Interactive Advertising Bureau
Audience Reach Measurement Guidelines
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Project Participants

AccuWeather.com
AMC Group Online Media Services
AOL
Audit Bureau of Circulations (ABC)
BPA Worldwide
Broadband Enterprises
BuzzLogic
CBS Interactive
CNN.com
Compete, Inc.
comScore
Cox Newspapers, Inc.
Deloitte & Touche, LLP
Disney Interactive Media Group
DoubleClick, Inc.
Ernst & Young LLP
Feeva Technology
Google, Inc.
Hitwise
ImServices Group
Meredith Interactive Media
Microsoft Advertising
Millward Brown USA Inc.
MTV Networks
Nielsen Online
Omniture
Operative
PricewaterhouseCoopers LLP
Quantcast
Reed Business Information US
Scarborough Research
Scripps Network
SourceForge Inc.
The Wall Street Journal Digital Network
TheStreet.com
Univision Online
Weather Channel Interactive (Weather.com)
WebTrends
Yahoo!, Inc.
YuMe Networks
Zango

Scope and Applicability

The recommendations established in these guidelines provide the detailed definitions for measurement of Audience Reach related to Internet-based content or advertising (also herein referred to as "unique" measurements), including appropriate controls, filtration procedures and disclosures associated with this measurement. Also included in these guidelines, because of the closely related processes involved in measurement, is supplemental guidance for Visits and Time Spent. These guidelines are intended to cover on-line browser or browser-equivalent based Internet activity. Additionally, any emerging technology utilizing standard HTTP protocols will be covered by these guidelines.

This document is principally applicable to Internet Publishers, Ad-serving organizations, Syndicated Measurement Organizations and auditors and is intended as a guide to accepted practice, as developed by the Interactive Advertising Bureau (IAB) and the Media Rating Council (MRC). Additionally, Advertisers and Internet planners and buyers at Advertising Agencies can use this document to assist in determining the quality of audience reach measurements.

This document is intended principally to guide the definition and application of measures that are to be used for commercial, revenue-generation purposes, and not necessarily those that may be developed and used for other internal or related non-commercial uses. In addition, it should be noted that where references are made within these guidelines to research studies that are required to develop and support data adjustment procedures and similar calibration methods, these do not necessarily need to be conducted by the measurement organization itself. Indeed, particularly in the case of smaller organizations, such studies may be cost or procedurally prohibitive, and in such cases the organization may rely on relevant work that has been done by others (for instance, by syndicated research providers, or ad-serving organizations, or large measurement organizations, including but not limited to syndicated audience measurement organizations). However, in all cases, the measurement organization must clearly disclose the details of such supporting empirical research, as well as a clear and defensible rationale as to how the referenced study is relevant to the specific case of the property measured.

These guidelines, along with the others that have been developed by the IAB and the MRC, are based on certain foundational principles, which are summarized as follows:

- Client-Initiated Counting is crucial.
    - These guidelines rely on the central concept that counting should occur on the client side, not the server side, and that counting should occur as close as possible to the final delivery of an ad to the client.
- Filtration procedures are necessary to ensure that non-human activities (for example, known or suspected robot/spider originating transactions) are excluded from measurement counts.
- Caching must be appropriately accounted for to ensure that content not actually delivered to a client is excluded from counts.

- The contribution of Internal Traffic to a web site should be excluded from counts, if material, and disclosed to data users.
- Transparency to data users is a paramount goal of these guidelines. Appropriate Disclosures must be made to users concerning the measurement methodologies employed. Appropriate Disclosures also includes the proper labeling of measurement metrics as defined in this Guideline.
- Accountability (record keeping and transaction legitimacy) should remain the purview of the measuring/selling organization and not be delegated exclusively to transaction partners which help facilitate completion of measured transactions. Selling organizations should keep necessary records and evaluate transaction partners for legitimacy, to the extent reasonable.

Syndicated Measurement Organizations often employ procedures that are common with more traditional forms of media measurement, such as in the use of sampling techniques, modeling, ascription procedures, maintaining panels of measured users, etc. In such cases, in addition to the guidance provided herein, the use of other established guidance which is more directly applicable to these organizations and their methodologies (such as the MRC's *Minimum Standards for Media Rating Research*), should be considered.

Contents

1. Audience Reach Measurement Definitions

1.1. Origination of Audience Activity

Audience activity generally consists of counts of Internet users accessing content and/or advertising through one or more Internet applications such as a browser or a browser-equivalent, filtered to remove suspected non-human activity. The foundation for the initiation of Unique Cookie or Unique User counting is a measurable incidence of audience activity, unduplicated for that cookie or that user, respectively, and related to the applicable web-site, property or application, such as a "widget", during the reporting period. This activity should be based on the "client-initiated" concept of counting, whereby audience activity (the request or transaction from the user) originates from a user's browser (or browser equivalent) – i.e., the "client" – and can consist of graphics or content requests, ad requests or search transactions.

Activity that is associated with or arising from the use of a standalone executable application should only be counted towards online audience reach if the application is being used to access content or messaging on the Internet and it is attributable to direct human interaction. Offline (or desktop) usage of an application should not be included. While some organizations may be able to calculate usage statistics for offline use of applications, offline reach measures should not be included in audience reach measurements. This position may be reconsidered at a future time, upon industry study and assessment of the attributes of offline applications' contributions to audience reach.

Beyond the filtration and other controls described herein, if the audience reach measurement organization has high confidence to believe that the audience activity did not originate through legitimate accessing of content or advertising by a user's browser (for example, those originating through robot, spider, fraud or spam activities), the audience activity should be excluded from valid counts. Therefore, Visits or Ad Impressions not meeting quality standards (e.g., that were removed as a result of HTTP invalid user agents, robot and spider filtration, or other forms of filtration) should have associated audience reach activity removed insofar as possible by the measurement organization.

1.2 Definitions of Audience Reach Measurements

1.2.1 *"Unique Cookies"* – A count of unique identifiers (see definition of "cookie" in Sec. 1.4) that represents unduplicated instances of Internet activity (generally visits) to Internet content or advertising during a measurement period.

Unique Cookies do not generally represent unduplicated browsers, users or people accessing Internet content or advertising due to several complexities surrounding the use of cookies and the accurate linkage of this identifier information to the browsers or users involved. Measurement of unique cookies is subject to numerous challenges, as explained elsewhere in these Guidelines (see Sec. 2.1 for details).

1.2.2 *"Unique Browser"* – An identified and unduplicated Cookied Browser that accesses Internet content or advertising during a measurement period. This identification procedure should use an attribution method, generally a cookie identifier, to identify the browser and establish the unduplicated nature of the audience activity during the reporting period. Included here should be an appropriate method, fully disclosed, to account for the potentially inflationary impact of cookie deletion among certain of the cookied browsers that access Internet content.

Web-sites or Properties with multiple domains should consider special sharing rules for cookie information to increase accuracy and provide greater leveraging of unique cookies or unique browser identification. Persistent cookies should be established with a lengthy expiration time, meant to approximate the useful life of the browser technology.

1.2.3 *"Unique Device"* – An unduplicated computing device that is used to access Internet content or advertising during a measurement period. A count of unduplicated devices necessarily accounts for multiple browser usage on an individual computer or other computing device. It may also contribute to an understanding of the number of Unique Users if it informs the number of multiple users who access internet content that are attributable to a single computer or computing device.

Note: While the scope of these guidelines remains limited to on-line browser or browser equivalent activity, and emerging technology that utilizes standard HTTP protocols, this definition of "device" recognizes the possibility of future application of these (or similar) guidelines to other platforms that access internet content and advertising.

1.2.4 *"Unique Users" and "Unique Visitors"* **–** An identified and unduplicated individual Internet user who accesses Internet content or advertising during a measurement period.

