprises an impregnable combination of elements mentioned above, starting with the viewer's decision to engage, fortified by dominant unit size and screen presence. In the minds of many, this virtually guarantees that a large portion of the video, if not all, will be viewed.

While there's truth to the notion that video ad units and content can serve as bastions of engagement on digital platforms, playback rate/time metrics only provide a partial picture of their performance. As standards for viewable video impressions are developed, it makes sense to consider a confluence of metrics that support 1) the verification of playback time, 2) the portion of the video in browser/application view and 3) the presence of audio signal at a volume level sufficient to be heard. Other, more peripheral measures can function as checks and balances to validate that a video unit was viewable and that the audio

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achieved a listenable threshold (or not). These confirming measures surfaced sporadically during most of the conversation with respondents and include the following:

- **Audio** – For most video content, achieving meaningful communication requires that 1) the audio signal of the video is transmitted and 2) the volume level is sufficient for the viewer to hear the audio content.
  Validation Checkpoint: Listenable audio

- **Muting** – Viewers can use this control as a way to avoid listening to advertising audio during the pre-roll ad phase of video content playback. Once the ad(s) has run its course and the content is in view, the sound is turned back on. **Validation Checkpoint: Listenable audio**

- **Scrolling** – Like channel switching during a standard TV commercial break, scrolling is another video ad avoidance technique. Viewers wander the page, looking at content while listening for cues that signal the advertising has run its course and the video content is about to begin. Once the audible cues confirm the start of the content, they scroll back and fully engage with the video. **Validation Checkpoint: Viewable portion of video content**

- **Pausing** – Pausing content or advertising mid-stream can be considered a more neutral action than scrolling or muting if the intent of the viewer is to resume the video. Conversely, hitting the pause button could potentially mean a resumption of playback at a much later time or not at all.
  Validation Checkpoint: Viewable/Listenable audio

Viewing Verification & Communication Impact
What measures/metrics are critical to gauge whether video content/ads have been viewed? Effective?

Viewing verification
"Face recognition, use device camera as monitor." *Mobile Ad Server*
"Would someone consider using Webcams?" *Publisher*
Communication Impact
"Ad and message recall." *Digital Network*
"Interactivity for call-to-action, surveys for branding measures." *Media Agency*
"Pre-testing, bio-metrics, ad stickiness." *TV Network-Publisher*

Respondents were asked about what types of measurements they would recommend for verifying whether videos have been actually viewed by consumers and how they could potentially gauge the impact of exposure to video ad units. This line of questioning went beyond the OTS focus of this paper to uncover any post- impression measurement that would be key to valuing video impressions in the marketplace based on impact.

Webcams: viewing the viewers - For a publisher and mobile ad services company, the notion of being able to retrieve webcam footage of viewers' faces across device platforms held high appeal for being able to understand how they were actually watching videos. They recognized that this approach would more likely be used within a permission-based experimental environment to provide richer insights than could be obtained by conventional viewer playback rates alone.

Surveys: uncovering branding impact - When queried about how to gauge the impact of video advertising beyond exposure, most cited survey research as a solution to capture changes in ad/brand awareness, purchase intent, brand favorability, etc. specifically geared towards campaign objectives. The flavor of these answers suggested that most felt the primary purpose of video advertising was to drive branding, much the same as in the TV space as relatively few talked about interaction metrics like hover, and click. In a more Switzerland vein, a handful of respondents mentioned that impact measures should attempt to capture campaign success metrics, whether the messaging is branding-oriented, call-to-action focused or both -- essentially the video ad measures needed to best reflect the use of video advertising in the media mix.

