Rich Internet Application Impression Measurement Guidelines

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Interactive Advertising Bureau

Rich Internet Application Impression Measurement Guidelines

Introduction

Consistent and accurate measurement of Internet advertising is critical for acceptance of the Internet and is an important factor in the growth of Internet advertising spending. This document establishes a detailed definition for ad-impressions and the measurement of ad-impressions in a Rich Internet Application (RIA), such as AJAX, which is a growing component of general ad-impression measurement on the Internet.

Rich Internet Applications, as relevant to this document, should be considered any type of website, stand alone application, game, widget, etc, that can dynamically load content and/or advertising without reloading the entire application. For example, web sites that move to a Rich Internet Application experience might make subsequent advertising calls after the first page load without an additional full page load.

These guidelines may be used primarily by Internet advertising sellers (herein referred to as “media companies” or “sites”) and ad serving organizations, including third-party ad servers and organizations that serve their own ads, for establishing consistent and accurate measurements in these complex, dynamic applications. They are intended as a guide to accepted practice.

Additionally, this document is intended to provide information to users of Internet measurements on the origin of key metrics, a roadmap for evaluating the quality of procedures applied by media companies and/or ad serving organizations, and certain other definitions of Internet measurement metrics, which are in various stages of discussions.

The definitions included in this document are a continuation of the Measurement Certification Initiative led by the Interactive Advertising Bureau (IAB) and facilitated by the Media Rating Council (MRC), and these guidelines are meant to be addendum to the existing IAB Ad-Impression Measurement Guidelines published in 2004.

Project Participants

AOL Networks
Atlas DMT
comScore
CNET Networks
Dow Jones Online
Fox Interactive Media
ImServices Group
Microsoft Digital Advertising Solutions
Nielsen/NetRatings
Right Media
Travelport / Orbitz Worldwide
Univision Online
ValueClick, Inc.
Walt Disney Internet Group
The Weather Channel Interactive
Yahoo

Scope and Applicability

These guidelines are intended to cover on-line browser or browser-equivalent based Internet activity. Wireless, off-line cached media and Interactive-based television were not addressed in these guidelines due to differences in infrastructure and/or delivery method. Additionally, newer extended metrics that are just beginning to be captured by media companies, such as "flash tracking" or flash sites, are not addressed in this document and will be addressed at a later time.

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1. Measurement Definitions

The following presents the guidance for "Ad Impression" counting in a Rich Internet Application environment built with technologies such as AJAX or JSON. In some cases the definition of an ad-impression is not impacted by these rich internet applications. An "Ad Impression" is defined as:

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.

This Guideline does not govern ads served during the first full page load/HTML request, which are still covered by the original Interactive Audience Measurement and Advertising Campaign Reporting and Audit Guidelines.

The remainder of this section explains how the Rich Internet Application environment is different from the traditional web page environment and the impact these differences have upon measurement.

This Guideline continues to require a client-initiated approach to ad counting. In contrast, 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 in a Rich Internet Application environment because they are the furthest away from the user actually seeing the ad.

The following details are key components of the Guideline:

- In the RIA environment, page-content changes and ad-serving are no longer always clearly linked.
- Therefore, combinations of methods are necessary to trigger counting of ad-impressions in the RIA environment, depending on the presence of one primary heuristic: Strong User Activity.
- Additionally, in certain circumstances where strong user activity is not the primary source of user interaction with the application, we allow the consideration of "focus" in triggering ad-counting.

2. Acceptable Counting Methods

A. Strong User Activity

In many RIA environments, i.e., e-mail applications, mapping, travel searching, etc., significant user activity continues to be present. In instances where significant user activity (clicking through and responding to mail, changing search options through clicking or typing, etc) is present, this activity can be directly tied to ad-serving and counting provided that counting rules are defined in a consistent and fully disclosed manner. User activity considered significant enough to trigger ad-counting is as follows:

- Mouse Button Usage
- Keyboard Activity, Typing (except when used to navigate away from the page – alt-tab, etc).

This counting method closely resembles the current IAB Ad-Impression counting guideline because of the clear linkage of certain pre-identified user-initiated events with ad counting.

In certain cases, other user-controlled input device usage, e.g., mouse hovering for expansion of application content boxes, joysticks or controllers, would also be considered acceptably Strong User Activity if the input is integral to the design of the user interaction in the application.

B. Applications Without Strong User Activity

In special circumstances, due to the nature of the RIA application, there may be no material user activity, for example, a single streaming event (i.e., financial tickers, sports game coverage, long single-stream video content). In these cases the application can be present on the user's browser for considerable time, and could in-fact be viewed, creating a valid opportunity for ad-serving without a natural counting event-trigger. In these cases disclosure and counting must abide by the auto-refresh guidelines of the current IAB Ad Impression Measurement Guidelines.