While it is possible for census-based measurers to produce counts of Unique Users under these guidelines, the threshold of measurement difficulty for achieving this measure in a census-based environment is quite high (generally because of the difficulty of being able to identify a cookie as a unique person persistently during the measurement period). The measurement organization may utilize algorithms and other data adjustment procedures, utilizing means such as cookies, as well as other possible identification methods such as online or offline studies, to calculate Unique Browsers and Unique Devices. Likewise, census-based measurers may similarly have procedures that ultimately can result in a Unique User metric. However, in order to report a Unique User, the measurement organization must utilize in its identification and attribution processes underlying data that is, at least in a reasonable proportion, attributed directly to a person. For instance, data collected from registrants is one possible source that can be utilized in creating a Unique Users measure by a census-based measurement organization, if registrants represent a reasonable proportion of the total user-base and when appropriate scientific projection methods are used for non-registrants. In no instance may a census measurement organization report Unique Users purely through algorithms or modeling that is not at least partially traceable to information obtained directly from people, as opposed to browsers, computers, or any other non-human element.

If content is pushed to users, this content must have been accessed for this activity to count in the Unique Users reported. Unique Users are filtered to exclude robotic activity to attempt to represent unduplicated individual people interacting with web-sites or properties on the Internet. If the measurements include both pulled content and accessed pushed content, they should be referred to as Unique Users; if no pushed content is included, these can be referred to as Unique Visitors. Herein, we will generally refer to these measurements as Unique Users.

There are similar requirements for syndicated measurement organizations in measuring unique users; these are outlined in the section of this Guideline entitled "5. Syndicated Measurement Organization Procedures."

1.3. Supplemental Definitions

While recognizing that the metrics "Visits" and "Time Spent" are not, in themselves, Audience Reach Measurement metrics, they do represent foundational concepts that serve as a basis for determining the Audience Reach Measurement definitions as detailed in the previous

sections. Therefore, it is appropriate to the purpose of these guidelines that the definitions of these concepts are included herein to better clarify their respective meanings and their contributions to the determination of Audience Reach Measurements. (See Section 9 for additional detail on these concepts)

1.3.1. *"Visit"* (sometimes also called a "session") – A single continuous set of activity attributable to a cookied browser or user (if registration-based or a panel participant) resulting in one or more pulled text and/or graphics downloads from a site.

Inactivity rules that result in the termination of a visit should be fully disclosed by the measurement organization; these disclosures should include both the time thresholds utilized to trigger the inactivity rules, as well as the amount of Time Spent to be credited in those situations where the inactivity rule is activated. For example, a hypothetical inactivity rule may specify that a visit will be terminated if there are 30 consecutive minutes of inactivity, and, in those instances where the rule is triggered after 30 minutes of inactivity, only one minute is to be credited to Time Spent for that portion of the visit. Inactivity thresholds may be determined with the type of content to the measured site as a consideration (for instance, a site that is heavily comprised of streamed video may logically utilize a threshold greater than 30 minutes), and it is expected that future study of internet users' activity patterns will yield optimal inactivity thresholds and rules.

Measures of visits should be filtered to remove robotic activity prior to reporting. Establishing a session/visit can involve making assumptions about user activity and is subject to measurement limitations such as dynamic IP addressing and cookie deletion. The Audience Reach Measurement organization should consider these difficulties when creating rules for determination of sessions/visits.

1.3.2. *"Time Spent"* **–** The amount of elapsed time from the initiation of a visit to the last audience activity associated with that visit. Time spent can be reported on the basis of cookied browsers, registration or panel participation, but in concept should represent the activity of a single cookied browser or user for a single access session to the web-site or property.

The basis for determining Time Spent should be disclosed to data users. In the case of activity measured using cookies, these disclosures should include appropriate information on the methods by which Time Spent was calculated for "single-page" visits that are included in the reported totals (i.e., those visits that consist of just a single page view); in these instances, the time of the beginning of the visit can be determined, but because there is no 2nd "ending" event associated with the visit, the duration of the visit may not be directly determined.

Likewise, disclosures should also include appropriate information on the methods used to determine the precise time at which a session is terminated, and its contribution to the calculation of Time Spent for that session; for example, the method used to estimate how the Time Spent on the last page visited before the termination of a session contributes to the total Time Spent for the session should be disclosed, with appropriate support provided for the method employed..

1.4 Other Definitions

1) Advertisement – A paid message or search transaction, as for example used with goods for sale or calling attention of the public to a marketing or branding message for the promotion of a product or service.

2) Advertiser – An organization, entity or individual that markets a product, service or branding message through the placement of Advertising.

3) Ad Impression - An ad impression takes place when a user requests ad content from a publisher or ad-server. This request should meet conditions for measurement as specified in the IAB Guidelines for the following: Ad Impression Measurement, Digital (Broadband) Video Commercial Measurement, Rich Media Ad Impression Measurement, or Rich Internet Application Ad Impression Measurement, as applicable.

4) Ad-server – a third-party organization that specializes in managing, maintaining, serving, tracking and analyzing the results of on-line advertising campaigns across Publishers.

5) Cookie – a small piece of information (i.e., program code) that is stored on a browser for the purpose of identifying that browser during audience activity and between visits or sessions. Cookies are typically set to expire. Some cookies are intended to remain on the browser temporarily (for example, during a session) and some are persistent in that they are intended to be retained for longer periods.

6) Cookied Browser – A browser that has accepted and stored cookie information, which facilitates identification.

7) Internal Users – An identified browser attributable to or belonging to an employee of the measurement organization (a party in the Audience Reach Measurement transaction stream). Generally, significant activity from internal users for purposes other than legitimate content or advertising viewing or search transactions, for example in testing software or validating creative, is excluded from counts.

8) Publisher – An organization, entity or individual that supplies web content or search content and places advertising for consumption/viewing by users.

9) Syndicated Measurement Organization – Any 3rd Party organization that measures and reports audience activity on the Internet across entities in a consistent manner. Traditionally, these organizations have primarily used a sample or panel of users (or households) who are recruited and tracked using software meters or other automated techniques. Due to the use of meters, web-site or property user-identification techniques such as cookies are not necessary. Some syndicated measurement organizations may also use a hybrid approach (for instance, measurements that result from linking census-based data with data from a sampling approach that supplies demography), while others may in the future utilize other combination approaches or new measurement techniques.

10) Content – Text or image information supplied to users via the Internet, including data transmitted via a web application upon user request. Content may contain advertisements or other forms of advertising messages.

2. Measurement Specifications

Further information on specific measurement techniques for the primary audience reach metrics is as follows, and these apply primarily to publishers, ad servers, and those who rely on the identification of cookied browsers to measure audiences. Information that is specifically pertinent to panel-based measurement, such as that used by most Syndicated Measurement Organizations, is noted separately below**.**

2.1. *Unique Cookies*

Measurement of web content accesses or ad impressions entails counting responses from a web-content or ad delivery system to a request from a user's browser, which is filtered from robotic activity and recorded at a point as late as possible in the process of delivery to the browser – therefore increasing the likelihood that a user viewed the content or ad. Previously issued IAB Ad Impression-related Guidelines require measurement using a client-initiated approach (in this case the "client" refers to an Internet user's browser), and generally required more than one browser/ad server round-trip before measurement of the ad impression. Content delivery should be similar in concept in that a consistent goal of assuring measurement as close as possible to the opportunity to see is desirable.

Upon initiation of content and/or ad impression delivery, the web-site or property may elect to store a cookie on the browser. This cookie should carry identifying information to enable unduplicated counting of browsers that accept cookies. In some cases it is difficult to determine whether the cookie was successfully stored on the browser until

further audience activity is observed from that browser. Because of this and other complexities, special rules should be developed for first-use cookies to reflect this uncertainty.

