MRC’s Digital Audience-Based Measurement Standards: A Guide for Marketing and Media Professionals

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Preface

The release of the MRC’s Digital Audience-Based Measurement Standards represents a new and long-awaited phase in the MRC’s long-term program to develop and encourage the marketplace adoption of new industry measurement standards designed both to improve the overall state of digital media measurement, and to facilitate the creation of effective cross-media measurement opportunities. In collaboration with the ANA, the 4A’s, and the IAB—the industry trade associations that have led the Making Measurement Make Sense (3MS) initiative since 2011—MRC has been engaged in a multiyear effort to reach this point, which began with the development and implementation of MRC’s viewability measurement standards for desktop and mobile ads.

Viewability has achieved wide marketplace acceptance and use since its introduction, and in so doing, has, along with the MRC’s Invalid Traffic Detection and Filtration Guidelines (issued in late 2015), improved the environment for digital advertising. That achievement always has been just a partial goal for the concept of the viewable impression. Indeed, MRC has always considered viewability’s most important role to be what has been realized in these new Digital Audience-Based Measurement Standards: as the basic foundational element upon which digital audience metrics that ultimately lend themselves to cross-media comparisons can be built. By building off MRC’s prior work on viewable impression measurement and invalid traffic filtration, the Digital Audience-Based Measurement Standards moves these concepts forward into audience measurement, and brings the prospect of effective cross-media audience measurement into focus as the next near-term goal. The MRC has already begun work on this next phase of 3MS-related work, and expects to be in a position to issue a cross-media audience measurement standard sometime in 2018.

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Overview and Fundamentals

Fundamental to the advertising industry is the notion that advertising is disseminated and received by audiences comprised of people with personal characteristics that meet marketer specified profiles, and that there exist reasonably accurate ways of ascertaining where ads appeared, and how many of what kinds of people were exposed (had the opportunity to see the ads). In addition, there is an expectation that there exist appropriate methods for assessing how well advertising works.

Throughout advertising planning, buying and post buy assessments, measurement systems and metrics are the key tools. Measurement is used to define target audiences, select placements, determine audience guarantees, serve and deliver ads, optimize creatives and campaigns, measure the characteristics of people who were exposed to the ads, confirm ads ran and when and where that occurred, etc.

The Media Rating Council (MRC), an independent, not-for-profit organization charged with ensuring that the advertising industry has standards for metrics and measurement, is also charged with determining the requirements for its accreditation of measurement organizations. The ultimate goal is to provide the advertising business with an understanding of which measurement and metrics are of acceptable quality for decisions that practitioners make every day, and to ensure that currency metrics meet quality standards for accuracy and transparency. Better measurement and the right measurement governance are critical to ensuring marketing dollars work better.

The MRC Digital Audience-Based Measurement Standards, released in December 2017, introduces and defines concepts that are new to digital ad measurement. As it breaks ground in the area of digital ad measurement, it builds new bridges to ultimately enable cross media platform measurement. The new guideline explicitly states that the focus on cross media comparability is on the digital inputs to cross platform measurement, and, in this regard, specifically calls out digital video and television comparability. In the MRC’s pipeline are additional initiatives that will focus on display cross media comparability with offline media.

By definition and necessity, the Digital Audience Measurement Standards are written in language suitable to the measurement industry and to practitioners of measurement functions, and thus is the authoritative document issued by MRC related to this form of measurement. The purpose of this supplemental guide for marketing and media professionals is to explain the Standards document in a more “decision-maker-friendly” way.

These new Standards mark several key “firsts.” For the first time, the digital ad viewability standard (desktop and mobile) is applied to clearly defined requirements for calculating the rating and GRPs of digital ads, and for digital ads that are part of cross media advertising campaigns. Another first is the

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1 The Digital Audience Measurement Standards are specific to digital ad measurement; measurement of content is excluded from its scope. Content measurement will be addressed in a forthcoming MRC Standards project (Cross Media Audience Measurement Standards).
requirement that for digital video ads intended for use in cross media comparisons and aggregations, audience metrics should be calculated on a duration weighted basis.

