

Chapter 6

Use of Web Analytics in Portals

Jana Polgar
Dialog IT, Australia

ABSTRACT

Web analytics are typically branded as a tool for measuring website traffic. They can be equally used as a tool for business research, results of advertising campaigns, and market research. Web analytics provide data on the number of visitors, page views, measure a visitor's navigation through a website, etc. This collection of data is typically compared against some metrics to indicate whether the web site is delivering expected values, what improvements should be considered, and so on. These metrics are also used to improve a web site or marketing campaign's audience response. Tracking portal visits are important in order to obtain a better understanding of which parts of the portal are delivering value. However, portals have unique attributes associated with the page composition techniques, page, and portlet refresh. Portal always presents multiple topics on the same page, which pose specific challenges to explore exciting opportunities allowing the web designer to gain insights about portal usage and user behaviour. Furthermore, portals are inherently multidimensional, and effective tools to monitor and analyse portal data usage must be able to support multidimensional analysis.

WHAT ARE WEB ANALYTICS?

Web analytics (Eric Patterson, 2004) or site analytics are used to provide data about the number of visitors, page views, show the traffic and popularity trends. In portal applications, the key to knowing what to track and monitor is understanding how the site is built and how the

page URL is formed. In addition, portals are often used in conjunction with Content Management Systems (CMS). The use of site metrics to capture and measure user activity primarily to understand end user needs, behaviours and site usability enable the designers to build better portals and better target the content. It is often expected that the knowledge of user behaviour would lead to increases in revenue with better content targeting and can also impact the cost of automatic tuning.

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Site Analytics are also known as being a factor in reduction of testing costs with better designs. In portals, the integration with site analyser tools is often performed by generating reports based on the portal site analyzer logs or manually embedding tags into portlets (JSR 168, 2005) and themes. Well designed portal is expected to provide environment for the necessary collection of analytics data and offer seamless integration of web analytics engine with the portal. Web Analytics are typically gathered in one of following ways:

1. **Server-side log analysis:** It's a fine-grained resource usage reporting method. Web servers record some of their transactions in logfiles. A typical server-side site analytics architecture is based on user interactions and metadata are written to server logfiles hosted on the Portal server. However, analytics engines are often not part of the Portal product.
2. **Active page tagging:** It is a client side script-based real-time reporting method, which collects cached content as well. This concept evolved to include certain information about the page and the visitor. Ajax enables to implement a call back to the server from the rendered page. When the page is rendered on the web browser, AJAX call-back code would call back to the server and pass the information about the visitor. This approach can become a problem considering browser restrictions on the servers which can be contacted with this protocol (XmlHttpRequest objects).
3. **Click analytics:** is a special type of web analytics reporting technique that gives special attention to clicks. The click analytics focuses on on-site analytics. A designer of a web site uses click analytics to determine the performance of the site, with regards to the number of clicks and their position on the web site.

With Web 2.0 the tracking of events has become even more important. The page / portlet designer must determine ahead in time what events are worse while to track and how to track them. However, if the site is using AJAX technology then the tracking of views is not providing expected results (Typically defined as the number of times a page was viewed). In a traditional web page, every click of a link or a button results in a trip to the web server and a reloading of a new page view. In an AJAX enabled web page or portlet refresh these server trips are replaced by the call-back calls, so instead of having several page views, we obtain only single view even though the data is changing constantly. In a site that is built using AJAX or another Web 2.0 technology, the only way to obtain consistent information about the visitor is to track all events.

Google Analytics (GATC) use the method of page tagging technology (Google Analytics Official Site - <http://www.google.com/analytics/>). It is based on a hidden snippet of Java Script that the user adds on every page. The purpose is to collect private visitor data and send it back to Google data collection servers for processing. In essence, GATC loads a large file from the Google web server, sets the variables and associates them with the user account. GATC also uses cookies on each visitor computer to track anonymous information such as returning visitor, timestamp, where from the site is being accessed.

There are of course disadvantages in using cookies. Many browser provide ad filtering extensions and can block GATC. In addition, the privacy networks such as Tor can mask the user's actual location and therefore provide distorted data. Furthermore, cookies can be deleted or blocked which results in loss of data and inaccurate reports. GATC technology is also facing some difficulty with mobile phones due to the usage of cookies and tags.

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