2.2. *Unique Browsers*

Specifically, included among the recipients of first-use cookies are likely to be a combination of legitimate first-time access instances and repeated access instances from browsers that have deleted cookies or that have not accepted cookies in the past. Additionally, it is not systematically determinable whether a browser with a new cookie or a browser that does not accept cookies has previously accessed the site or web-property. If this activity is not properly adjusted (i.e., accounted for), Unique Cookie measurements will be inflated.

The goal of this adjustment process is to estimate total Unique Browser counts based on the sum of known cookie-accepting unique counts and the estimated unique counts arising from first-use, deleting and non-accepting cookie instances. An audience measurement organization can either use a calibration method (using information from another accredited source) or its own internal estimation method as the basis for this adjustment. If an internal method is used, the estimated unique counts from first-use, deleting and non-accepting cookie instances should be based on a scientifically sound data-model or algorithm that uses information/activity from the cookie-accepting group (for example, reach per volume of impressions) to project unique counts to the first-use, deleting and non-accepting cookie group. The following section describes methods for estimating activity from these groups:

Cookied-Browser Identification and Other Methods of Identification – As previously discussed, Publishers and Ad-servers that conduct Audience Reach Measurements generally rely on "cookies" to link audience activity to a specific browser. This linkage is critical to a census-based measurer's ability to track and attribute content access or other forms of advertising activity to a single browser, both during a visit or across multiple visits during a reporting period. Cookies come in multiple forms and can be applied at different times during a visit; additionally, some cookies are enabled for a visit or session and some are stored on the browser and remain persistent until deleted as a result of browser settings, pre-established cookie expiration timing or deliberate user removal.

Unfortunately, not all browsers are set to accept cookies and users may elect to delete stored cookies during a measurement period – either event breaks the linkage described above and makes the browser or user appear as a first-time visitor would appear, post deletion.

Audience Reach Measurement that employs cookie-based techniques should have certain assumptions documented and available to users of the count data; these assumptions impact the nature of Audience Reach Measurements and the resulting counts. First-use cookie rates, cookie deletion rates, and the level of activity from browsers that do not accept cookies are likely to vary because of different user activity attributes. Each audience reach measurement organization should disclose its processes to account for these groups; these processes should include but are not necessarily limited to the following:

- **Rules for First-Use Cookies and Browsers that Do Not Accept Cookies**
  - Research is necessary to determine standardized rules for how first-use cookies should be counted in Audience Reach Measurement for a web-site or property. In many instances, these first-use cookies may be users who have accessed the site multiple times, but cannot be linked with prior activity due to cookie deletion or the use of multiple browsers.
  - If registration and cookie techniques are not addressable to certain audience activities, other identification methods are sometimes employed. If User-Agent Strings and IP Addresses or other heuristics are used to identify non-registered or non-cookied browsers, these methods should be studied for effectiveness using independent research. *In general, due to rates of cookie deletion and/or dynamic IP addressing, the use of these secondary identification methods is not encouraged without significant research-based support.*

- **Calibration, Sampling and/or Projection Methods used to Identify/Assign Activity Associated with Non-Cookied Browsers**
  - Calibration of known cookied Browsers to total activity using cookie deletion rates provided by an MRC Accredited Measurement Organization (preferred method).
  - Using activity ratios from cookied browsers to project to non-cookied browsers or first-use cookied-browser activity (recommended if Calibration options are not available).
    - Start with Zero for Non-Cookied Browsers or First-Use Cookied Browsers and Use Other Measures (i.e., page impressions, number of visits, etc.) as Basis for Projection. In this case, cookie deletion rates should be studied and considered in the projection procedures.
  - Sample Based Projection (recommended if Calibration options are not available).
    - Selecting Samples of Non-Cookied Browser or First-Use Cookie Browsers to Determine Key Activity Ratios (using other tracking methods

or off-line research), Then Project These Measures to All Non-Cookied Browser or First-Use Cookied Browser Activity

- These methods should be probability based, utilizing random samples of non-cookied browser or first-use cookie browser activity.

- **Hierarchy for Use and Preference of Registration, Cookies and other Identification Methods**

  - The Audience Reach Measurement organization bears the responsibility to research and support the accuracy of methods used.

Cookie deletion rates, calibration methods and sources or estimation methods used to account for first-use, deletion, and non-accepting cookie groups should be disclosed by the audience measurement organization. The audience measurement organization should disclose census-based unique cookie counts and the estimated unique activity from first-use, deletion and non-accepting cookie groups **separately and in aggregate**. If the measurement organization relies on a unified model that makes reporting among these separate groups impossible, it may report these counts in aggregate only, but should be prepared to demonstrate in an audit the ability of its unified model to address each type of cookie completely.

Panel-Based Measurement:
Unique cookie measurement is generally not applicable to Syndicated Measurement Organizations that rely solely on panel tracking and measurement to derive counts of Audience Reach Measurements without the use of cookies.

2.3. *Unique Devices*

Publishers and Ad-servers will generally need to rely on algorithms (data models) to estimate the number of users attributable to the counts of Unique Cookies and Unique Browsers they develop. This algorithm should include an adjustment of the Unique Browser numbers to Unique Devices, therefore accounting for multiple browser usage by individuals and multiple individuals using a single browser. The measurement organization may also choose to report this measure of unique devices; while such measures are not required under these guidelines, if they are reported, they should follow the same general guidelines concerning quality and disclosures as is noted in the following section for data adjustment that results in Unique User counts.

2.4. *Unique Users*

As noted above, Publishers and Ad-servers will generally need to rely on algorithms (data models) to estimate the number of users attributable to the counts of Unique Cookies they develop. The underlying basis for this algorithm should be a study of actual users (i.e., people). Ideally, such a study would be based on direct contact

and/or observation of people using the browser at the time of accessing web-site content or ads with the unique cookie, as well as observation of the number of browsers in use by these users. Additionally, inferences will need to be made about advertising activity of users with non-cookied browsers, so these types of users should also be contacted and observed. Also, the activity of users who access content from multiple locations (home, work, school) on different browsers should be factored into these algorithms.

The resulting study should be representative of, and projectable to, the users of the web-site or property, and periodically re-performed to reflect gradual changes in audience. Known weaknesses in the projection processes should be disclosed to users of Audience Reach Measurements.

Studies performed to provide the basis for adjustment of cookies to users should meet several general quality requirements:

- Samples used to determine user instances should be representative of the users of the site or web property:
  - Random and probability-oriented processes should be used to select samples
  - Studies should include users and activity from all days of the week and across day-parts
  - Sample sizes should be disclosed
  - Response rates for these studies should be calculated and disclosed
- Method of contact, information gathered, and projection methods should be disclosed.
- Any ascription or data attribution procedures applied should be disclosed and quantified.
- Weighting and adjustment procedures should be disclosed and the performance and magnitude of weighting adjustments should be disclosed (for example, the resulting statistical efficiencies).

Syndicated Measurement:
Syndicated Measurement Organizations may track panelist audience activity and/or rely on their own attribution techniques (logging, database matching, activity analysis, etc.) to determine the identity of a specific panelist. These records will be accumulated for web-sites or properties and projected/weighted to totals which represent the Internet accessing population. Syndicated Measurement Organizations, similar to Publishers and Ad-servers, have an obligation to study the effectiveness of their attribution techniques periodically and disclose known weaknesses in the attribution processes.

General Notes:

- Under these guidelines, audience measurement organizations may choose to follow the parameters specified above for reporting Unique Cookies, and/or those for

reporting Unique Browsers, and/or those for reporting Unique Devices, and/or those for reporting Unique Users, or those for all of these measures. However, these guidelines establish that if a measurement organization chooses to report metrics that are specifically referred to as "Unique Cookies," "Unique Browsers," "Unique Devices," or "Unique Users," it must follow the parameters spelled out herein.

