

Web Analytical Tools to Assess the Users Approach to the Web Sites

Suguna L S

A Gopikuttan

Abstract

There are number of web sites available in the World Wide Web. They are aimed at sharing information and services to their users. In order to better serve their needs one has to know the visitors' needs and the site's traffic. This is possible using Web Analytical Tools. They are software which helps to know how often visitors come to the site, tracks visitor conversion across a series of pages, compares the behaviour of different types of visitors, and much more.

Keywords: Website Analysis, Web Analytical Tool, Word Wide Web (WWW)

1. Introduction

A website has been termed as the 'window of the world'- the interface on the Internet through which individuals carry out the interaction, sharing and spreading of information, entertainment, research, conducting of various online programs, etc ¹.

A website is a collection of related web pages, images, videos or other digital assets that are addressed relative to a common Uniform Resource Locator (URL), often consisting of only the domain name, or the IP address, and the root path ('/') in an Internet Protocol-based network. Each webpage is a document, typically written in plain text interspersed with formatting instructions of Hypertext Markup Language (HTML, XHTML). It may incorporate elements from other websites ². All publicly accessible websites collectively constitute the World Wide Web. Each web organization is unique when it comes to its culture, existing systems, IT skills and infrastructure, the need for reporting or analysis etc (even if different organizations are in exactly the same line of business)³.

All sites should also be looking for qualitative input, and the best source of this data is your visitors. Web sites have to be analysed and redesigned from time to time to better serve its users⁴. The analysis will help to know what actually users wanted from your site.

1.1 Website Analysis

Web Analysis is the measurement, collection, analysis and reporting of Internet data for the purposes of understanding and optimizing Web usage. It helps one to estimate how the traffic to the website changes. Web site analysis provides you data on the number of visitors, measure a visitor's journey once on your website, page views, etc. to gauge the traffic and popularity trends⁵. It also includes its drivers and conversions; for example, which landing pages encourage people to make a purchase. This data is typically used to improve a web site on the basis of audience response⁶.

1.2 Web Analytical Tools

Web analytics is an essential part of understanding how websites work and how visitors interact with the website. Numbers, reports, graphs, trends, behaviours are just a few that needs to be taken into consideration and a good web analytics tool is one that is able to give its clients a realistic snapshot of the effectiveness of their website⁷.

Getting started with Web analytics software is a simple and straightforward task, usually involving not much more than adding some script to your site, usually in a header or footer that appears on every page. Modern analytics products make it possible to regularly test the performance of a site or page, trying out different designs. It's easy to know what's happening right now on your site.

2. Choosing a Web Analytical Tool

The world of Web analytics is complicated by the fact that not every software package handles metrics in the same way⁸. The tool should be selected with a sense of what you want to track. The requirements may vary from simple traffic monitoring to complex analyses. An ideal web analytical package is expected to provide -

1. Hits. A hit measures the number of requests for text, images, and files that your web server receives for a given page. The number of hits a site receives depends on the quantum of information the way how it is organized.
2. Visits. The most useful unit of measurement in site analytics is the number of visitors to a particular site or page. The trend in the overall number of visits to your site over time can give you insight into your site's popularity. Comparing the number of visits to each page is also a good way to identify which parts of your site are most useful to your visitors.
3. Unique Visitors. This is the number of site visits by different users. If two people visit the site three times each, you'd have six visits by two unique visitors.
4. Page Views. The number of times any page was viewed by any visitor. Increased page views can indicate a more interesting site, or simply one that requires people to jump through hoops to find what they need.
5. Top Entry and Exit Pages. These are the pages where most people enter your site (and don't assume it's the home page) and where most people leave it.
6. Referrers. These are the external links that people follow to get to your site. For instance, if AWStats links to Google analytic's site, AWStats would show up as a referrer in Google analytic's Web stats. This metric can be very useful just in staying on top of who's talking about you.

7. Search Keywords. Many stats packages can show the words or phrases people typed into search engines like Google or Yahoo in order to get to your site.
8. Visitor Information. You can discover a lot about your visitors through analytics tools, including how many are new to the site, the country or region where they're located, the Web browser they're using, and much more.
9. Click Paths. Also called click tracks, or click trees, these are graphical representations of typical journeys through your site. For instance, a click-path chart might show you that 20 percent of your home page visitors go on to click the Resources link, while 15 percent visit the About Us page, whereby 60 percent then leave the site and 10 percent go to the Board page – and so on.
10. Conversion. Conversion tracks the number of people who did what you wanted them to do from a given starting point – for instance, the percentage of people who viewed your home page and then signed up for your newsletter.
11. Tracking Registered Users. If parts of your site require users to log in, a Web analytics tool can track exactly what those users did during each visit to the site. (Without a login, it's not practical to link up data for a particular person from one visit to another.) This can allow for more detailed analyses and understanding of what different types of visitors are doing on your site⁹.