Marketplace Impact – Pricing Structure
*What are operational implications for deploying viewable video impressions? For example, **audience guarantees**, technology and infrastructure.*

> "Will have different currency and variation of viewability across platforms; would require re-stacking of supply and demand." ***Media Agency***
> "Implications for pricing are critical. E.g., what to charge for 1/2 view vs. whole view?" ***Mobile Services Firm***
> "Downward pressure on CPMs, a shake-out." ***Media Agency***
> "Massive challenge; when price goes down . . . it's difficult to have it come up" ***Measurement Firm***

Downward pressure on CPMs? - The potential to measurement change to viewable video impressions brought to mind the current transition to viewable/demographic impressions in the digital display marketplace. Many cited the likelihood of downward pressure on video CPMs as measured audiences declined and CPMs rose. Still others felt that the magnitude of measurement impact on video would be far more subdued relative to display, given their generally bullish contentions that video viewability far exceeds the levels of general display. For the most part, respondents were uncertain about the impact on rates since they had not previously experienced a change of this magnitude in the digital space.

One Media Agency exec stated that publishers could potentially temper any immediate downward pressure on higher video CPMs, depending on how they positioned video inventory vs. other media. For example, if the sell side emphasized the strength of user initiation leading to higher engagement, then

CPM premiums could be justified; combining this engagement with superior targeting capability would further support higher CPM.

Concept: time-based CPMs - When considering how establishing ad unit pricing for viewable video would play out in the marketplace, respondents tended to refer back to the discussion on establishing video ad currency standards. The predominant theme that emerged was a time-based playback structure that begged the question of what price to pay for inventory where, for example, ad playback was 25% vs. 75%. There was a split between respondents who felt the standard should be one percentage number vs. those who felt the industry could handle a system rooted in several time-based pricing tiers.

VIEWABLE VIDEO IMPRESSIONS: TECHNOLOGY EXPERTS

This section focuses on input provided by Technical SME respondents who are directly responsible for, or manage the ad serving and reporting processes at their firms. Most of the feedback is based on questions asked exclusively of Technology experts vs. End Users.

Marketplace Impact – Operational/Technical
What are operational implications for deploying viewable video impressions? For example, technology and infrastructure.

> "Android not as standardized as Apple; want to control user experience and presentation." *TV Network/Publisher*

The most common issue that Technical SME's cited was the whirlwind of app technologies used for displaying content, either static or video. Their biggest concern was achieving user-experience parity across all devices and platforms to avoid disappointing people who, for example, visit the same publisher website and mobile app.

Measurement & Reporting Capabilities
Please describe the measurement and reporting capabilities that your firm currently has in place.

> "We use best platform-specific measurement systems built from that environment from the ground up." *TV Network/Publisher*
> "Ad serving done through 3rd party; standard ad serving capability." *TV Network/ Publisher*

Respondents claimed to use a combination of organic, in-house serving/reporting platforms as well as 3rd party solutions. One TV Network/Publisher mentioned investing in state-of-the art technology within each peripheral platform, i.e., mobile, tablet and gaming.

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What metrics capture/reporting is in the developmental stage?

> "Looking at ways to marry cross platform using unconventional methods." *TV Network/Publisher*
>
> "Cross platform; go to TV buyer with scale across all the operating platforms." *TV Network/Publisher*

Cross-platform focus - The obsession with cross-platform metrics surfaced prominently when Technical Experts were asked about measurements in the developmental stage. This focus on cross-platform measurement is driven largely by business and sales leads who request solutions that will help leverage the entire span of advertising inventory in turnkey fashion. While one TV Network/Publisher was keen on devising an in-house method of reporting unique viewers across video platforms, most others deferred this task to panel companies like comScore and Nielsen, while lamenting the low sample sizes associated with panel measurement offerings. Apart from the cross media theme, one mobile technology services platform mentioned measuring lifetime value of leads generated from mobile campaigns.

What do you believe are the challenges in measuring video ads/content on these devices?

> "Accuracy, screen sizes, discrepancies, player/performance optimization, bandwidth, number of OS platforms, devices, content providers - streaming integration, ad vendors - ad serving, redirects, system integration." *Publisher*
>
> "The combination of operating systems, browsers, apps, devices and viewing screens creates thousands of measurement permutations to solve for." *Trade Association*

Long road to standardization - Diversity across operating systems, devices, browsers, apps, and viewing screens was identified as the key impediment towards consistency in measuring viewable video on peripheral devices. Most Tech SMEs were resigned to the fact that this cornucopia of technology combinations was likely to remain status quo for at least the next couple of years as there was no clear road to standardization. One respondent believed that the challenges of standardization would be best approached at the operating system level. So, for example, creation of iOS and Android video ad and content specs for application developers would go a long way for streamlining measurement solutions, irrespective of variations in devices. On the flip side, however, any move towards standardization runs the risk of tempering app development creativity if conforming app tools means limiting development options.

