



Web Analytics

"Big Three" Definitions

Version 1.0

Unique Visitors
Visits/Sessions
Page Views

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INTRODUCTION:

During the second half of 2006 the Web Analytics Association Standards committee embarked on an effort to define what was agreed upon as the three most important metrics – Unique Visitors, Visits/Sessions & Page Views.

The Standards committee determined that these three metrics make up the foundation for most web analytics definitions. In addition, since many other metrics rely on an understanding of these three, the decision was made to focus on these metrics first.

After multiple rounds within the committee a request was sent for feedback to the entire WAA membership base. Comments and feedback were reviewed and the definitions tuned.

While a significant amount of effort was made to collect feedback, we are always open for further comments. Please contact Jason Burby or Angie Brown at standards@webanalyticsassociation.org if you would like to provide feedback.

Definition Framework Overview

There are three types of Web analytics metrics – counts, ratios, and KPIs:

- **Count** — the most basic unit of measure; a single number, not a ratio. Often a whole number (Visits = 12,398), but not necessarily (Total Sales = \$52,126.37.).
- **Ratio** — typically, a count divided by a count, although a ratio can use either a count or a ratio in the numerator or denominator. (An example of a ratio fabricated from ratios is "Stickiness.") Usually, it is not a whole number. Because it's a ratio, "per" is typically in the name, such as "Page Views per Visit." A ratio's definition defines the ratio itself, as well as any underlying metrics.
- **KPI (Key Performance Indicator)** — while a KPI can be either a count or a ratio, it is frequently a ratio. While basic counts and ratios can be used by all Web site types, a KPI is infused with business strategy — hence the term, "Key" — and therefore the set of appropriate KPIs typically differs between site and process types.

A metric can apply to three different universes:

- **Aggregate** — Total site traffic for a defined period of time.
- **Segmented** — A subset of the site traffic for a defined period of time, filtered in some way to gain greater analytical insight: e.g., by campaign (e-mail, banner, PPC, affiliate), by visitor type (new vs. returning, repeat buyers, high value), by referrer.
- **Individual** — Activity of a single Web visitor for a defined period of time.

TERM: Unique Visitors

Type: Count

Universe: Aggregate, Segmented

Definition/Calculation:

The number of inferred individual people (filtered for spiders and robots), within a designated reporting timeframe, with activity consisting of one or more visits to a site. Each individual is counted only once in the unique visitor measure for the reporting period.

Comments:

Authentication, either active or passive, is the most accurate way to track unique visitors. However, because most sites do not require a user login, the most predominant method of identifying unique visitors is via a persistent cookie that stores and returns a unique id value. Because different methods are used to track unique visitors, you should ask your tool provider how they calculate this metric.

A unique visitor count is always associated with a time period (most often day, week, or month), and it is a "non-additive" metric. This means that unique visitors can not be added together over time, over page views, or over groups of content, because one visitor can view multiple pages or make multiple visits in the time frame studied. Their activity will be over-represented unless they are de-duplicated.

The deletion of cookies, whether 1st party or 3rd party, will cause unique visitors to be inflated over the actual number of people visiting the site. Users that block cookies may or may not be counted as unique visitors, and this metric is handled in different ways depending on the analytics tool used. Ask your tool provider how blocked cookies are managed in their tool: it is important to understand how this impacts other metrics with regard to these visitors.

TERM: Visits/Sessions

Type: Count

Universe: Aggregate, Segmented

Definition/Calculation:

A visit is an interaction, by an individual, with a web site consisting of one or more requests for an analyst-definable unit of content (i.e. "page view"). If an individual has not taken another action (typically additional page views) on the site within a specified time period, the visit session will terminate.

Comments:

Different tool providers use different methodologies to track sessions. Ask your tool provider how this metric is computed. A typical time-out period for a visit is 30 minutes, but this time period is configurable in many web analytics applications.

A visit typically consists of one or more page views (see page view definition). However, in the case of sites where interaction consists solely of file downloads, streaming media, Flash, or other non-HTML content, a request for this content may or may not be defined as a "page" in a specific web analytics program but could still be viewed as a valid request as part of a visit. The key is that a visitor interaction with the site is represented.

Visits can be added together over time, but not over page views or over groups of content, because one visit can include multiple pages.

TERM: Page Views

Type: Count

Universe: Aggregate, Segmented

Definition/Calculation:

The number of times a page (an analyst-definable unit of content) was viewed.

Comments:

Most web analytics tools allow the client to specify what types of files or requests qualify as a "page." Certain technologies including (but not limited to) Flash, AJAX, media files, downloads, documents, and PDFs do not follow the typical page paradigm but may be definable as pages in specific tools.

Content, such as XML feeds (RSS or Atom) and emails that can be delivered to both web browsers and non-browser clients are not typically counted as page views because the request or receipt of the content does not always correspond to the content being displayed. As an alternative, image based page tags can be placed inside such content to track the views of all or portions of the content.

Web server responses returning status codes indicating the requested content was missing (400 to 499) or there was a server error (500 to 599) should not be counted as a page view unless the web server has been configured to return a real page in the same response with the status code. Returning a page such as a site map, search page or support request form instead of the default missing or error messages is configurable in the most widely used web serving applications (Apache and IIS).

Web server responses returning status codes indicating redirection to another page (300 to 399) are also not typically counted as page views but can be used to track events such as click throughs with systems specifically designed to use the redirect as a counting mechanism. Most redirect counting is done with a status code of 302.

Within the status codes that indicate a successful response (200 to 299) there are few status codes which also may or may not be counted as a page view: The 202 status code (Accepted) is returned in cases where the request has been accepted by the server and the server might or might not return content to the request at a later time. It is not possible from this response to determine if the content was ever sent so it would typically be excluded from page view counts. The 204 status code (No Response) tells the web browser there is no content to return but no error has occurred so the browser should stay on the page prior to the request. It is essentially a non-event. The 206 status code (Partial Download) usually occurs with the delivery of larger file downloads such as PDFs. This code indicates that only a part of the file was delivered so it typically should not be counted as a page view.

Filtering by status codes to remove requests that should not be counted is generally needed only when processing raw web server log files and is not usually needed in page tag based implementations. Vendors do make different distinctions in deciding what should be counted. Consult your tool provider for more information on your implementation.