Bottom-line: If you want to pick the right tool for your Institution you'll have to actually try a couple in real life on your real site before you can decide which one is optimal for you.

3. Steps to Start Web Analytical Tool

Only a few steps are needed to get started.

1. Sign up with user name and password
2. Enter the Website name
3. Enter the URL of the site you wish to track, and assign a name as it should appear in your Analytics reports. If you'd like to track more than one website, you can add more sites once your account has been set up
4. Enter the Account information- Name of the user, country, phone No., email address, etc.
5. Copy the script/ code given by the Analytical package.
6. Paste the code in the source of your website.
7. Receive your web statistics.

4. Analysis

Most of the web analytical tools have more or less the same features. This includes counting the number of hits, page views, popular pages, visitor's location, time of visiting the site, the pages from where the visitor has entered your website, key words used for searching, etc. They are represented in various types of Graphs; Projects, Statistics, Calculations, Methods and Formulas, Testing and Analysis, etc make it easy to understand the web traffic. Some of the popular web analytical tools have been selected for the study. A comparative study is made here. The data for analysis has been selected from each of the web analytic Tool's website.

4.1 Features of Web Analytical Tools

The metrics of each of the tools is represented in Table 1. The analysis shows that *Google Analytics* has almost all features. The second position is with *Site Meter*. The next is *One Stat*. This is followed by *Shiny Stat*, *Stat Counter*, *Go Stats*, *Mind Viz Tracker*, *Web stat*, *W3Counter* and *Free Stat*.

Table 1: Features of Web Analytical Tools

Sl. No.	Features	Site meter	Google Analytics	Mind Viz Tracker	Shiny stat	Stat counter	Free stats	One stat	Go stats	Web Stat.	W3 counter
1	Hits	✓	✓	✓	✓	–	✓	✓	✓	✓	–
2	No. of Visits	✓	✓	✓	✓	✓	–	✓	–	–	✓
3	Unique/individual Visitors	✓	✓	✓	–	✓	✓	✓	✓	✓	✓
4	Page Views.	✓	✓	✓	✓	✓	✓	✓	✓	–	✓
5	Top Entry and Exit Pages	✓	✓	–	✓	✓	✓	✓	✓	–	–
6	Measure all Search Keywords	✓	✓	✓	✓	✓	✓	✓	–	✓	–
7	Visitor Information /visitors map /country	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	Individual visitor's Click Paths& Conversion.	✓	✓	✓	✓	–	–	✓	✓	✓	✓
9	Referrer pages	✓	✓	✓	–	✓	✓	–	✓	–	✓

10	Get an alert if your site goes off-line	-	-	-	✓	-	-	-	-	✓	-
11	Live	✓	✓	-	✓	✓	-	✓	✓	✓	✓
12	Weekly report via e-mail	-	✓	✓	✓	✓	-		✓	-	
13	Search engines/ browsers	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
14	downloads	✓	✓	-	-	✓	-	-	-	-	-
15	Popular pages	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	Time on site	✓	✓	-	✓	-		✓	✓	✓	✓

4.2 Various Versions of Web analytical tools

Most of the web analytical tools are available in various versions. This is represented in Table 2. Many of them offer free versions. Most of the free versions have limited features. And allow sites having limited visitors. Out of the ten Web analytical tools examined here only three offer free trial versions. These trial versions are available only for fifteen days or more. Most of the Web analytical Tools have free versions, trial versions and priced versions.

Table 2: Versions of Web Analytical Tools

Sl. No.	cost	Site meter	Google Analytics	Mind Viz Tracker	Shiny stat	Stat counter	Free stats	One stst	Go stats	Web-Stat.	W3 counter
1	Free version	✓	✓	✓	✓	✓	✓	-	✓	-	✓
2	Free trial versions	-	-	-	✓	-	-	✓	-	✓	-
3	Below \$10	✓	-	-	-	✓	-	-	✓	-	✓
4	\$10to \$1,000 a mont	-	-	-	-	✓	✓	✓	✓	✓	✓

4.3 Reporting of Information

Once the code is added Google, Shiny Stat, One Stat, W3Counter, displays statistics in a custom reporting interface that we can view online (Table 3). In Installed or Downloaded version, you will get information only when you give your Account Information and URL of the website to be analysed. Each time you have to enter the details and get the report.

