



# **Digital Video Ad Impression Measurement Guidelines**

**(Formerly titled Broadband Video Commercial Measurement Guidelines)**

**Updated Dec 2009**

**This document was originally published in May 2006 by the Interactive Advertising Bureau (IAB) and its members in collaboration with the Media Rating Council (MRC). The Auto-Play Addendum in Section IX was developed by the IAB's Digital Video Committee and the MRC and released in December 2009 to address growing concerns over digital video advertisements that played automatically (auto-play) upon a webpage load.**

These guidelines, including the Dec 2009 Addendum are meant to be viewed in conjunction with the existing Ad Impression Measurement Guidelines published in 2004.

**This document can be found on the IAB website at: [www.iab.net/dvmeasurement](http://www.iab.net/dvmeasurement)**

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## Table of Contents

<b>I. Background.....</b>	<b>3</b>
<b>II. Measurement Definitions.....</b>	<b>4</b>
<b>III. Digital Video Ad Impression Measurement.....</b>	<b>5</b>
<b>IV. Scope and Applicability .....</b>	<b>5</b>
<b>V. Digital Video Ad Impression Measurement Recommendation .....</b>	<b>6</b>
A. Impression Counting .....	6
B. Buffering and Caching.....	6
C. Filtration .....	7
D. General Reporting Parameters .....	8
E. Disclosure Guidance.....	9
<b>VI. Areas of Further Examination .....</b>	<b>9</b>
<b>VII.Guideline Overview .....</b>	<b>10</b>
<b>VIII. Auditing &amp; Certification.....</b>	<b>10</b>
<b>IX. Auto-Play Addendum – <i>December 2009</i>.....</b>	<b>12</b>
<b>APPENDIX: Preferred Map of Digital Video Ad Measurement .....</b>	<b>14</b>

## I. Background

In November 2004, the IAB's Measurement Task Force, now the Ad Ops Council, with the support of major global organizations involved in the advertising and research disciplines, joined together to issue a global standard for counting online ad impressions.

This initiative marks a number of significant firsts in the advertising industry. This is the first time that any advertising medium has developed a measurement standard that measures the ad itself, as delivered to a consumer, versus other media that measure the programming or content. Interactive is also the first medium to launch a "global" measurement standard that has been accepted by the key industry stakeholder organizations in the U.S., Europe, Asia and Latin America. Other media (such as television, radio and magazines) use different measuring techniques depending on country and region. These firsts are considered major strategic advantages for the Interactive medium.

This continuing landmark effort was intended to free the market from any existing confusion about how ad impressions should be counted and would provide industry transparency to the systems that measure ads. This last part is a critical indication to the maturing of a 10 year industry. With these guidelines, advertisers, agencies and publishers are better able to gauge the performance of their campaigns by standardizing when and how an ad impression is counted. The Measurement Guidelines satisfy the needs of the global media-buying community by offering consistent and accurate data.

The Measurement Guidelines have the support of major online publishers, as well as the nearly 40 major proprietary online ad-server technologies worldwide and major associations in Europe, the U.S. and beyond. The Measurement Guidelines are intended to hasten the growth of Internet advertising spending by simplifying the buying and selling process for advertisers, marketers and publishers.

Among other key points, the Measurement Guidelines offer a detailed definition for counting an ad impression, which is a critical component in establishing consistent and accurate online advertising measurements across publishers and ad serving technologies. In addition to the ad-impression guidelines, the report recommends third-party independent auditing and certification guidelines (U.S. only) for all ad-serving applications used in the buying and selling process.

The Measurement Guidelines did not specifically address specific areas such as wireless, off-line cached media or interactive-based television. These digital-video-specific guidelines are to be viewed in conjunction with the Measurement Guidelines. Where appropriate, sections from the Measurement Guidelines are reiterated in whole or in part for both consistency and clarity.

## II. Measurement Definitions

The following presents the guidance for general “Ad Impression” counting:

“A measurement of responses from an ad delivery system to an ad request from the user's browser, which is filtered from robotic activity and is recorded at a point as late as possible in the process of delivery of the creative material to the user's browser – therefore closest to actual opportunity to see by the user.”