- Audience Measurement Organizations should include information for report users that discloses the roles that modeling and calculation play in computing their estimates for audience reach measurements. For example, a Unique Cookies measure may be derived relatively directly from census-based counts of cookies, but other metrics, including Unique Browsers, Unique Devices, and Unique Users, most likely will be arrived at by applying other sources of data to this Unique Cookies count. The measurement organization should disclose to users how it derives these calculated metrics, and this disclosure should include some estimation of the level of confidence that the measurement organization has in both the component parts of this modeled measure, as well as the modeled measure itself. For census based measurers, it is likely that the levels of confidence in the accuracy of each measure will follow the hierarchy of audience measures as explained in Appendix A, with Unique Cookies the measure with the greatest level of confidence, and Unique Users the measure with the least (in a census-based measurement environment), as the latter will require the application of several other data sources in the data adjustment process. For audience reach measurement applications based on panels or other samples, these confidence disclosures are required in the form of disclosures of sampling error and non-sampling error.
- Discussion and supplemental guidance on the measurement of Visits and Time Spent is included in Section 9 of this document.
- Rich Internet Applications such as Ajax can blur the distinction between client-requested content and auto-refreshed content (not attributed to a direct browser request). The IAB recently published a Rich Internet Application Measurement Guideline, which includes recommended measurement methods for this type of application. When web-content and ad updates qualify for measurement under the RIA Guidelines, they qualify for audience activity that can initiate a Visit, Unique Cookie, Unique Browser, Unique Device, or Unique User.
- Similarly, certain multi-tab browsers and other applications allow for multiple pages to be loaded on a single browser in a simultaneous fashion. This raises the issue of "in focus" vs. "out of focus" pages, and how they should be accounted for under these guidelines.
    - In general, the initial load of a page, whether in or out of focus, shall constitute an event that can contribute to the unique cookies and/or unique users tabulations.
    - However, only those pages in which user interaction occurs can contribute to calculations of Time Spent, or to counts of additional impressions beyond the first measured impression.

- Probability-based test results should meet appropriate standards of statistical rigor, and these standards should be fully disclosed in the presentation of any such testing results. For instance, a 95% statistical reliability standard is common among scholarly work in this area.

3. Measurement Controls

Transaction Records

Appropriate transaction records should be maintained for Audience Reach Measurements. Insofar as commercially reasonable, these transaction records should include activity facilitated by transaction partners or facilitators downstream from the content provider (such as third-party or fourth-party servers). These records are an important part of enabling the measurement and filtration procedures described in these Guidelines and should be retained in a manner that can be accessed by the measurement organization to validate/filter audience activity.

Transaction records should include identifying information for the cookied browser (e.g., HTTP header information, cookie identifier(s), IP address, user agent, date, time, etc.) or user (if registration or through syndicated measurement), including historical records sufficient to determine unduplicated occurrences for these metrics across the applicable measurement period. Retention of time and date information for significant audience activity is necessary if time spent is measured, and this information is critical to enable appropriate processing of new measurement periods and cut-off of reporting periods.

In addition, appropriate transaction records should be retained for a commercially reasonable amount of time (ideally, for at least 12 measurement periods, or to the extent allowable by law), to allow for auditing and investigation of errors or customer questions.

If changes are made to this information through the information processing of the measurement organization, these changes should be documented and care should be exercised to not bias or distort the Audience Reach Measurement process.

Ad Impression measurement techniques as previously defined in the IAB Ad Impression measurement guidelines are not changed by this Guideline, unless otherwise noted (these are available at www.iab.net).

Visit Processing

Processing information related to visits (sessions) includes identification of initial cookied-browser or user activity and tracking this information during audience activities for that browser or user attributable to the web-site or property. Additionally, as specified above, certain levels of inactivity can terminate a visit for the identified browser or user. To remain

consistent with previously issued IAB Guidelines, these activities should be measured using a client-side measurement process.

Audience Reach Measurement in a Rich Internet Application (e.g., Ajax) environment should be initiated after initial measurements that are in compliance with the IAB Rich Internet Application Guidelines.

A Browser or User should only be counted once (unduplicated) for Unique Cookie or Unique User measurement, despite the fact that a Cookied Browser or User can have multiple visits during a reporting period.

Furthermore, in all instances related to the reporting of Audience Reach Measurements, the use of the qualifier word "Unique," whether used in regard to "Unique Cookies," "Unique Browsers," "Unique Users," or in any other ways, should be limited only to references to records that have been de-duplicated within the entire reporting period, using all reasonable means at the disposal of the measurer. As a rule, the word "Unique" should not be used in reference to any measures that include duplication within the measurement reporting period (for example, to refer to a weekly average of daily unduplicated users, or any other such metric, as a unique user count for a week is not permitted).

Registration-Based Identification

Web-sites or properties can employ user registration techniques for the purpose of identifying the user, setting custom user content parameters and/or granting access to controlled content. Registration techniques, if properly controlled and executed, can be a reasonable way of identifying unique users to a web-site or property or supplementing other Audience Reach Measurements employed.

There are several issues associated with using a Registration-Based method for Audience Reach Measurement. Among these are: (1) users may not choose to register their identity every time they access content and/or they may have multiple registration IDs; and (2) multiple users may use one computer and may register with other users' identifying information when convenient to do so. Strong efforts should be made to avoid these issues when registration is used by a web-site or property. Additionally, the smaller the component of the web-site or property that is subject to registration (partial-site registration), the lower the likelihood that this information will be complete enough for use in Audience Reach Measurement.

For these reasons, all Audience Reach Measurers, including syndicated measurement organizations, should periodically study the effectiveness of their registration processes and try constantly to maintain effective user compliance with registration processes.

Registration transactions should be maintained in sufficient detail to document Audience Reach Measurement counts and retention of this information should be retained as herein required.

Disclosure of the Methods for Converting to "User" Data

The overall methods used to convert other "Unique" measures (i.e., Cookies, Browsers, and/or Devices) to Unique Users should be disclosed to users of the count data along with a description of the research used to support data adjustment and projection methods. Where applicable, the known limitations in the accuracy of data adjustment and projection methods should be disclosed by the measurement organization.

Data Accumulation

Appropriately controlled data retention and accumulation methods are critical to Audience Reach Measurements because these measurements are derived using audience activity over the reporting period. Additionally, the foundation for Audience Reach Measurement is the identification and attribution of activity to an unduplicated cookied browser or user, which requires appropriate identification and flagging of unique instances, and differentiation of these from return visits or other audience activity.

In some cases these data retention and accumulation methods are applicable across multiple web-sites or properties, so this information should be shared across these entities in a controlled manner with appropriate record-details and time/date information.

Syndicated measurement organizations should maintain appropriate data retention and accumulation methods for panelist or other audience activity and the projection of this information is also subject to data retention requirements.

General Requirements

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

- HTTP Header Controls
- Random Number assignment techniques to identify unique serving occurrences of content/ads.

Publishers and Ad-Servers should fully disclose their cache busting techniques to users of Audience Reach Measurements.

Internal Traffic – Company-internal traffic should be disclosed on a disaggregated basis. If company-internal traffic is material to reported Audience Reach Measurements and does not represent exposure to content or advertising that is qualitatively similar to non-internal users, it should be removed from reported counts. Additionally, all robotic or non-human audience activity that arises from internal sources (for example, IT personnel performing testing of content) should be removed.

Auto Refresh Activity –Activity that results from auto refresh mechanisms is not activity that contributes to the determination of Time Spent or other measurements covered in these guidelines.

Support for Sampling, Modeling or other Data Adjustment Procedures – Audience Reach Measurement organizations that use sampling, modeling or other data adjustment procedures in the production of reported data, should have adequate empirical evidence supporting the accuracy of these techniques as they are applied to the reported data. This includes, but is not limited to, support for the appropriateness of applying such evidence to the varying time frames for which data is reported. This evidence is subject to audit and should be retained for that purpose. Specific disclosure of proprietary models or algorithms to users is not necessary if sufficient empirical evidence exists to support these techniques; nevertheless, the techniques used are still subject to audit.