This guide to the new Standards discusses:

- The viewability and invalid activity filtration requirements for inclusion of digital ad impressions in audience-based metric calculations like GRPs;
- The new concept of duration weighting of digital video ad impressions for the purpose of frequency and GRP calculations;
- The requirement that duration weighting be applied to digital video ad impression measurement when used in cross media comparisons and analyses;
- The need to consider the workflow implications of duration weighted digital video ad impressions in planning, buying and optimizing;
- The reach qualifier and de-duplication requirements for digital advertising and digital components of cross platform advertising measurement;
- The requirements for measurement and reporting granularity to ensure that types of ad units within and across platforms are measured accurately and reported appropriately;
- The acceptable ways to produce universe estimates for digital ad rating and GRP calculations as well as considerations of coverage and audience de-duplication;
- Multiple third-party data sets and their appropriate use to assign audience characteristics;
- Some of the right questions to ask the experts about digital ad metrics;
- A list of previously existing standards and guidelines you may want to review to ensure that you and your team know what you need to reference for better measurement and metrics.

Standards development is accomplished by the collaboration of many in the advertising business. The MRC works with large groups of people from companies across the ecosystem as well as with trade associations to develop and finalize its measurement standards. The MRC Digital Audience-Based Measurement Standard is related to The Making Measurement Make Sense (3MS) initiative, which is jointly led by the ANA, the 4A’s, and the IAB. The MRC wishes to thank these associations for sponsoring the efforts to develop and finalize the new Standards, as well as the many individual participants who have contributed their time and energies to this effort.

Standards development seeks to build on existing standards and best practices that are already in market. In the area of digital measurement, there are two issues that are constant considerations: filtering invalid activity/impressions out of measurement, and promoting measurement practices that provide appropriate safeguards for consumer privacy.

Filtration of invalid activity/impressions is done to ensure that actions by actual people, not machines or devices, are measured. By definition, the purpose of audience measurement is to measure human activity. There are layers of technology, manual processes and processing that are necessarily associated with core measurement techniques for digital audience based measurement. For this reason, as well as the fact that “audience” measurement requires measuring human behavior, the new measurement Standards mandate application of Sophisticated Invalid Traffic (SIVT) detection and filtration techniques, which are above and beyond the General Invalid Traffic detection and filtration that is required of all digital measurers by MRC’s Invalid Traffic Detection and Filtration Guidelines.
Safeguarding privacy is also particularly relevant to a number of measurement principles and requirements covered in the Standards, such as de-duplication of audience, tracking user behaviors across devices, collecting data directly from consumers, and using such data for enrichment purposes. The new Standards, while not privacy focused, do recognize privacy-related challenges associated with these measurement areas, and express a position that these be considered in all measurement practices outlined. Further, since regulatory policy can change, all businesses engaged with consumers and their data need to monitor and address any new regulations in this and related areas as they are issued.

**Viewable Ad Impressions, Duration and Invalid Activity Filtration**

Viewability for digital display and video, mobile and desktop ad impressions has become a transactional metric in the last few years. The MRC standard for viewable digital ad impressions (at least 50% of pixels in view for a minimum of one second for display, two continuous seconds for video) was a first step in a broader cross platform measurement plan. It was not an end in and of itself.\(^2\) From its inception, the viewable impression was intended to bring digital ad impression measurement closer to commonality with other media impression measurement, especially, but not only, to that of TV. The notion of comparably measured impressions is foundational to the ability to count and combine across media platforms.

It is clear that time spent viewing content and ads is an important tool for audience and media assessments. By definition, ad viewability measurement includes measuring for how long an ad was in view on screen at the required pixel level. Conceptually this “opportunity to see” the digital ad upon its delivery is aligned with the fundamental notion in marketing that advertising can have an effect on people who are exposed to it. “Opportunity to See” is basic to advertising; for example, TV and print each carry advertising that renders fully on a screen or page, respectively. The new Digital Audience Measurement Standards specify that a viewable impression is the qualifying unit for inclusion of a digital ad impression in audience-based measurement. This holds for both digital only and cross media platform reach, frequency, rating and GRP calculations. By doing so, digital audience based measurement approaches commonality with other media, making it easier to compare digital and other media for planning, buying and evaluating. Moreover, this accomplishes another goal, that of ensuring that, piece by piece, desktop and mobile, regardless of creative unit type, digital audience-based measurement is always comprised of viewable impressions.