Table 3: Reporting of Information

Sl. No.	Version	Site meter	Google Analytics	Mind Viz Tracker	Shiny stat	Stat counter	Free Stats	One stat	Go stats	Web-Stat.	W3 counter
1	Online	–	✓	–	✓	–	–	✓	–	–	✓
2	Installed	✓	–	✓	–	✓	✓	–	✓	✓	–

4.4 Easiness in Use

Most of the web Analytical tools are difficult to use. Of the Web Analytical Tools examined here, Google Analytics, Free Stats, One Stat, Go Stats, are the easiest to use. You need to install these Analytic Tools on your site, which involves pasting a chunk of HTML provided by it into every page. Installing the code might take anywhere from a couple of minutes and receive your statistics. Others are little bit difficult, where you need to have some knowledge of script, some more time in giving additional details, installing and downloading process, familiarising with the package, entering data, etc.

4.5 User Aid

Understanding the functioning of the tool is very essential. Most of them provide various types of Graphs; Projects, Statistics, Calculations, Methods and Formulas, Testing and Analysis, etc. In order to assist the use of the data analysis techniques, most of the Web Analytical Tools provide demonstrations. Out of the ten web analytical tools studied here it is only Google Analytics that provides more user aid techniques. This includes demonstrations, video demonstrations, free online courses and user training. Mind Viz Tracker, Shiny Stat and Web Stat gives guide lines as well as video demonstrations.

Table 4: User Aids

Sl. No.	User Aids	Site meter	Google Analytics	MindViz Tracker	Shiny stat	Stat counter	Free stats	One stst	Go stats	Web Stat .	W3 counter
1	Demo/ guidelines	✓	✓	✓	✓	✓	✓	✓	✓	–	✓
2	Video Demo.	–	✓	✓	✓	–	–	–	–	✓	–
3	Free online course	–	✓	–	–	–	–	–	–	–	–
4	User training	–	✓	–	–	–	–	–	–	–	–

4.6 List of Web Analytical tools

Web Analytical Tools are of different types. There is Open Source Software, Hosted web analytics software, Proprietary Software, etc. Detailed lists of almost all web analytical tools with their name, price in US Dollars and the type of software is given in Table 4.6.

Web analytics software released under an open source license are known as Open Source Web Analytical software. The GNU (General Public License) is the most widely used free software license for general use¹⁰. Proprietary software is computer software licensed under exclusive legal right of its owner. The purchaser, or licensee, is given the right to use the software under certain conditions, but restricted from other uses, such as modification, further distribution, etc¹¹. But these Analytical Tools offer a variety of sophisticated and complex analysis.

The third type is web analytics Software hosted as a Service. Web hosts are companies that provide space on a server they own or lease for use by their clients. A web hosting service allows individuals and organizations to make their own website accessible via the World Wide Web. Each site "sits" on its own partition, or section/place on the server, to keep it separate from other sites. This is generally the most economical option for hosting, as many people share the overall cost of server maintenance¹². If your Web site is hosted by a shared hosting company (such as DreamHost or LunarPages), you can likely access some Web statistics through the same control panel you use to administer email addresses, check available file space, and so on. AWStats and Webalizer are the two most common statistics packages available through shared hosting services.

Table 5: List of Web Analytical tools

Sl. No.	Name	Price in USD	Type of software
1	Analog	free	Open Source software (GPL)
2	AWStats	free	Open Source software (GPL)
3	Bango Mobile Web Analytics	From \$49/month	hosted web analytics Software as a Service
4	ClickTale	Free - \$99/month	hosted web analytics Software as a Service
5	Compuware Vantage	Negotiable	web analytics proprietary software
6	CrawlTrack	free	Open Source software (GPL)
7	GoAccess	free	Open Source software (GPL)
8	Google Analytics	Free	hosted web analytics Software as a Service
9	Insight	Negotiable	hosted web analytics Software as a Service
10	InstaVista for Web Analytics	Negotiable	hosted web analytics Software as a Service
11	LogZilla	Free	Mixed(99% open source), including a free version