4. Filtration Procedures

4.1. Filtration of General Audience Activity

Publisher/Ad Server Measurement:
In addition to validity assessments described above, filtration of audience activity to remove non-human activity is highly critical to more accurate and consistent counting. These 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"). Publishers and Ad-servers where applicable, should employ both techniques in combination. Further, all parties are encouraged to adopt the strongest filtration techniques available.

Minimum Requirements - The following explains minimum filtration activity for Publishers and Ad-servers acceptable for compliance with this guideline:

4.1.1. Specific Identification Approach

4.1.1.1. Robot Instruction Files – Robot Instruction Files should be used.

4.1.1.2. Filtration Lists – URL, user agent, and client browser information should be used to exclude robots based on exact matches with a combination of two sources (or some equivalent): (1) The IAB/ABCe International Spider & Robots List and (2) IAB/ABCe International Known Browser Type List. In the case of (1), matches are excluded from measurements. For item (2) matches are included in measurements.

Note: Filtration occurring in third party activity audits commissioned by Publishers and Ad-servers on a regular basis is sufficient to meet this requirement.

4.1.2. Activity-Based Filtration

In addition to the specific identification technique described above, Publishers and Ad-servers should use activity-based filtration to help identify new robot-suspected activity and remove suspected invalid activity. Activity-based filtration helps identify likely robot/spider activity in log-file data and invalid audience activity through the use of one or more analytical techniques. For example, 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.
    - Certain proxy server structures (leading to dynamic addressing, etc.) can increase the difficulty of filtration and other click assessment internal controls – these situations should be considered when structuring click filtration procedures and assessing click counts for validity.
- Outlier activity – in certain cases, where very unusual patterns are noted, outlier activity may be filtered and excluded from valid click counts.
- Interaction attributes – consistent intervals between impressions, content accesses, clicks or page/click-throughs from a user;
- Other suspicious activity.

Measurement organizations should apply all of these 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 is used, this should be re-challenged periodically to assure the appropriateness of the approach. Activity based filtration of audience measurements must be applied on a periodic basis, at minimum quarterly. In all cases, organizations must have defined procedures surrounding scheduling and procedures for application of this filtering.

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

Publishers and Ad-servers should periodically monitor pattern analysis decision rule(s) to assure measurements are protected from robot/spider inflationary activity with a minimal amount of lost real visitor activity.

Note: Activity-based filtration occurring in third party activity audits is sufficient to meet this requirement, assuming it is performed with a sufficient frequency that is consistent with company performed processes (such as quarterly).

Disclosure of Filtration Methodologies

Publishers and Ad-servers should disclose their Audience Reach Measurement methodology to advertisers, agencies and other users of the count data. These disclosures should be sufficient to afford the advertisers, agencies and users a thorough understanding of the Audience Reach Measurement methodology, however, these disclosures should not compromise the necessary security of filtration systems (for further guidance, see "Description of Methodology" below)**.**

Syndicated Measurement:
Syndicated measurement organizations should review measured activity to ensure robotic activity is not included in measured counts.

5. Syndicated Measurement Organization Procedures

Syndicated Measurement Organizations have complex methodologies for selecting, recruiting and maintaining panels (or other methods of user-attribution); collecting data; editing, projecting and weighting data and reporting audience activity. A strength of these organizations is the ability to attribute audience activity to users and the known demography of users in a panel or some other user-attributed data-source. This information is gathered through a combination of manual and automated techniques, some of which can involve direct contact with panelists and some involve use of software metering techniques or other data collection devices.

Similar to census-based measurers, the quality of the user attribution process (logging, activity assessment, etc.) is critical to the measurement accuracy; however, the following additional areas are critical to accuracy among these Syndicated Measurement Organizations:

- Completeness of Frame for Selection of Panelists
- Completeness of Attribution Data-Source (if non-panel)
- Panelist Selection Procedures
- Panelist Characteristic Updating
- Panel Refresh and Turnover-Replacement Procedures
- Panel Cooperation and Incentive Techniques

- Panel Representation Versus Population and Panel Calibration Methods
- Characteristic Attribution Techniques, Including Modeling, Ascription, etc. (if non-panel)
- In-Tabulation Qualification Rules
- Accuracy of Software Meters and other Data Collection Devices
- Completeness of Data Collected
- Information Processing Controls
- Reasonableness and Support for Data Editing Procedures
- Reasonableness and Support for Data Adjustment, Modeling and/or Ascription Techniques
- Reasonableness and Support for Weighting Variables and Models
- Reasonableness and Support for Universe Estimates, Used In Audience Activity Projection
- Accuracy of Data Calculations and Reporting
- Overall Rates of Response
- Disclosure of Standard Errors Associated with Audience Reach Measurements

Due to the complexity and judgmental nature of the procedures applied by these organizations, full disclosure and auditing of the methodologies performed is critical. Accreditation by the Media Rating Council is recommended, similar to other syndicated measurement providers in other media types.

Syndicated Measurement Organizations should make cookie-deletion rate data available to subscribing Publishers and Ad-servers. This data enables the calibration procedure described earlier in the Guidelines and greatly enhances the ability of Publishers and Ad-servers to estimate Unique Browsers. Because panelists may possess special behaviors by virtue of their panel participation, Syndicated Measurement Organizations should study cookie deletion and blocking rates considering non-panelists to ensure these behavioral differences do not bias these estimates.

Likewise, Syndicated Measurement Organizations should disclose the operating systems and major browser types that are not measurable using its meters and/or measurement software. The impact of these exclusions on the reported measurements should also be estimated and disclosed if the Syndicated Measurement Organization is projecting its results to the entire universe of browsers and/or users, regardless of operating system or browser type.

It is unlikely that Audience Reach Measurements from Publishers and Ad-servers will be completely reconciled to those derived by Syndicated Measurement Organizations due to differences in data origination and methodologies involved. Adoption of strong controls and recommended Guidelines for Audience Reach Measurement should help align these measurements to a reasonable degree, however.

6. Auditing Guidelines

6.1. General Auditing

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

6.1.1. 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, validation of invalid audience activity detection and exclusion procedures, validation of general filtration procedures and measurement recalculations.

6.1.1.1. Organizations are encouraged to perform testing to determine the accuracy of measurement, registration, user polling, counting, and modeling methods used in their Audience Reach Measurement processes.

6.1.2. Processes/Controls: Examination of the internal controls surrounding the content access, ad delivery, information processing and other processes relevant to Audience Reach Measurement.

6.1.3. All Filtration Procedures must be subject to audit for reasonableness and completeness as part of measurement certification.

6.2. US Certification

All Audience Reach Measurement applications used in the buying and selling process are recommended to be certified as compliant with these guidelines. This recommendation is strongly supported by the American Association of Advertising Agencies (AAAA), and other members of the buying community, for consideration of measurements as "currency."

Syndicated measurement organizations should seek Accreditation from the Media Rating Council, following the process established by the U.S. Congress for other media types.

7. General Reporting Parameters

Audience Reach Measurement reporting should be consistent with the parameters set forth in Section 5 of the Interactive Audience Measurement and Advertising Campaign Reporting and Audit Guidelines (US Version), June 2004. Reporting periods used in all Audience Reach

Measurements should be clearly and prominently disclosed to users. In addition, all reported data should be made available to users based on Eastern Time Zone (U.S.) time periods (in addition to any others that the audience measurement organization may deem appropriate), to allow users to make comparisons across web sites and properties from a common standard of time reference.

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8. Description of Methodology

Publishers, Ad-Servers and Syndicated Measurement Organizations should make available a Description of Methodology (DOM) document to users of the audience reach measurements, including a description of manual and automated filtration processes. A list of suggested contents of the DOM is included in the IAB Ad Impression Measurement Guidelines (available at www.iab.net), and in general these requirements are applicable to measurements of Audience Reach.