For the purpose of streaming digital video content, “**opportunity to see**” is defined as the point at which the end-user is most likely to actually view a digital video commercial associated with that content (see specifics below).

Two methods are used to deliver ad content to the user – server-initiated and client-initiated. Server initiated ad counting uses the site's web content server for making requests, formatting and re-directing content. Client-initiated ad counting relies on the user's browser to perform these activities (in this case the term “client” refers to an Internet user's browser).

The Measurement Guidelines require ad counting to use a client-initiated approach; server-initiated ad counting methods (the configuration in which ad impressions are counted at the same time the underlying page content is served) are not acceptable for counting ad impressions because they are the furthest away from the user actually seeing the ad.

The following details are key components of the Measurement Guidelines:

1. A valid ad impression may only be counted when an ad counter receives and responds to an HTTP request for a tracking asset from a client. The count must happen after the initiation of retrieval of underlying page content. Permissible implementation techniques include (but are not limited to) HTTP requests generated by <IMG>, <IFRAME>, or <SCRIPT SRC>. Other implementation techniques are acceptable if they maintain the client-initiated, closest “opportunity to see” approach. For client-side ad serving, the ad content itself could be treated as the tracking asset and the ad server itself could do the ad counting.
2. The response by the ad counter includes but is not limited to:
  - a. Delivery of a “beacon,” which may be defined as any piece of content designated as a tracking asset. Beacons will commonly be in the form of a 1x1 pixel image, but the Guideline does not apply any restrictions to the actual media-type or content-type employed by a beacon response.
  - b. Delivery of a “302” redirect or html/javascript (which doubles as a tracking asset) to any location, and
  - c. Delivery of ad content
3. Measurement of any ad delivery may be accomplished by measuring the delivery of a tracking asset associated with the ad.

4. The ad counter must employ standard headers on the response, in order to minimize the potential of caching. The standard headers will include the following:
  - Expiry
  - Cache-Control
  - Pragma
5. One tracking asset may register impressions for multiple ads that are in separate locations on the page; as long as reasonable precautions are taken to assure that all ads that are recorded in this fashion have loaded prior to the tracking asset being called (for example the count is made after loading of the final ad). This technique can be referred to as “compound tracking.” Use of compound tracking necessitates that the ad group can only be counted if reasonable assurance exists that all grouped ads load prior to counting, for example through placing the tracking asset at the end of the HTML string.

As a recommendation, sites should ensure that every measured ad call is unique to the browser. There are many valid techniques available to do this, (including the generation of random strings directly by the server, or by using JavaScript statements to generate random values in beacon calls).

### III. Digital Video Ad Impression Measurement

In an effort to improve online as an advertising medium, the IAB’s Digital Video Committee & Measurement Task Force are announcing a subset of measurement guidelines for digital video ads online, specifically, on-line browser or browser-equivalent based Internet activity that involves streaming video and audio advertising content. These guidelines are principally applicable to Internet media companies and ad-serving organizations. Additionally, planners and buyers can use these Guidelines to assist in determining the quality of digital video ad measurements.

The purpose of this set of guidelines is to lend efficiency to the online ad creation and media buying communities and to foster an environment of open dialogue on outstanding issues and concerns.

### IV. Scope and Applicability

Many names have been used to describe the TV-like “video ad” units in the marketplace. Some of the many names that have been used for this ad placement include: in-stream ads, in-video ads, streaming ads, video ads, multimedia adjacencies, and many others. So as to have a standard term for these ad units, the IAB Digital Video Committee recommends using the name “**Digital Video Ad.**” The Digital Video Committee chose this term because “Digital Video Ads” may appear before (pre-roll), during (mid-roll) and after (post-roll) content.

These recommendations focus on streaming video based advertising. These guidelines do not address streaming audio only ads or video within in-page ad units.

“Digital Video Ads” may appear before, during, and after a variety of content including, but not limited to, streaming video, animation, gaming, and music video content in a player environment. This definition includes Digital Video Ads that appear in live, archived, and downloadable streaming content. Whenever a companion ad is served along with the Digital Video Ad, the publisher should provide a mechanism for tracking all the ads, whether separately or combined, and also fully disclose the methodology of the tracking.

