

Guideline for the technical measurement of visibility of online campaigns

Content

1. Introduction (background and goal)
2. Project participants
3. Glossary
4. Process description of the delivery of advertisements
5. Process description of the measurement of visibility of online campaigns (general)
6. Standard criteria for the measurement and analysis of results
 - 6.1 Requirements for the measuring system
 - 6.2 Area of application (browser)
 - 6.3 Measuring base
 - 6.4 Measuring range
 - 6.5 Forms of advertising
 - 6.6 Standard measurements
 - 6.7 Iframes
 - 6.8 Measuring point
 - 6.9 Reporting
 - 6.10 Rules for the communication of measurement results
 - 6.11 Transparent campaign bookings

1. Introduction (background and goal)

The relevance for comprehensive qualitative performance assessment of online advertising is ever-increasing. There are different methods to measure the performance of online advertising - in a quantitative as well as qualitative fashion. An important qualifying feature of the delivery of advertisements is the measurement of visibility. In practice, the visibility of advertisements of an online campaign is either measured by marketers or by media agencies or advertisers or by both parties. The BVDW, Bundesverband Digitale Wirtschaft e.V., has established a lab and has prepared this guideline for the measurement of visibility together with the other market participants.

Goal of this guideline is to ensure the comparability of measuring results and to minimize as much as possible any deviations between the different measuring systems and providers by applying uniform processes, measurement values and reporting. This guideline is to serve as a recommendation for action on the basis of the current state of the art. It is not excluded that in the course of further development of this technology additional standards may be developed.

2. Project participants

The following companies contributed to the present guideline for the technical measurement of visibility of online campaigns (as of 10/2015):

- ➊ Batch Media
- ➋ comScore
- ➌ Dentsu Aegis Network
- ➍ Digital Control
- ➎ InteractiveMedia
- ➏ mediascale
- ➐ Meetrics
- ➑ Pilot
- ➒ Scout24 Media
- ➓ United Internet Media

3. Glossary

Basis: National and international sources¹

➔ Ad impression

Playout of an advertisement via an ad server, initiated by the inquiry of a user (e.g. his browser), adjusted in view of impressions generated by non-human traffic, e.g. search engine scans. The binding reference for the definition of an ad impression can be found in the IAB Measurement Guidelines: http://www.iab.net/guidelines/508676/guidelines/campaign_measurement_audit

➔ Ad visibility

In the following, visibility is used interchangeably.

➔ Fraudulent impression (fraudulent delivery)

Deliveries that are the result of intentionally deceptive acts, manipulating legitimate delivery or counting processes of advertising or creating fraudulent activity leading to inflated figures relevant for invoicing. All fraudulent impressions are invalid (but not all invalid impressions are fraudulent) and impressions that are known to be fraudulent can never be viewable impressions. Some measurement providers of viewable impressions apply additional techniques after having determined the visibility of advertising in order to identify fraudulent impressions and to account for them in the count of their reported impressions.

➔ Iframes

The section of a website/webpage that depicts advertising from a third-party ad server that limits access of this ad server to only the code of the page. Iframes can be nested I frames and this way create a "chain" of serving instances of serving partners. Cross-domain iframes are iframes whose ad tag is on an HTML document that is loaded from a domain that is not the domain that loaded the document transmitting the iframe.

➔ Invalid impressions (invalid delivery)

Impressions that do not fulfill certain quality or completeness criteria regarding delivery of advertising or that are otherwise no legitimate ad impressions that are taken into account in the counting of impressions (impressions counts). Possible reasons why an ad impression may be invalid are, for example, non-human traffic (spiders, bots, etc.) or an activity that pursues the generation of fraudulent page views (see definition fraudulent deliveries).

➔ Measured impression (MI)

Number of successful measurement operations

➔ Measured rate (MR)

Percentage from MI (AI or SMC)

➔ Non-human traffic

Traffic generated artificially by machines or alternative non-human activities.