The DOM should provide sufficient detail to establish that employed processes conform with herein contained IAB Guidelines (and other Industry Standards such as the Disclosure Standards Section of the MRC Minimum Standards for Media Rating Research), but not to a level of detail that might either allow other parties to misappropriate filtration techniques/technologies, or for competitors to gain from knowledge of the specific procedures. All such information, however, will be made available to Industry oversight auditors in conjunction with annual certifications.

The DOM should describe the particular counting and reporting methods used. For custom arrangements made specifically between Publishers, Ad-servers or Syndicated Measurement organizations and Advertisers or Ad Agencies, confirmation of these specific terms should be fully disclosed to the transaction participants. Additionally, the DOM should include procedures for adjusting Unique Cookie (or Unique Browser or Unique Device) measurements to Unique User measurements, as applicable.

9. Visits and Time Spent Calculation Rules and Examples

9.1 Visits

A site Visit (or "session") begins with a user-initiated "event," or a request for content that originates from the user's browser. This event also "starts the clock" on the Time Spent measure. Each event within the session extends the Visit, and adds to the Time Spent by the user.

- However, when browser cookies serve as the method by which activity is tracked, as is the case with census measurements by publishers and ad servers, there needs to be at least one additional event subsequent to the initial event associated with the visit for Time Spent to be calculated; otherwise, while the first event serves as a marker by

which to designate the start of a visit, there is no second event to serve as a marker by which the duration of the visit may be measured.

- Accounting for these one-event, "single page visits," is important to the overall calculation of an average Time Spent measure for a site. To ignore these visits in the calculations likely could result in a misstatement of average Time Spent per visit.
- Certain types of sites or web site content may be more likely to result in these single page visits, as is the means through which the user initiates the visit (for instance, accessing the site via a search engine link).

- In the absence of definitive information on the duration of single page visits, publishers and ad servers have the option of estimating the duration of such visits, and factoring this estimate into their calculations of average Time Spent measurements. Such estimates should be derived from empirical data specific to the site for which these estimates are to be used. The method by which such estimates are calculated, as well as the impact these derived estimates have on average Time Spent measures, should be disclosed to users.
- Likewise, "exit page" visits—those visits to the final page requested in a session—also present similar challenges to the calculation of Time Spent for the session as a whole, because they, too, leave no marker by which to determine the precise end point of the session. Methods by which publishers and ad servers estimate the duration of these exit page visits should be disclosed to users, and the contribution these make to the calculation of Time Spent for the sessions, if material to the overall value of Time Spent, also should be disclosed to users.
- Syndicated Audience Measurement Organizations that rely on panel-based approaches to measurement are able to track user activity through a "meter," or similar software-based approach that utilizes a program that is loaded on the panelists' computers, and thereby generally are able to track time spent at a site by a user regardless of whether or not there is a second event associated with the visit.

9.2 Time Spent

All time spent visiting a site that is included in the Time Spent measure should occur within the defined reporting period. Time Spent which occurs in whole or in part outside the reporting period should be excluded from the calculation; however, if a visit overlaps between a reportable and a non-reportable period, the portion of time associated with that visit that occurs within the reportable period may be included.

- Measurement organizations should institute specific "inactivity rules," by which a user visit is terminated and thus excluded from additional contributions to Time Spent after a pre-determined level of consecutive minutes of inactivity. These inactivity criteria should be fully disclosed, and it is expected they may be modified in the future based on evidence from empirical study of the evolution of users' browsing habits.

- Likewise, consideration should be given to establishing a minimum time duration criterion to contribute to Time Spent. For instance, does a 2-second visit contribute to the calculation (or to the estimated duration of single page visits)?
- Users who are accessing multiple sites simultaneously on their browsers may, in theory, contribute to Time Spent at two or more sites at the same time. However, some distinction likely should be made for the differences in opportunity to see among the different sites, based on factors such as the relative prominence of the content on the browser, "in focus" vs. "out of focus" use, or some other logical means. Thus, in a sense, not all Time Spent is created equal; there could be separate measures for Time Spent-1st Order vs. Time Spent-2nd Order, or Time Spent: Prominent View vs. Time Spent: Background view, etc.

Time Spent Examples

The following pages illustrate the calculation of Time Spent under several different scenarios. These include examples of Time Spent calculations under both Census and Panel-Based Measurement environments, as well as in situations in which a multitab browser is employed by the user. These examples are presented using a hypothetical 60-minute reporting window.

Examples: *(These are based on a hypothetical 60-minute reporting period; unless otherwise noted, it is assumed the user's browser will accept cookies)*

Session 1: Session begins at 0:00 and ends session at 0:32, for 32 minutes of uninterrupted minutes of continuous activity.

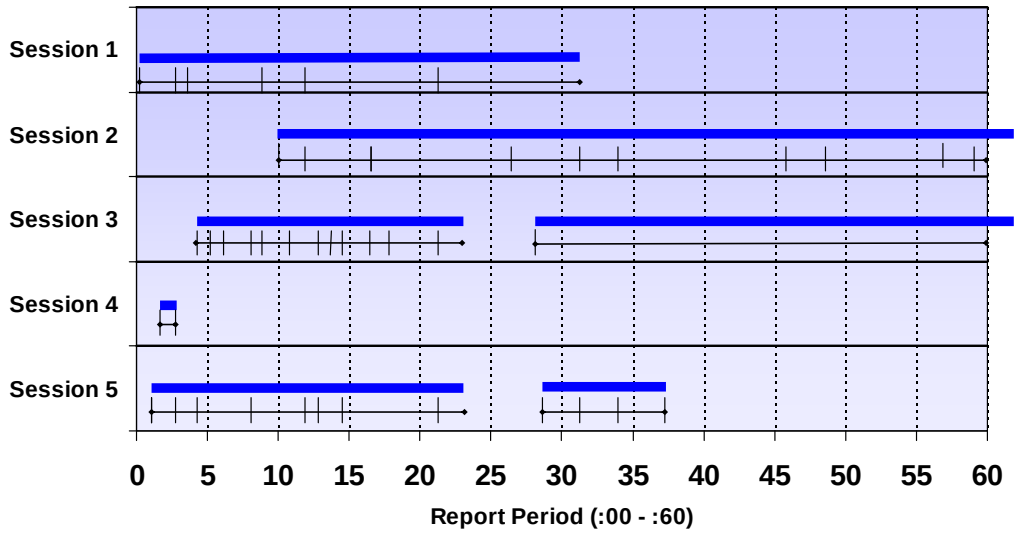
Session 2: Session begins at 0:10 and ends at 1:03, for 53 uninterrupted minutes of continuous activity.

Session 3: 1st session begins at 0:04 and ends at 0:23, for 19 minutes of uninterrupted continuous activity. 2nd session begins at 0:28 and there is no other event associated with this activity through the end of the reporting period.

Session 4: Session begins at 0:02 and ends at 0:03, for 1 minute of uninterrupted activity.