## **V. Digital Video Ad Impression Measurement Recommendation**

### ***A. Impression Counting***

A Digital Video Ad Impression is the measurement of response from a Broadband ad delivery system to an ad request from the digital video content host (facilitated through the user’s browser), which is filtered from robotic activity and is recorded at a point as late as possible in the process of delivery of the creative advertising material to the user’s browser, therefore closest to actual opportunity to see by the user.

A valid digital video ad impression may only be counted when an ad counter (logging server) receives and responds to an HTTP request for a tracking asset from a client. The count must happen after the initiation of the stream, post-buffering, as opposed to the linked digital video content itself. Specifically, measurement should not occur when the buffer is initiated, rather measurement should occur when the ad itself begins to appear on the user’s browser, closest to the opportunity to see.

Measurement of any digital video ad delivery may be accomplished by measuring the delivery of a tracking asset associated with the digital video ad. As a recommendation, digital video ad content providers should ensure that every measured digital video ad call is unique to the browser. There are many valid techniques available to do this, (including the generation of random strings directly by the server, or by using JavaScript statements to generate random values in beacon calls).

### ***B. Buffering and Caching***

Cache busting techniques are required for all sites and ad-serving organizations. The following techniques are acceptable:

1. HTTP Header Controls
2. Random Number assignment techniques to identify unique serving occurrences of pages/ads.

Publishers and ad serving organizations should fully disclose their cache busting techniques to buyers and other users of their data.

Digital Video Ads are frequently associated with significant buffering or caching functions to facilitate the effective delivery and viewing of content on the user’s browser. In these cases ad-measurement should maintain the concept of “opportunity to see.” To reiterate, measurement should not occur when the buffer is initiated, rather measurement should occur when the ad itself begins to appear on the user’s browser, closest to the opportunity to see. Not all media players are currently capable of “exposing” the end of the buffering action, but it is a critical component of the guidelines. Therefore third party technology vendors are encouraged to develop this function as soon as possible.

Measurement of other buffering and caching situations should be evaluated using the “opportunity to see” concept.

### **C. Filtration**

Filtration of site or ad-serving transactions to remove non-human activity is highly critical to accurate, consistent counting. Filtration guidelines consist of two approaches: (1) filtration based on specific identification of suspected non-human activity, and (2) activity-based filtration (sometimes referred to as “pattern analysis”). Each organization should employ both techniques in combination. *Organizations are encouraged to adopt the strongest possible filtration techniques.*

#### **Minimum Requirements**

The following explains minimum filtration activity acceptable for compliance with this guideline:

##### **Specific Identification Approach:**

- Robot Instruction Files are used.
- URL, user agent, and client browser information is used to exclude robots based on exact matches with a combination of two sources: (1) The IAB Industry Robot List and (2) a list of known Browser-Types published by the IAB. In the case of (1), matches are excluded from measurements. For item (2) matches are included in measurements. (Note that filtration occurring in third party activity audits is sufficient to meet this requirement.)
- Disclose company-internal traffic on a disaggregated basis. If company-internal traffic is material to reported metrics and does not represent exposure to ads or content that is qualitatively similar to non-internal users, remove this traffic. Additionally remove all robotic or non-human traffic arising from internal sources, for example IT personnel performing testing of web-pages. A universal or organizational identification string for all internal generated traffic or testing activity is recommended to facilitate assessment, disclosure or removal of this activity as necessary.

##### **Activity-based Filtration:**

- In addition to the specific identification technique described above, organizations are required to use some form of activity-based filtration to identify new robot-suspected activity. Activity-based filtration identifies likely robot/spider activity in log-file data through the use of one or more analytical techniques. Specifically, organizations can analyze log files for:
  - **Multiple sequential activities** – a certain number of ads, clicks or pages over a specified time period from one user
  - **Outlier activity** – users with the highest levels of activity among all site visitors or with page/ad impressions roughly equal to the total pages on the site
  - **Interaction attributes** – consistent intervals between clicks or page/ad impressions from a user



- **Other suspicious activity** – users accessing the robot instruction file, not identifying themselves as robots. Each suspected robot/spider arising from this analysis requires follow-up to verify the assumption that its activity is non-human.