➔ Served measurement code (SMC)

Number of delivered measurement scripts

¹ <http://www.werbeformen.de/index.php?id=4261>
<http://www.bvdw.org/der-bvdw/glossar.html>
http://www.iab.net/campaign_measurement_audit
http://www.iab.net/member_center/antifraud
<http://www.iab.net/viewability>

➔ **Viewable impression (VI)**

Number of ad impressions that became visible either on the basis of ad slots that became visible or advertisements

➔ **Viewable rate (VR)**

Percentage from VI/MI

➔ **Viewable ad impression**

A delivered ad impression can be assessed as viewable impression if the advertising was displayed in the visible section of the browser, if the current tab of the browser is in the focus, thus visible in the foreground (in-focus browser tab) as well as if a predefined visibility criterion consisting of at least one visible area and a minimum duration of visibility of this area is reached. It is acknowledged that an "opportunity to see" of the impression is given for a viewable ad impression; for a delivered ad impression this can be but doesn't have to be the case.

(Source: Document MRC: Guidelines for the measurement of viewable ad impression (visibility of advertisements; version 9.0 - March 26, 2014)

4. Process description of the delivery of advertisements

Advertising on the Internet is largely delivered via ad serving systems. Including advertisements directly in the source code of the website is a thing of the past and is only rarely practiced these days. The measurement of visibility thus refers to advertising that is inserted into the websites via ad serving systems.

In order for advertising to be placed on websites via ad serving systems, ad slots are defined on the websites. When a user calls up a website, ad servers use the predefined areas on the websites to place advertising. In the simplest case, the ad server inserts the advertisement in the intended ad slot. In practice, however, it is also common for ad servers to not immediately place the advertisement but to deliver JavaScript codes that call up other ad servers in the form of a redirect that then place the advertisement or carry out additional redirects.

By JavaScript codes being able to take over the placement of advertisements, a definite allocation of advertisements and the corresponding ad slots is not always given in practice. The fact alone that an ad server uses a certain ad slot does not allow for a clear conclusion regarding the type of the subsequently placed advertisement, e.g. a super banner ad slot could be used for the layout of a wallpaper. For the measurement of visibility of advertisements, this means that a distinction has to be made between the provision of a useable ad slot and the placement of the advertisement.

Usually, the marketers of websites with their ad serving systems control the technically correct and sufficiently rapid provision of an ad slot. The operators of all participating ad servers are involved in the technically proper placement of the advertisements. This also includes the ad servers of media agencies and advertisers who are involved in the delivery of advertisements.

The reduction in identified figures for viewable ad impressions as a result of using additional verification functions (e.g. non-human traffic) exceeding the identification of visibility can lead to unexplained inconsistencies among measuring service providers when identifying the viewable impressions. Thus, impressions that were removed from the overall number of transmitted viewable impressions as a result of using additional verification functions have to be shown separately.

5. Process description of the measurement of visibility of online campaigns (general)

In order to measure visibility, ad serving systems place JavaScript codes in websites in addition to advertisements anytime these websites are called up by users with the help of browsers.

In practice, the delivery of advertisements in line with an online campaign is determined via media plans that, amongst other things, identify the marketers, the placing, the timeframes and the scope of advertisements to be placed. The implementation of such media plans is carried out via ad serving systems where this information is entered. In addition, besides such information, the standard ad serving systems support the option to allow also for the delivery of the visibility measurement scripts during the implementation of an online campaign. Such measurement scripts could be scripts of third parties, delivered by third parties, or proprietary scripts of the ad serving systems.

The measurement scripts survey whether the ad slot/the advertisement was loaded and rendered in full by the browser of a user and visitor of a website and whether they appear in the section of the browser that can be seen by the user (viewport). For comprehensive websites, it falls to the user and his scrolling behavior as to which areas of the websites will become visible. As a result, there is the possibility that a portion of the advertisement that was placed on the website remains invisible because users do not necessarily scroll into the corresponding areas.

Since some users do not use the browser window in full-screen mode, a minimized browser window can also affect the visibility of ad slots and advertisements. For mobile devices, users also use the option to enlarge the content of a website via a zoom function. For browsers in full-screen mode, this also leads to the fact that ad slots that are shown besides the editorial content are outside of the visible browser section.