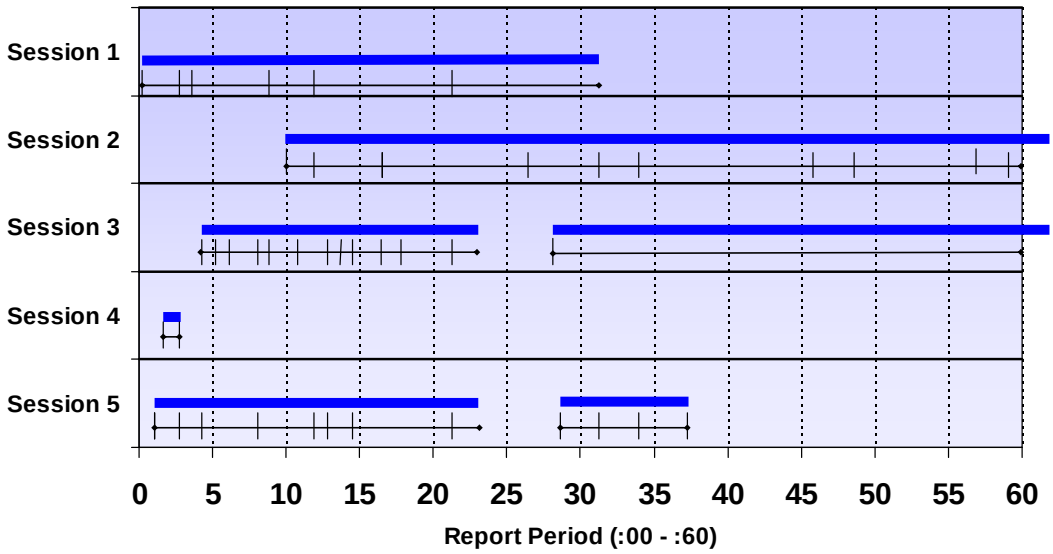
Session 5: 1st session begins at 0:01 and ends at 0:23, for 22 minutes of continuous activity. 2nd session begins at 0:28 and ends at 0:37 for 9 minutes of continuous activity. The user's browser does not accept cookies.

Time Spent Examples



Note: In the above chart, the blue bar denotes the duration of the session noted in the example. The black lines represent user activity within the report period, with the hash marks within these lines representing user driven "events" associated with the session.

Time Spent Measures: Census-Based Approach Examples



Note: These examples assume there is no estimation method or other means in place by which the measurer allocates "exit page" time spent to the overall time spent calculation. If such estimation methods do exist by which exit page time spent contributes to the overall time spent calculation, these methods should be fully disclosed and supported by empirical research, as noted in Sec. 1.3.2 of these Guidelines.

Session 1: While the Session included 32 minutes of uninterrupted minutes of continuous activity, the last "event" associated with the session before it concluded occurred at 0:21, resulting in a Time Spent of 21 minutes.

Session 2: The last event associated with this Session occurred at 0:59, which results in a measure of 49 minutes of Time Spent.

Session 3: The last event associated with the 1st session occurred at 0:22, which results in a Time Spent of 18 minutes for this visit.* While the 2nd session begins at 0:28, there is no other event associated with this 2nd visit, and thus no Time Spent is measured in a census approach. Therefore, the total Time Spent within the report period is 18 minutes (the duration of the 1st visit only).

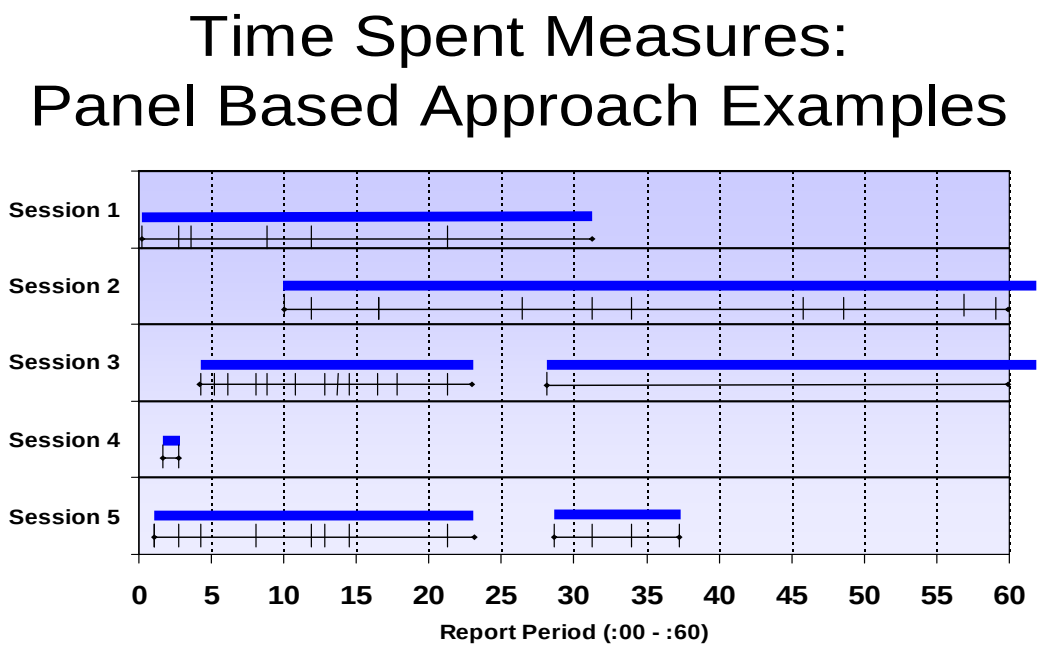
* *Note: Certain organizations that engage in census-based measurement have edit rules in place that bridge gaps in user activity within a session, if they occur within a certain time frame. For instance,*

applied to this example, the existence of a rule that bridges gaps within sessions at a site when that gap is less than 30 minutes in length would result in these events being reported as a single visit, rather than as two separate visits. The reported Time Spent calculation likewise would take into account not only the duration of the visits themselves, but also the time length of the gap between the two visits described above.

If such edit rules exist, they must be fully disclosed to users. In addition, they should be supplemented by empirical research that supports their application, and this research should also be made available to users.

Session 4: The Session begins with an event at 0:02, and ends with another event at 0:03, for a Time Spent measure for the visit of 1 minute.

Session 5: The 1st session begins at 0:01, and the last event associated with the visit occurs at 0:21, for a Time Spent measure of 20 minutes. The 2nd session begins at 0:28 and ends with an event at 0:37, for a Time Spent measure for this visit of 9 minutes. However, because the user's browser did not accept a cookie for either of the two visits, a census-based approach would record the 2nd visit by this user as a unique visit from another user.



Note: This set of examples assumes the use of an inactivity threshold of 30 minutes; in other words, after 30 minutes of inactivity, measurement of the user session is terminated. These examples also assume that if this inactivity rule is invoked, one minute of those 30 minutes of inactivity is credited to Time Spent.

Session 1: The measurement of Time Spent for this session would begin at 0:00 and end at 0:32, for a total of 32 minutes of Time Spent.

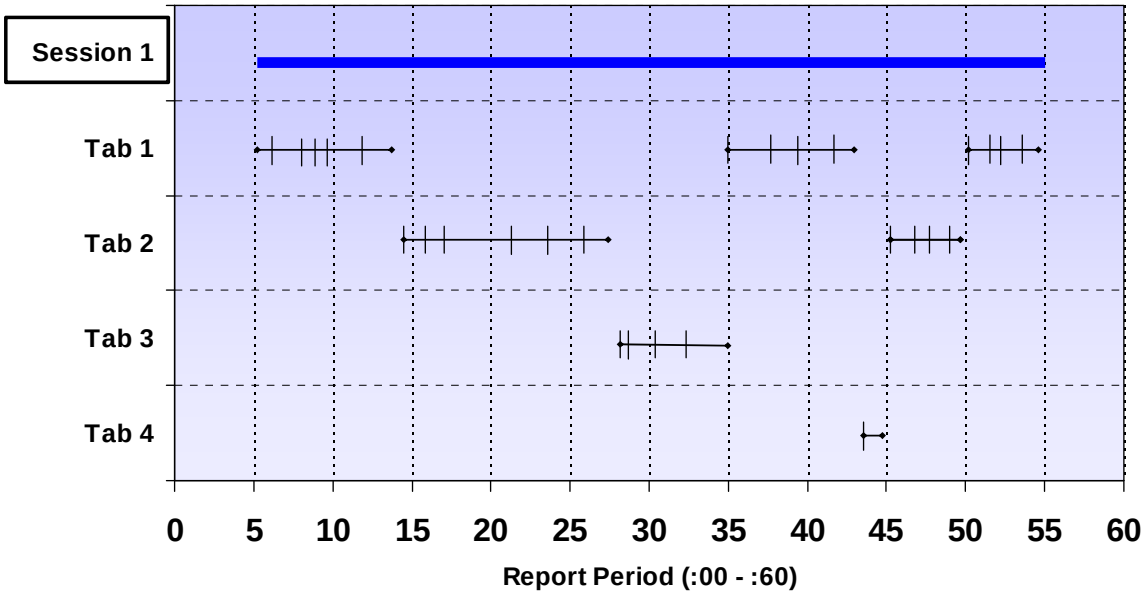
Session 2: Measurement of Time Spent for this visit would begin at 0:10, and end at 0:60 (the end of the report period), for a Time Spent total of 50 minutes.