The following guidelines apply:

- For both display and video on desktop and mobile, web and in app, average viewable duration is required in reporting digital ad audiences, whether in a given target, coverage, or larger universe.
- Digital ad average viewable duration measurement should be based on one second granularity.
- The Standards recognize that for analog media, existing crediting granularity may be greater than one second; for example, one minute (based on a “preponderance of the minute” qualifier)

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\(^2\) For additional information, see “Viewability Project Background and Data Analysis” addendum, issued by MRC on June 28, 2016 and available at www.mediaratingcouncil.org.
is the traditional criterion for TV. It is permissible that for cross media GRPs, reach and frequency of ad schedules, longer increments than one second are used for digital video ads, provided that the basic time increments are the same for all media being combined.

- In addition to General Invalid Traffic filtration, which is required in all digital measurement, the application of Sophisticated Invalid Traffic (SIVT) detection and filtration techniques is required for the measurement of viewable impressions that are included in digital audience based measurements.

**Duration Weighting**

Duration weighting provides a measure of how much time across all delivered viewable impressions was spent relative to the total creative unit length. As mentioned above, the concept of viewability as a digital metric began with the idea that for cross platform measurement to be more comparable and consistent, the basic (transactional) unit, or ad impression, needed to be comparable to other media. Viewability is defined by its two components, quantity of pixels (at or above threshold of 50%) on screen in view for at least the minimum time requirement (one second for display, two seconds for video).

The new Standard requires that the average amount of time a viewable digital ad impression is on screen, in view, must be reported for all formats (see below). The Standard paves the way for digital video and TV ads to be combined using a common time based method. This is accomplished through duration weighting.

Duration weighting can be applied to digital video ads on desktop, mobile in-app and mobile web (see bullets below). Duration weighting makes GRPs for campaigns of different lengths more comparable because it accounts for differing ad lengths. The calculation of **Duration Weighted Viewable Impressions** is simple: the sum of the durations of all viewable impressions delivered divided by the ad unit length, or:

\[
\frac{(\Sigma \text{Viewable Duration})}{(\text{Ad Unit Length})}
\]

**Duration weighting is not required for digital display ads** because as opposed to video ad creative which always has a maximum duration, display ad duration is not pre-defined.

Below are some specifics for duration weighting and digital video ad measurement:

- Reporting of duration weighted metrics for digital video ads that are part of digital only ad campaigns is encouraged but is not mandated;
- Duration weighted GRPs can be reported along with the corresponding non-duration weighted (traditional) GRP measure.
- Duration weighting is required for viewable video ad impressions to be included in cross media advertising GRPs and frequency (it is anticipated that the forthcoming Cross Media Audience Measurement Standards, expected in 2018, will require duration weighted digital video GRP estimates to be compared/combined with duration weighted video GRP estimates for all other media types included);
Whether duration weighting is required or not, under all circumstances, the reporting of average viewable time/duration is required for digital ad impressions, both video and display, mobile web, in-app and desktop;

In certain instances, technology limitations can make duration measurement (and thus the application of duration weighting) challenging to apply for some video ads. In these cases, digital video ads that render on the screen can be included in total counts of digital video ad impressions.

- It is possible to project viewability and thus duration weight using modeling techniques if necessary. The requirement is that any method for projecting or estimating must be based on empirical proof and fully disclosed. An assessment of the possible impact of modeling should be provided by the measurer. The impacts should not be significant, typically no more than 5% (see Section 2.2.1 of the Standards for further discussion of material or significant impacts).

Duration weighting for digital video ad impressions that are part of cross media frequency and GRP campaign measurement should always be part of the calculation of these metrics as described below.