Besides the task of the measurement script to determine whether an advertisement was placed correctly on a website called up by a browser and whether it has become visible, the JavaScript also collects additional information regarding use. This way, the measurement script determines whether the browser window is active, or, in technical terms, whether the window is in focus. If the user switches to another browser or application window, the script then identifies the switch in focus and starting at that point it assumes that the advertisement is no longer visible on a previously loaded website.

If marketers as well as agencies measure an online campaign, it has to be ensured that the different measurement scripts do not interfere when it comes to functionality. In addition, it is important to note that the moment when a measurement script starts measuring also depends on the ad serving system that takes over the placement of the measurement script.

A marketer ad server places the measurement script when a website is delivered. However, the marketer ad server will not necessarily also deliver the advertisement but can also initiate a redirect that leaves it up to the agency ad server or other systems to place the advertisement. If the visibility rates for several measurements of a campaign via marketers and agencies show a high degree of differences or if measuring results significantly deviate from the standard values, all parties involved in the measurement of visibility are requested to identify possible sources of errors in their systems or to verify that their systems did not lead to technical issues during the delivery and placement of advertising.

A difference between measurements by marketers and agencies lies in the measurement of the moment of the completed placement of an advertisement. In the case of redirecting the placement of an advertisement to agency ad servers, the ad serving systems of the marketers are able to integrate the measurement script into the respective websites prior to the placement of the advertisement. Agency ad servers generally integrate the measurement script after the placement of the advertisement.

For this reason, further measurement differences can occur, because marketer measurement scripts record the point in time when the placement of the advertisement is completed (measurement of the ad slot), however, agency measurement scripts start measuring at the (later) point in time when the script is loaded and executed (measurement of the delivery of the advertisement or script).

6. Standard criteria for the measurement and analysis of results

Basic assumption

Counting of a viewable impression is carried out upon proof of an ad impression according to the following definition (see www.werbeformen.org/Leistungsnachweis).

6.1. Requirements for the measuring system

The used measuring systems have to be able to measure or calculate the percentage of an area and the duration of visibility of ad slots/advertisements in regard to the presentation in a browser on the basis of predefined parameters such as for example threshold values.

6.2. Area of application (browser)

This guideline refers to the Internet use via the browser families used most often.

At the very minimum, all browser families customary in the market are to be supported that show 95% of all traffic. A list of browser families currently to be supported is attached to this guideline.

6.3. Measuring base

The measuring base is the amount of delivered ad impressions. If necessary, there is the option of a complete survey (measurement of every ad impression) or a partial survey in the form of sampling (measurement of a portion of the delivered ad impression). If a partial survey is conducted, the surveying party has to prove that such partial survey is representative.

Here, the measurement must not be influenced by a selection in view of browsers, operating systems, websites, marketers, connection speeds, countries, times of day, groups of persons and the like in order for the partial survey to actually show a random section of the overall volume. A complete survey should be pursued whenever possible. Methodology and the survey procedure should be shown accordingly.

6.4. Measuring range

Reference point for the measurement of the visible section (viewport) of a browser. During measuring, it has to be ensured that the viewport is an active tab or window of the browser, namely placed in the foreground on the screen. Furthermore, such measuring has to determine whether the defined minimum threshold value, meaning a minimum percentage of the area of the advertisement and a minimum duration is reached. All systems measuring visibility have to be able to show the 50:1 ratio.

Minimum requirements for polling

In an effort to provide consistency among measurement service providers for viewable impressions, the following minimum frequencies for measurement polling are determined to identify the visibility of an ad:

100 milliseconds for processes that concern the visibility of display impressions. These frequencies correspond to 10 subsequent positive observations for a viewable impression of both types. A recording of these observations by the measurement provider for any third parties is not required.

In addition, measurement service providers who are able to monitor browser state changes can use this approach instead of the aforementioned polling requirements up until the point where a change in state is visible (at that point, the above-mentioned frequencies are applied at a minimum). This applies to cases where these monitored changes in state can be attributed to changes in scrolling position, the size/dimensions of the browser and the tab focus.

Ads delivered on pre-fetched or pre-rendered pages are not counted as viewable impressions up until the point where they show up in the visible section of the browser window and meet the above-mentioned criteria for viewable impressions.