Sites should apply all of these types of techniques, unless in the judgment of the auditor and management (after running the techniques at least once to determine their impact), a specific technique is not necessary for materially accurate reporting. If a sub-set of these techniques are used, this should be re-challenged periodically to assure the appropriateness of the approach.

- Activity Based filtration must be applied on a periodic basis, with a minimum frequency of once per quarter. Additionally, Activity Based filtration should be run on an exception basis in order to check questionable activity. In all cases Organizations must have defined procedures surrounding the schedule and procedures for application of this filtering.

The intent of activity-based filtration is to use analytics and judgment to identify likely non-human activity for deletion (filtration) while not discarding significant real visitor activity. Activity-based filtration is critical to provide an on-going “detective” internal control for identifying new types or sources of non-human activity.

An organization should periodically monitor its pattern analysis decision rule(s) to assure measurements are protected from robot/spider inflationary activity with a minimal amount of lost real visitor activity. The IAB has contracted with ImServices to work with ABCe in Europe to develop a single global Spiders & Bots filtering list. That list includes 300 or more of the most frequently seen Spiders & Bots activity on the net. It is overseen by an industry committee that will work with ImServices to manage that list and make additions and deletions as needed.

If your company uses a third-party ad server, it is important that you check the IAB website occasionally to confirm that your ad serving technology provider is using the up-to-date list. Additionally, publishers and ad serving organizations should fully disclose the significant components of their filtration process to buyers and other users of their data.

#### ***D. General Reporting Parameters***

In order to provide for more standardization in Internet Measurement reporting, the following general reporting parameters are recommended:

Day – 12:00 midnight to 12:00 midnight

Time Zone – Full disclosure of the time-zone used to produce the measurement report is required. It is preferable, although not a current compliance requirement, for certified publishers or ad-servers to have the ability to produce audience reports in a consistent time-zone so buyers can assess activity across measurement organizations. For US-based reports it is recommended that reports be available on the basis of the Eastern time-zone, for non US-based reports this is recommended to be GMT.

Week – Monday through Sunday

Weekparts – M-F, M-Sun, Sat, Sun, Sat-Sun

Month – Three reporting methods: (1) TV Broadcast month definition. In this definition, the Month begins on the Monday of the week containing the first full weekend of the month, (2) 4-week periods –

(13 per year) consistent with media planning for other media, or (3) a calendar month. For financial reporting purposes, a month is defined as a calendar month.

*Additional Recommendation: Dayparts – Internet usage patterns need further analysis to determine effective and logical reporting day parts. We encourage standardization of this measurement parameter.*

### **E. Disclosure Guidance**

An organization's methodology for accumulating Internet measurements should be fully described to users of the data. Specifically, the nature of Internet measurements, methods of sampling used (if applicable), data collection methods employed, data editing procedures or other types of data adjustment or projection, calculation explanations, reporting standards (if applicable), reliability of results (if applicable) and limitations of the data should be included in the disclosure.

Whenever possible, Digital Video Ad impressions arising from differing ad placements (e.g., pre-roll, mid-roll and post-roll content), banner sizes, bit-rates or other publisher-established parameters should be reported with disaggregated detail. If, due to ad-counting software limitations, an organization cannot report the disaggregated detail of these differing ad types, the ranges of ad types included in the reported total should be disclosed.

## **VI. Areas of Further Examination**

The IAB Digital Video Committee and Measurement Task Force acknowledges that there are areas of further examination, not thoroughly addressed in this document and continues to work diligently to explore and clarify these issues for the benefit of the industry. Such areas may include;

- Next generation advertising units
- Next generation video delivery platforms
- Downloadable digital video applications
- Time-based measurement metrics
- Additional measurement metrics such as "mid-point" or "ad finish"
- Various forms of "trickplay", including application minimization/maximization; sound on/off; transfers, etc.

In addition, the Digital Video Committee and Measurement Task Force recognize that there are several non-currency data points that, when utilized, could enhance the accountability of this medium. In capturing initiation of the digital video commercial as previously described, end-point and duration data could enable buyers and sellers to understand the final behavior of consumers (end-users). Although some current technologies might not readily permit this, others will, and evolving technology should eventually allow these attributes to be considered.