12	Mint	\$30/Site	web analytics proprietary software
13	MouseTrace Visitor Recording	\$9.95 - \$99.95	hosted web analytics Software as a Service
14	Open Web Analytics	free	Open Source software (GPL)
15	Piwik	free	Open Source software (GPL)
16	Sawmill	mixed, from \$99/profile	web analytics proprietary software
17	SiteCatalyst	Negotiable	hosted web analytics Software as a Service
18	SurfReport	\$695/Site	web analytics proprietary software
19	Tealeaf cx*	Negotiable	web analytics proprietary software
20	TraceMyIP.org	Free-\$29.95/month	hosted web analytics Software as a Service
21	Urchin	\$9995	web analytics proprietary software
22	Visitors	free	Open Source software (GPL)
23	W3Perl	free	Open Source software (GPL)
24	Webalizer	free	Open Source software (GPL)
25	Webtrekk Q3	From \$202/month	hosted web analytics Software as a Service
26	Webtrends	N/A	hosted web analytics Software as a Service
27	Woopra	Free - \$179.95 / mo	hosted web analytics Software as a Service
28	Yahoo! Web Analytics	Free	hosted web analytics Software as a Service

5. Conclusion

Google Analytics is a good default option for a lot of organizations. It is free. Google allows you to analyze your web site in any given time period, instead of being limited to a monthly view and allows you to see the percentage of people that clicked each link on a given page. The right Web analytics package can make a big difference in your ability to understand your visitors' needs and your site's traffic. Choosing the right option means you'll be able to track exactly what people are doing on your site. Of course, if you're familiar with Web statistics tools and want to track more complex trends, then picking a more powerful analytics package of your suit might be the way to go.

References

1. Choudhury, M. M., & Choudhury, A. M. (2010). Identification of the characteristics of e-commerce websites. *Webology* (1), 77.

2. Yahoo Answers. (n.d.). Retrieved Dec 3, 2010, from <http://answers.yahoo.com/question/index?qid=20100720084816AAUSTVm>
3. Free Design. (n.d.). Retrieved Dec 3, 2010, from <http://freedesizn.co.cc/seo/web-analytics-tools-comparison-a-recommendation.html>
4. Information Week. (n.d.). Retrieved Dec 4, 2010, from <http://www.informationweek.com/news/internet/reporting/showArticle.jhtml?articleID=228500159>
5. Face Book. (n.d.). Retrieved Dec 7, 2010, from <http://www.facebook.com/pages/Web-analytics/115016611842624>
6. Creative Intellects. (n.d.). Retrieved Dec 7, 2010, from <http://creativeintellects.com/services/web-analytics/>
7. The best web-analytics-companies. (n.d.). Retrieved Dec 9, 2010, from <http://www.seopressreleases.com/web-analytics-companies-ranked-topseoscom-august-2010/11328>
8. Adopstools. (n.d.). Retrieved Dec 2, 2010, from <http://www.adopstools.com/?section=analytics>
9. Wikipedia. (n.d.). Retrieved Dec 10, 2010, from http://en.wikipedia.org/wiki/Web_analytics
10. *Google Books*. (n.d.). Retrieved Dec 13, 2010, from [http://books.google.co.in/books?id=OCGsutgMdPIC&pg=SA10-PA58&lpg=SA10-PA58&dq=Web+analytics+software+released+under+an+open+source+license+are+known+as+ Open+Source+Web+Analytical+softwar e.+The+GNU+\(General+Public+License\)+is+th&source=bl&ots=JRTpYfiGNk&si](http://books.google.co.in/books?id=OCGsutgMdPIC&pg=SA10-PA58&lpg=SA10-PA58&dq=Web+analytics+software+released+under+an+open+source+license+are+known+as+Open+Source+Web+Analytical+software.+The+GNU+(General+Public+License)+is+th&source=bl&ots=JRTpYfiGNk&si)
11. Proprietary software definition. (n.d.). Retrieved Dec 13, 2010, from <http://www.linfo.org/proprietary.html>
12. Hosting information. (n.d.). Retrieved Dec 13, 2010, from <http://hosting.bianz.in/>

About Authors

Ms. Suguna L S, M. Phil. Student , Dept. of Library and Information science, University of Kerala, Trivandrum - 695034

E-mail: sugunals@yahoo.co.in

Dr. A Gopikuttan, Associate Professor & Head, Dept. of Library and Information science, University of Kerala, Trivandrum - 695 034.

E-mail: agopikuttan@yahoo.co.in