A digital campaign GRP is the sum of all rating points across various pages, properties and applications and is reported as a gross number. GRPs may be used to quantify the total number of rating points garnered by a campaign within a specific target audience, universe, measured population, or coverage. To get there, one must calculate rating points for each component of the ad campaign. The calculation represents the sum of all viewable impressions delivered by the campaign divided by the target audience, universe or measured population multiplied by 100. The formula for a Digital Campaign GRP is:

$$[(Σ \text{Viewable Impressions}) ÷ (\text{Measured Population, Universe or Target})] \times 100$$

Because duration weighting must be applied to digital video ad impressions included in a cross-media campaign measurement (and is encouraged for digital only campaign reporting), the calculation for a digital video ad rating may incorporate duration weighted impressions. Thus, the total duration weighted viewable impressions divided by the target audience, universe or measured population multiplied by 100, is the formula for a Duration Weighted Digital Video Ad Rating point, or:

$$[(Σ \text{Duration Weighted Viewable Impressions}) ÷ (\text{Measured Population, Universe or Target})] \times 100$$

Similar to the calculations and rationale for rating point and GRP for all viewable digital ad impressions and for duration weighted viewable digital video ad impressions, the calculation for frequency may incorporate duration weighted viewable digital video ad impressions. Frequency quantifies the average number of times a unique user, home or audience generated a viewable impression (display and/or video) and contributed to the reach of an ad campaign over the course of a specified time parameter. Here, the time parameter can be a session, time period, such as a month, week, a day, a seasonal ad campaign, etc. The calculation of Frequency for a Digital Ad is the sum of viewable impressions delivered divided by the sum of the unique audience that contributed a viewable impression, or:

$$(Σ \text{Viewable Impressions}) ÷ (Σ \text{Unique Audience with a Viewable Impression})$$

For Duration Weighted Frequency of digital video ads, the calculation is:
(Σ Duration Weighted Viewable Impressions) ÷ (Σ Unique Audience with a Viewable Impression)

(Refer to Appendix A in The Standards for step by step examples of the calculations using mock data from a single campaign that includes different placements, ad formats, digital platforms.)

The MRC anticipates its views on duration weighting may be refined as part of its forthcoming work on the Cross-Media Audience Measurement Standards, which will serve as the authoritative standard for cross-media audience measurement.

Workflow Implications of Digital Video Ad Impression Duration Weighting

The MRC recognizes that transactions that include digital video ad placements will need workflow accommodations to fulfill the duration weighting requirement. Thus, the MRC recommends that buyers of ads include explicit language about the duration of digital video ads being purchased. Further, a variety of considerations during the course of a campaign may involve changing video ad creative length. Such changes must be communicated adequately by the buy side to ensure that both buy and sell sides monitor that the altered creative length(s) are weighted appropriately and reported separately.

As the digital video ad measurement and reporting requirements are met by measurement companies, guidance on the transactional processes used in the U.S. will likely come from trade groups like the 4As, ANA, IAB, and MMA.

Digital and Cross Media Platform Reach Qualifier and De-Duplication Requirements

Reach is the most basic advertising metric used to assess how many unique people saw an ad at least once across a campaign. The audience can be defined as unique persons in the total US population, in-target unique users, unique households in the US or a geographic segment. For advertisers and media planners, reach matters when assessing if requisite audience levels for a specific brand or product have been exposed to the campaign within budgetary parameters. Reach in the age of highly targeted, data enriched, multi device usage is an easy construct through which to express the counting of unique audiences in complex environments.

Reach can be expressed as a percentage of a measured population, universe or target, or as a whole number. For digital advertising, the qualifier for being counted into reach is at least one viewable exposure to the ad campaign within the specified timeline, e.g., a daypart, a day, a week, a month. The calculation for Reach is:

\[
\left[ \frac{\text{Σ Unique Audience with a Viewable Impression}}{\text{Measured Population, Universe or Target}} \right] \times 100
\]

The equation representing the relationship among reach, frequency and GRPs is:

\[
\text{Reach} \times \text{Frequency} = \text{GRPs}
\]

Since, by definition, Reach is based on an unduplicated audience, calculating it correctly requires de-duplication: identifying individuals who have seen the ad multiple times within the measured time period and counting them only once. A simple example is the person who sees an ad on a website on
desktop twice in one week and sees the same ad on a mobile app three times in that week will count only once in the weekly reach of that ad.