## VII. Guideline Overview

Guideline	Recommendation
<b>Ad Counting</b>	Client/Browser-initiated
<b>Buffering &amp; Caching</b>	Measurement Standard = "Opportunity to see"
<b>Measurable Activity</b>	Includes, but is not limited to: <ul style="list-style-type: none"> <li>o Delivery of a beacon, defined as any piece of content designated as a tracking asset</li> <li>o Deliver of a "302 Redirect" or "html/javascript"</li> <li>o Delivery of digital video ad content</li> </ul>
<b>Reporting</b>	Include disaggregated detail for placement, or range of ad types
<b>Filtration</b>	Strongest possible combination of both specific identification and activity-based filtration
<b>Auditing</b>	<ul style="list-style-type: none"> <li>o Counting methods</li> <li>o Processes/controls</li> </ul>

## VIII. Auditing & Certification

For companies who have already been certified, it is recommended that inclusion of Digital Video Ad Measurement be made upon the next regularly scheduled auditing and certification cycle. These digital-video-specific guidelines are intended to be supplemental to the auditing and certification process.

### 1. General

Third-party independent auditing is encouraged for all ad-serving applications used in the buying and selling process. This auditing is recommended to include both counting methods and processing/controls as follows:

- a. **Counting Methods:** Independent verification of activity for a defined period. Counting method procedures generally include a basic process review and risk analysis to understand the measurement methods, analytical review, transaction authentication, validation of filtration procedures and measurement recalculations. Activity audits can be executed at the campaign level, verifying the activity associated with a specific ad creative being delivered for performance measurement purposes.
- b. **Processes/Controls:** Examination of the internal controls surrounding the ad delivery, recording and measurement process. Process auditing includes examination of the adequacy of site or ad-server applied filtration techniques.

Although audit reports can be issued as infrequently as once per year, some audit testing should extend to more than one period during the year to assure internal controls are maintained. Audit reports should clearly state the periods covered by the underlying audit testing and the period covered by the resulting certification.

## 2. US Certification Recommendation

All ad-serving applications used in the buying and selling process are recommended to be certified as compliant with these guidelines at minimum annually. This recommendation is strongly supported by the AAAA and other members of the buying community, for consideration of measurements as "currency."

- a. Special Auditing Guidance for Outsourced Ad-Serving Software Ad serving organizations that market ad-serving/delivery software to publishers for use on the publisher's IT infrastructure (i.e., "outsourced") should consider the following additional guidance:
  - i. The standardized ad-serving software should be certified on a one-time basis at the ad-serving organization, and this certification is applied to each customer. This centralized certification is required at minimum annually.
  - ii. Each customer's infrastructure (and any modifications that customer has made to the ad-serving software, if any) should be individually audited to assure continued functioning of the software and the presence of appropriate internal controls. Processes performed in the centralized certification applicable to the outsourced software are generally not re-performed. The assessment of customer internal controls (and modifications made to outsourced software, if any) is also recommended to be at minimum an annual procedure.

These certification procedures are only necessary for outsource clients who wish to present their measurements for use by buyers.

- b. Special Auditing Guidance for Advertising Agencies or Other Buying Organizations If buying organizations modify or otherwise manipulate measurements from certified publishers or ad-servers after receipt, auditing of these activities should be considered.

There are, in addition to MRC and its congressional supported certification process for the broadcast industry, a number of other certifiers and types and levels of certification are available to ad serving organizations.

For a complete copy of the U.S. Guidelines, frequently asked measurement and certification questions, and a list of IAB member companies who have completed or committed to certification, please visit:

[http://www.iab.net/iab\\_products\\_and\\_industry\\_services/508676/guidelines/campaign\\_measurement\\_audit](http://www.iab.net/iab_products_and_industry_services/508676/guidelines/campaign_measurement_audit)

## **IX. Auto-Play Addendum – December 2009**

### **Scope and Applicability**

This addendum to the IAB Ad-Impression Measurement Guidelines was promulgated for the purpose of providing guidance on the measurement and disclosure of auto-play video ads. This guidance is intended to provide information for interactive publishers, ad serving organizations, rich-media ad-servers, syndicated measurement organizations (where applicable), advertising agencies and marketers for measuring and reporting auto-play video impressions as well as criteria for assessing the reasonableness of measurement techniques and disclosures.