Current auto-refresh guidelines require the following:

- User-set refresh rates count as implemented.
- Site-set refresh rates are assessed for reasonableness based on the refresh rate and the nature of the content being refreshed.

Ads served through site-set auto-refresh are reviewed for materiality relative to user-initiated ad-served, and if material, site-set auto-refresh counts are disaggregated and described separately.

The organization using the Rich Internet Application, generally the publisher, may have the ability to determine whether the RIA is "in-focus" at the time of the ad count. If the "in-focus" status is known, counts may be differentiated and labeled "in-focus".

A measuring organizations' mechanism and ability (or inability) for determining focus should be disclosed.

3. Caching Guidelines

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

- 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.

4. Filtration Guidelines

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

A. 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/ABCe International Spider & Robot List (or some equivalent) and (2) a list of known Browser-Types (also included in the IAB/ABCe International Spider & Robot List). 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 (1) material to reported metrics; and (2) does not represent exposure to ads or content that is qualitatively similar to non-

internal users, then it should be removed. 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.

B. 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:

1. Multiple sequential activities – a certain number of ads, clicks or pages over a specified time period from one user,
2. 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,
3. Interaction attributes – consistent intervals between clicks or page/ad impressions from a user
4. 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. Additionally, publishers and ad serving organizations should fully disclose the significant components of their filtration process to buyers and other users of their data.

5. Auditing Guidelines

A. 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:

- **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.
- **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.

B. 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."

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:

- The standardized ad-serving software should be audited on a one-time basis at the ad-serving organization, and this audit is relevant to each customer. This centralized auditing is required at minimum annually.
- Each customer's infrastructure (and modifications that a 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. Appraisals performed in the centralized audit 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.

Special Auditing Guidance for Advertising Agencies or Other Buying Organizations

If buying organizations implement process that could affect the ad impression numbers reported by audited publishers or ad-servers, auditing of these activities should also be considered. There are a number of auditing organizations as well as types and levels of accreditation and certification available to ad serving organizations, advertising agencies or other buying organizations.

6. 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.

7. Disclosure Guidance

Any method used for triggering ad-counting (using any of the above methods) must be disclosed during the sales process. This disclosure should include specifics of any time-based metrics used in addition to the specific nature of agreed-upon user interactions or content demarcations. If different trigger methods are combined within campaign, results from different trigger approaches should be disaggregated for reporting purposes, insofar as possible.

Additionally, changes to counting triggers must be disclosed to all affected parties at time of change (if material and mid-campaign, advanced notification is warranted with estimated impact). Changes that occur during campaigns should be disaggregated before and after change for reporting purposes.
Similar to general ad-impression measurements, 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.

The following are examples of the types of information disclosed:

- Nature of Internet Measurements
- Name of Property, Domain, Site, Included in the Measurement
- Name of Measurement Report
- Type of Measurements Reported
- Sampling Methods Used for Browsers not Accepting Cookies or Browsers with New Cookies
- Explanation of Projection Methods Data Collection Methods Employed
- Method of Data Collection
  - Logging Method
  - Logging Frequency
  - Logging Capture Point
  - Types of Data Collected
  - Contents of Log Files
  - Cookie Types
  - Contacts with Users (if applicable)
- Research on Accuracy of Basic Data
- Cookie Participation Percentages
- Latency Estimates
- Rate of Response (if applicable) Editing or Data Adjustment Procedures
- Checking Records for Completeness
  - Consistency Checks
  - Accuracy Checks
  - Rules for Handling Inconsistencies
  - Circumstances for Discarding Data
  - Handling of Partial Data Records
  - Ascription Procedures Computation of Reported Results
- Description of How Estimates are Calculated
  - Illustrations are desirable
- Weighting Techniques (if applicable)
- Verification or Quality Control Checks in Data Processing Operations
- Pre-Release Quality Controls
- Reprocessing or Error Correction Rules
- Reporting Standards (if applicable)
- Requirements for Inclusion in Reports, Based on Minimum Activity Levels Reliability of Results

- Sampling Error (if applicable) Limitations on Data Use
  - Non-sampling Error
- Errors or Unusual Conditions Noted in Reporting Period
- Limitations of Measurement, such as Caching, Multiple Users per Browser, Internet latency

8. Conclusion and Contact Information

This document represents the combined effort of the IAB and MRC to bring consistency and increased accuracy to Internet measurements. We encourage adoption of these guidelines by all organizations that measure Internet activity and/or wish to have their measurements included for consideration by buyers.

For further information or questions please contact the following individuals:

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