De-duplication has to employ procedures that are robust and transparent (see Section 4.3 of The MRC Digital Audience Measurement Standards for discussion of these techniques and required disclosures and empirical proofs). Measurement of audience based reach/unique users must have information inputs that come directly from people or that can be shown to be directly attributable to people. Machine based measures such as unique cookies, unique browsers, unique devices may not be represented as or used in place of people based measures of unique users.

De-duplication involves identifying users, devices and duplication of both users and usage in order to avoid inflation of reach numbers. Another key point about duplication and the need for rigor in de-duplication that can affect the calculation of audience metrics relates to coverage estimates. If coverage estimates for a specific target or universe are off, estimated reach, ratings, and GRPs will also be incorrectly stated.

As noted, multiple methods are acceptable for de-duplication and all require rational and empirical proof. The MRC does encourage measurement vendors to develop, validate and undergo periodic testing of tracking assets that can identify users across devices and platforms.

Granularity: Viewability Measurement and Duration Reporting by Ad Placements

Generally speaking, the term “granularity” is used in measurement methods to express the smallest, most discrete data unit required. In order for granular measurements to provide the utility demanded by users, reporting must be correspondingly appropriate and accurate.

The new Standards require that viewable ad impressions be used as the qualifying unit for digital audience based measurement and that average viewable duration be consistently reported for display and video on mobile web and in app as well as desktop.

The Digital Audience Measurement Standards call for measuring digital ad duration in one second increments (although crediting can be on less granular levels, such as minute level, as long as cross-media combinations include the same crediting basis).

Within an ad campaign, viewable duration reporting must occur at the creative placement level within each platform by unit type. That is, users of the audience data must be able to assess viewable duration by ad format (display, rich media and video) and placement within platform (mobile web and in-app, desktop). Further, viewable duration for video ads should be reported by creative length.

For purposes of developing an understanding of how time spent varies by platform for a specific campaign, it is permissible to aggregate the measurement within each platform and ad format while retaining separation between video and display units. Separating display and video is also required for total time spent reporting across digital platforms by creative.

Today’s technical limitations prevent consistent measurement of audio in digital video ads. The MRC does encourage consideration of audio in measurement where feasible and encourages reporting of the
duration of video viewability that is audible. For the purpose of reporting cross media video audiences (linear TV and digital video), the requirement is consistency across measured entities.

**Universe Estimates, Coverage, GRPs and Digital Rating**

As noted earlier in this guide, the formulas behind GRP and rating are very straightforward and the required impression unit is a viewable impression. Where the complexity ensues is in determining the universe estimates, or the coverage or the total in-target populations. In order to project audience numbers, it is essential that acceptable universe or coverage estimates are used. For total US persons and basic age/gender/region universes, independently verified sources of truth like US government data and generally accepted industry estimates exist. For highly specialized/customized target audiences and media coverage universes, this is usually not the case.

It is important to note that the Standards require complete transparency and empirical based proofs for producing universe estimates for the more specialized targets. Let’s start with media coverage universes. The broader ones such as the internet user population or total TV households and persons are not particularly challenging. However, when census-like tracking and measurements are the sources of universe estimates, it is important to understand that while perhaps unobtrusive, and entirely based on activities captured by tags, beacons or code, there are technical limitations that can impact the data. Coverage estimates may be limited or biased due to incompatible browsers, players, or certain functional limitations in mobile devices. All limitations like these must be disclosed by measurement organizations and their impact estimated. In-app measurement is especially prone to impacts resulting from technical limitations and incompatibility.

Samples or panels of consumers or devices can be used for estimating coverage and universes, but again, they, too, have limitations which must be disclosed and understood by users of the data.

**Audience Assignment Using Multiple Third-Party Data Sets**

Measurement services often combine their data sets with other third-party data sets to complete information or expand information. Typically, this is done with the intent of enriching the data and its utility for developing advertising targets or developing marketing insights about specifically defined groups in the population.

The Standards state that there are many legitimate methods for using expanded data sets for audience attribution purposes. The requirements for rigor, methodological rationale, empirical proof and quality assurance procedures are outlined in Section 4.3.5 of the Standards document.