Session 3: The 1st session, which begins at 0:04 and ends at 0:23, would result in 19 minutes of Time Spent. The 2nd session begins at 0:28; because there is no 2nd event associated with this session, the application of a 30-minute inactivity rule would occur at 0:58, and therefore this 2nd visit would result in only the number of minutes of Time Spent that are to be applied according to a pre-determined crediting rule. For the purpose of this example, it is assumed that the rule for the amount of Time Spent credit to be applied in such inactive periods is 1 minute, and thus, a total of 20 minutes of Time Spent would be credited within the report period for both sessions (the full 19 minutes for the 1st session, plus an additional 1 minute for the 2nd session..

Session 4: This visit would result in 1 minute of Time Spent.

Session 5: The 1st session, which runs from 0:01 to 0:23, would result in 22 minutes of Time Spent, while the 2nd session, which begins at 0:28 and ends at 0:37, would add an additional 9 minutes of Time Spent. Because the panel-based approach would be able to trace this activity to the same user regardless of the browser's acceptance of cookies, the total Time Spent for the user within the report period would be 31 minutes.

Time Spent Measures: Multitab Browser Example



Note: In the above chart, the blue bar denotes the duration of the session noted in the example. The black lines represent user activity within the report period in each of the tabs within the browser, with the hash marks within these lines representing user driven "events" associated with each tab during the session.

In this example, the user begins a session at :05 and ends it at :55 using a multitab browser, in which four different pages are loaded simultaneously, one on each of the browser's four tabs. Tab 1 has loaded a page from hypothetical site "A.com," with which the user interacts for the first 8 minutes of the session. "B.com" is the site in Tab 2, which the user calls into focus at 0:13, and with which the user interacts until 0:28, at which point the user moves to Tab 3, "C.com," with which the user interacts until 0:35. At 0:35, the user returns to site "A.com" on Tab 1 until 0:43, at which point the user opens Tab 4, "D.com," for two minutes. At 0:45, the user re-opens Tab 2 ("B.com"), interacting with this site until 0:50, at which point the user again returns to "A.com," using Tab 1, for the final 5 minutes, before terminating the session.

In this example, each of the four sites included in the browser's four tabs would qualify for counting toward the calculations of unique cookies or unique users as a result of this session's activity. Note that even had Tab 4 not been brought into focus by the user from :43 to :45, it still would be eligible to contribute to the counts of unique cookies or unique users for hypothetical site "D.com."

The Time Spent measures for each of the four sites would be the cumulative time for which each of the sites was in focus to the user during the session, summarized as follows:

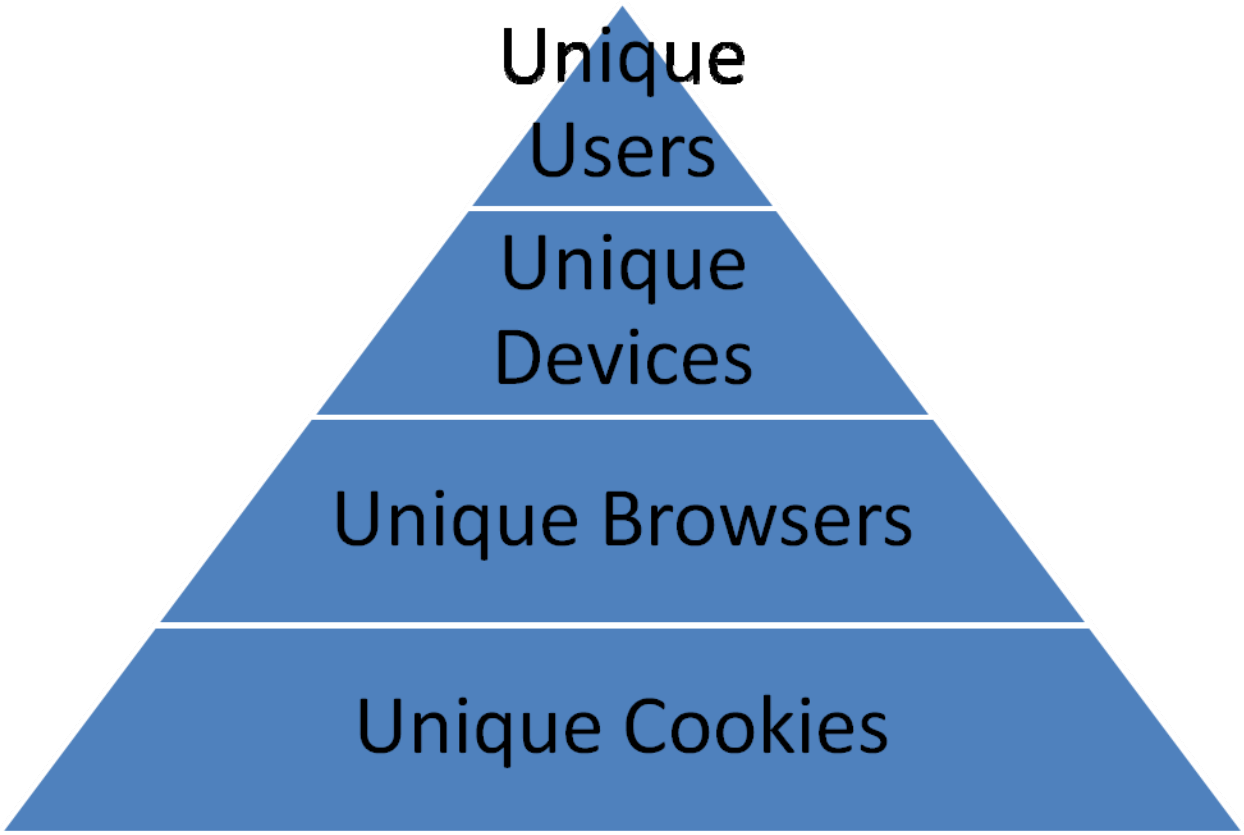
- A.com (Tab 1): 21 minutes (in focus from :05-:13, :35-:43, :50-:55)
- B.com (Tab 2): 20 minutes (:13-:28, :45-:50)
- C.com (Tab 3): 7 minutes (:28-:35)
- D.com (Tab 4): 2 minutes (:43-:45)

Thus, the total cumulative Time Spent for this session by the user is 50 minutes.

Note that in contrast to the situation regarding the calculation of unique cookies or users, had Tab 4 not been brought into focus by the user from :43 to :45, it would not contribute to the calculation of Time Spent. Only those tabs that are in focus can receive Time Spent credit during a user session.

10. Appendix A:

Hierarchy of Audience Measurement Definitions in Census-Based Approaches



Unique Cookies are those unduplicated cookies that represent visits to internet content or advertising during a measurement period.

Unique Browsers result from the count of Unique Cookies after adjustment for cookie deletion.

Unique Devices result from the count of Unique Browsers after multiple browser usage on an individual computer is accounted for.

Unique Users represent unduplicated people who have visited the internet content or advertising during the measurement period. It is the most difficult measure for a census-based measurement organization to report, as the calculation required to reach this metric must include a component that is directly attributable to people, rather than computers or other mechanized devices.