IDEAS FOR FUTURE RESEARCH

Respondents were asked what types of research would help to further the development of measurement techniques for video advertising on peripheral devices as well as inform an advertising standard for viewable video impressions. They were provided two options:

1) Identify the top two-three research topics from a list of six (see below) that surfaced during the interview process, and/or
2) Recommend other future research initiatives

When selecting from the list of the six research initiatives, **items #2 and #3 -- cross-platform video dynamics and ad frequency impact -- surfaced to the top.** How people engage with their devices to consume advertising and content did not emerge in a meaningful way during the interview process; but its prominence as a future initiative makes a lot of sense from the perspective that respondents were very interested in measures beyond impressions, to provide clues about the strength of advertising communication that could be found by observing people in a field environment. The topic of ad frequency impact came up a several times during interview conversations as both buyers and sellers were curious to know about ad avoidance or burnout. Oddly enough, communication value research (#1) was the option best equipped to provide insight for setting a time standards for video impressions but received only an average number of votes.

Potential Future Research Initiatives

1. **Communication value research** (examples)
   - Branding impact at 25%, 50%, 75%, 100% completion rates.
   - Interaction impact at 25%, 50%, 75%, 100% completion rates.

2. **Cross-platform video dynamics**
Ethnographic research to help understand how people engage with their devices and, ultimately, video advertising and content

3. **Impact of Ad Frequency**
Gain understanding of impact of ad frequency on completion rates. e.g., if a viewer encounters a pre-roll ad repeatedly, do they take avoidance action like mute, scroll, etc.

4. **Video Interaction Analysis**
Are there insights to be gleaned from electronic measures like "Pause," "Mute," "Scroll," "Hover" "Touch Time" as they relate to video completion rates and inferences for communication measures? (Assuming data availability)

5. **Viewable Dimensions**
How viewing distance, screen size and connection speed impact the viewing experience across and within devices.

6. **Measurement technology**
Using webcams to understand video viewing dynamics and view rates among equipped phones/tablets and TVs

Additional Research Initiative Ideas

Audio vs. visual - Everyone focused on viewability for display, . . . if we don't consider the sound, we're only focusing on half of the value. So should there be a **"hearable" metric** that either sits along side or is baked inside the "viewable" metric? *Publisher*

Attentiveness - "if we have a "viewable" metric for online but no such thing for TV, we will drive a wedge between the two marketplaces . . . **Attention** is a key thing that needs to be measured. "If a person has a tablet on their lap while they're watching TV and a commercial break comes on, I would think advertisers would want to know if that person was paying attention to the TV (and the spot) or if their eyes and attention was focused more on the tablet screen. *Publisher*

Clutter - "Surprised there is nothing about **ad clutter** on your list. I believe it is a very important digital issue." *Trade Organization*

APPENDIX
Article Synopsis
(Chronological Order)

"Is An Online Ad Still An Ad If Nobody Saw It?", Ad Age, April 8, 2012
Synopsis: The article investigates primarily the business ramifications of moving to a viewable impression standard for online display advertising. The magnitude of the viewable impression issue is first illustrated with a ComScore study of 18 online campaigns that found up to 31% of online ad impressions served were never viewed, despite the fact they were counted in campaign delivery reports. Industry leaders then commented on future implications of a viewable impression standard for the internet marketplace. Media agencies were highly supportive of the movement as it advanced measurement accuracy, advertiser value and cross-media metric harmonization. From the publisher side, the IAB's Sherrill Mane pointed out that "viewability metrics will help publishers better understand the valuation of inventory- all units are not created equal."