Important to note is the requirement that measurement services disclose sources of data along with integration processes. Changes in methods or the data sets used must be fully disclosed. Periodically, validation of the assignment/integration must take place using information that is directly obtained from people or actually observed data relationships, as opposed to being based solely on inference.

The Standards discuss the appropriate use of first party or registration data in determining audience characteristics. In addition, the Standards stipulate that ad request protocols like OpenRTB may include
information about an impression, a user or a device. Characteristics obtained through ad requests may be factored into audience attribution if properly validated and corroborated using other data sources.

Some Questions for the Experts

Given the complexity of today’s measurement, metrics and data landscape, it is incumbent on users to know what questions to ask and how to leverage relevant experts. The last section of this guide provides some suggested questions that marketing and media professionals should be asking of measurement experts when using metrics and data for decision-making. The section begins with the most fundamental set of questions that pertain to quality and adherence to standards. It goes on to cover in house best practices for ascertaining that data are being vetted appropriately. The last two paragraphs cover questions that should be asked regarding reporting of reach and GRPs in digital and cross media campaigns as well as data sources, integrations and deliveries within target audiences.

• The first question to ask when presented with measurement and metrics is, “Are the measurement companies and other data providers accredited by the MRC?” And if the answer is yes, then the next question has to be, “Do the numbers we are using come from products and services that have been accredited?” The reason for the follow up question is that there are companies that have undergone auditing and accrediting of certain products/services they provide, but not necessarily all of their offerings.

• Another simple first step is to ask colleagues if an in-house expert has looked at what data is being used and whether they have vetted it fully. Often, for obvious reasons, one thinks this is being done and only when one stops to actually review, does one discover that no one has vetted data that matter. Moreover, due to both the methodological and technical understanding involved, are the right experts being consulted?

• Are the data reported consistent with relevant standards and any other applicable industry guidelines? For example, are GRPs based on Viewable Impressions that have been filtered for SIVT? In digital video ads cross media campaigns, are duration weights and consistent granular reporting units for impressions being used? If not, you should consider whether the Reach and GRPs within and across the platforms do, in fact, include impressions that are comparable.

• Is the measurement of digital and cross media platform advertising campaigns providing metrics that permit understanding ad deliveries within and across platforms and creative units? Are the reports that are being used for decision-making and transactions appropriately reporting audience-based digital deliveries? Does this hold for each platform and each kind of unit within the platform?

• When multiple data sources are integrated to develop target audiences and measure deliveries within those audiences, is an expert vetting the methods against the Standards? Are appropriate data sources being used? Are the methods disclosed and transparent and are there empirical justifications for projecting/estimating data gaps? Is the in-house expert certain that these methods have been accredited and does he/she believe that this is the best quality data available for the decisions under consideration?
Reference List of Previously Released MRC Standards and Relevant Industry Guidelines:

MRC Minimum Standards for Media Rating Research:

Multi-Channel Digital Video Data Capture, Accumulation and Processing Guidelines:

MRC Viewable Impression Measurement Guidelines (Desktop):
http://mediaratingcouncil.org/081815%20Viewable%20Ad%20Impression%20Guideline_v2.0_Final.pdf

MRC Viewable Impression Measurement Guidelines (Mobile):

MRC Guidelines Concerning Data Integration:
http://mediaratingcouncil.org/MRC%20Guidelines%20Concerning%20Data%20Integration.pdf

MRC Invalid Traffic Detection and Filtration Guidelines Addendum:
http://mediaratingcouncil.org/101515_IVT%20Addendum%20Final%20(Version%201.0).pdf

IAB/MMA/MRC Digital Measurement:
- Ad Impression Measurement Guidelines, U.S. & Global
- Audience Reach Measurement Guidelines
- Desktop Display Impression Measurement Guidelines
- Digital Video Ad Measurement Guidelines
- Mobile In-App Measurement Guidelines
- Mobile Web Measurement Guidelines
https://www.iab.com/guidelines/iab-measurement-guidelines/

IAB Content Taxonomy:

The IAB’s Mobile Location Data Guide for Publishers:

The Digital Advertising Alliance’s Self-Regulatory Principles:
http://www.aboutads.info/principles

The Network Advertising Initiative’s Code of Conduct:
http://www.networkadvertising.org/code-enforcement/code