6.5. Forms of advertising

In the present version of the guidelines for the measurement of visibility of online campaigns only **standard advertising formats** and advertising formats of the **premium ad package** are taken into account (see www.werbeformen.org).

For expandable advertising formats the non-expanded format counts in general. Advertising formats that are not connected to each other can only be measured individually, e.g. tandem ad. For advertising formats that are connected to each other and that consist of more than one format, such as the wallpaper for example, the entire advertising slot is used for the measurement of visibility.

Video advertising (delivered via video players), mobile advertising and non-standardized special advertising formats according to www.werbeformen.org are currently not part of this guideline.

6.6. Standard measurements

The reference value for the visibility measurement is the measured impression (MI). It is the number of successful measurement operations. The MI volume has to be shown within the reporting. Information in the reporting regarding possible causes for counting differences between AI and MI is preferred.

The results are measured and shown using the parameter

visible according to market standard: yes/no

on the basis of the measured impressions.

6.7. Iframes

In general, it is to be shown whether iframes are to be included in the measurement.

6.8. Measuring point

Mandatory for compliance with this guideline is the measurement of the ad slot or the advertisement of an online campaign. Visibility is to be measured on the end device of the user.

Ad slot: The measuring point of the ad slot is another important quality index to determine the quality in the delivery chain. The measuring point of the ad slot is reached when the ad slot is prepared for the intended advertisement. This includes the transmission of the ad size of the expected advertisement as well as the direct path statement or the redirect to the advertisement.

Advertising material: In order to be measured, the advertisement has to be fully loaded and rendered in the browser and has to be in a final position on the website. Fully loaded and rendered means that the advertisement completely fills its intended ad slot. Reloading (see polite download on www.werbeformen.org) is not part of the verification of the loading process.

6.9. Reporting

The guideline for the technical measurement of visibility of online campaigns also includes the standard structure of reporting. The documentation of measurement results includes, depending on origin (ad server service providers or verification service providers) at least the following information:

Template for verification service providers

1. Served measurement code (SMC)

is the number of delivered measurement scripts

2. Measured impression (MI)

is the number of successful measurement operations

3. Measured rate (MR)

is calculated as the percentage from MI/SMC

4. Viewable impression (VI)

is the number of measurement scripts that became visible either on the basis of ad slots that became visible or advertisements

5. Viewable rate (VR)

is calculated as the percentage from VI/MI

Besides the correct values for these measurement values, the following information is to be shown in the reporting regarding the measuring process:

- **Iframe measurement:** yes/no
- **Complete survey:** yes/no
If a partial survey is conducted, the surveying party has to prove that such partial survey is representative.
- **Measuring point:** Ad slot or advertising material (see 6.8)

Sample reporting:

In one campaign, there are a total of 100 million delivered measurement scripts of which 30 million are classified as visible and 20 million are classified as invisible; for 50 million, the visibility status was not determined.

- **Served measurement codes:** 100 million
- **Measured impression:** 50 million
- **Measured rate:** 50/100 -> 50%
- **Viewable impression:** 30 million
- **Viewable rate:** 30/50 -> 60%

- **Iframe measurement:** no
- **Complete survey:** yes
- **Measuring point:** Ad slot

6.10. Rules for the communication of measurement results

If visibility rates of different measuring systems, based on the same ad impressions of a campaign, while complying with regulations and permissible methods defined in this guideline, such as measuring based on advertising and ad slots, differ from each other by more than 10%, the concerned parties are requested to clarify the cause(s) and give detailed information regarding the applied method to measure the campaign.

Service providers of visibility measurements have to be able to deliver to the customer campaign reporting within one day that covers at a minimum the timeframe up until the previous day in order to be able to assist in an efficient manner in the clarification process in case of differing reporting. In general, the values defined in paragraph 6.9 (reporting) should be used in the communication.

6.11. Transparent campaign bookings

While booking an advertising campaign, it is important to inform all parties involved on the side of the media agency and marketers regarding the following items:

- ➔ Execution of a viewability measurement
- ➔ Naming of measuring providers/measuring systems
- ➔ Goals of the campaign