"Viewable Impressions Are the Future of Metrics: Are You Ready?," Peter Naylor, NBC Universal, Ad Age, September 27, 2012
Synopsis: The author appeals to internet publishers to adopt viewable measurement practices in anticipation of the ensuing changeover to this

transactional standard during 2013.   He urges publishers to start the transition process so that they can begin optimizing inventory and site placement for greatest revenue profitability. Optimization includes ensuring that site layout is primed for viewability, monitoring of large files sizes and running tests to determine how viewable measurement impacts inventory.   To support his view, Mr. Naylor references the NBCNews.com launch of ServeView, "a system guaranteeing that ads served are positioned so they are viewable by consumers." While ServeView's implementation triggered a reduction in inventory of 30%, click-through rates for ½ page ads were 2.5% greater than the industry average, suggesting that that higher ad viewability captures CTR measures more accurately.

The Role of Visual Attention in Internet Advertising: Eleven Questions and a Score of Answers, Adam S. Greenberg, Carnegie Mellon University, Journal of Advertising Research, Vol. 52, No. 4, 2012

In this article Adam Greenberg provides answers to a series of questions on consumers' attention to digital marketing, based on his analysis of a large dataset provided to him by the Advertising Research Foundation. Among the 11 issues covered, the following were most relevant for this paper: Clutter or "visual crowding" was cited for diverting people's attention away from advertising either through confusion with non-advertising objects or the sheer volume of items on a page. In general, complex pages with a high diversity of content, ads and shapes will spur users to diffuse their attention across multiple locations on the page. Next, page placement impacts attention and eye tracking studies show that ads appearing in the left/right margins are attended to more than the top of the page. However, ad attention in the left/right margins is about on par with top page position when "the viewer is reading a web site for comprehension."

"Viewable Impression Advisory," Media Rating Council (MRC) Press Release, November 14, 2012
Synopsis: This document recommended that the ad industry delay transactions based on viewable impression currency until viewable measurement issues were fully understood. The MRC conducted a 22-campaign viewability pilot test during May/June 2012 that produced viewable rates ranging from a high 78.6% to low of 7.8. The MRC indicated that cross-domain iFrames posed the key barrier to viewable measurement while miss-firing of viewable decision tags contributed to a lesser extent.   Cross-domain iFrames contributed 75% of unmeasured impressions in network placements and more than 1/3 for publisher placements. The pilot test also revealed that while the 50% of pixels in view for one second is a plausible threshold for most display ads, larger ads, like the IAB Rising Stars will require "special considerations" as they occupy more real estate on internet pages.

"Clear Guidance," MediaPost, Sherrill Mane, November 28, 2012, 10:55am
Synopsis: This article underscored the importance of the MRC Viewable Impression Advisory document issued two weeks earlier, emphasizing the need to

follow MRC guidance on defining viewable thresholds for transactional purposes. A distinction is made between "transactional" and "methodological" standards: transactional sets the viewable impression definition (50% pixels/minimum one second) while methodological refers to the accuracy and precision of capturing and reporting viewable impressions. The article cites the work that MRC is engaging in to hone methodological standards and urges the industry to wait for a new viewable impression guideline, to be released during 1st Q 2013.

"A Modest Proposal on 'Viewable' Ads: It's a Nice Idea, But Let's Not Make It a Currency for Online Display," Ari Paparo, November, 29, 2012
Synopsis: In this article, Mr. Paparo makes a plea to the industry to not adopt viewable impressions as standard currency until there has been adequate testing and measurement. He asserts that "Moving ahead with a currency too quickly will be a huge setback to display and will reinforce the perception that it is hard to measure." Some of the key issues with viewability measurement cited are as follows: 1) complex java-based instructions for browsers that slow down the serving process 2) infeasible currency for programmatic/auction-based markets where viewable rates are unknown before the transaction, 3) no imminent solution for cross-domain IFrames and 4) publishers' need to over-allocate inventory to make viewable impressions goals. As a resolution Mr. Paparo's proposes that modification of IAB Terms & Conditions to require all line items to conform to X% minimum viewability while capping the use of cross-domain IFrames to a specified portion of inventory.