This addendum is applicable to video advertising formats only – including linear video advertising (pre, mid and post-roll) and non-linear video advertising (e.g., overlays, product placements) video advertising. Pure display impressions and rich media based impressions that may auto-execute or load are covered in other guidance pertaining to Auto-Refresh and rich Internet applications. Additionally, in-banner and player-widget video advertising are covered by the IAB Rich Media Guidelines, which remain fully applicable; however, auto-play executions of in-banner and player-widget video advertising should consider the disclosure requirements specified below.

### **Glossary**

Auto-Play Video Ad – A video ad or a video ad linked with video content that initiates “play” without user interaction or without a user actively starting the video (essentially automatically starting without a “play” button being clicked by the user). If a user has a reasonable expectation that he/she will be requesting a video when clicking on a link (for example, a small video icon appears next to the link), this is not considered auto-play and is governed by standard video impression counting procedures.

Auto-Refresh – Internet display advertising, rich media advertising or content that is refreshed without user interaction. Auto-Refresh can be set directly by a user or set by a site without user interaction. Auto-Refresh refers to the action of serving or changing advertising or content in an automatic manner.

### **Auto-Play Video Ad Impression Measurement**

The presence of Auto-Play Video Ads should be disclosed including the parameters and settings surrounding auto-play. If material to total video impressions, the estimated rates of Auto-Play Video Ads should be quantified in the measurement organization’s Description of Measurement Methodology (DOM), based on periodic study (see Disclosure section below). For material levels of Auto-Play Video Ads, quantification and reporting on a campaign basis within production reports directly is preferred, but not required at this time due to current technical limitations.

Auto-Play Video Ads should be measured using a client side counting technique, similar to requirements for conventional display advertising and video ads covered by existing IAB guidelines.

Auto-play parameters should be reasonable for the content type and presentation environment (site and content location, etc).

If the user has a reasonable expectation that they are entering a video environment (based on site titling or video icons next to the link, etc.), this video content is considered standard video and therefore not subject to segregation rules above. Additionally, if a user is aware that a playlist of video is being

executed (clearly disclosed on the site as a list) the follow-on advertising content will not be considered Auto-Play video. Measurement Organizations should refer to the IAB's guidelines on Rich Internet Applications for guidance on the type of user-activity required for counting in environments where little user-interaction may be expected.

Long-form video content, for example television programs available on Internet, may contain structures similar to commercial pods interspersed within the content. Since the user is likely to have a reasonable expectation that such a commercial structure exists when they execute the video these ads do not constitute auto-play. These ads, however, should be counted as they are viewed, essentially not "pre-counted."

IAB display impression guidelines contain specific guidance around the concept of Auto-Refresh. These requirements are triggered when refresh (of advertising) occurs automatically without user action or request. In this case, the display impression guidelines require reasonable Auto-Refresh rates for the associated content type (sports site, news site, stock tickers, etc.) and the guidelines require segregated disclosure of the Auto-Refresh counts if they are material to total impressions by campaign. Auto-Refresh that is user-set is counted as a normal advertising impression. The guidelines for Video Ad Auto-Play are patterned after these existing Auto-Refresh guidelines.

## **Disclosure**

A measurement organization is required to disclose the usage (or presence) of Auto-Play in the measurement of video advertising impressions. This disclosure should be prominently placed in the Description of Measurement Methodology (DOM) of the measurement organization. Parameters surrounding Auto-Play should be disclosed, such as frequency settings, site location, initiation environment (for example, upon first arrival on a home page) and the type of video ads involved.

If material, which is generally defined as greater than 5% of video impressions, the measurement organizations should quantify and disclose estimated rates of auto-play in its DOM. This quantification should be supported by a periodic, at least annual, study based on real production campaigns.

When technologically feasible, quantification and disclosure of auto-play levels by campaign directly in reported results is preferred.

## **Auditing**

The IAB supports transparency and validation of key metrics and has recommended that measurement organizations have metrics audited by an appropriate third-party auditor. The prior guidance supplied by the IAB in this area is fully applicable to auto-play video ad impressions and is incorporated herein. For further information, refer to the IAB Impression Guidelines, which can be found at:

### APPENDIX: Preferred Map of Digital Video Ad Measurement

