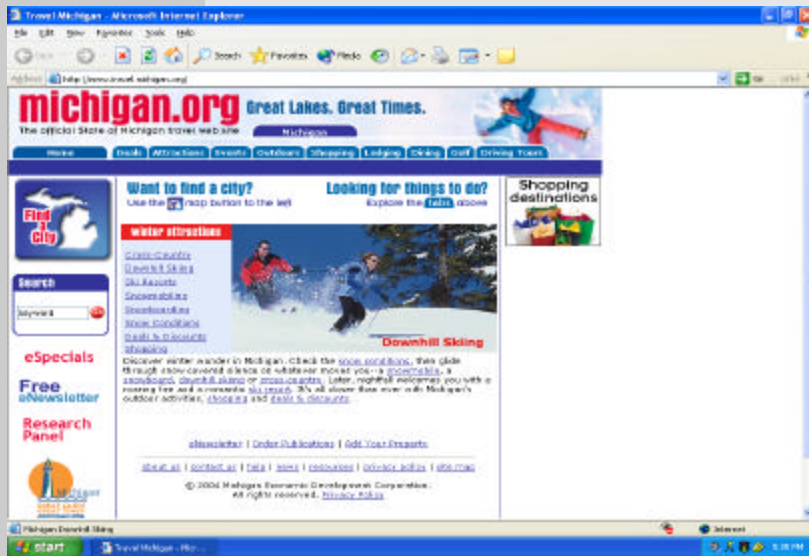


Web site evaluation: terminology and measurement



In Summary:

The Internet has become a powerful communication tool. Tourism web sites need to know how to measure the performance of their web-sites effectively. Some of the measures suggested in this bulletin are user sessions and link popularity. There are other ways to improve an organization's website performance beyond monitoring web traffic alone. These include the engagement of the visitors in the website and his/her active participation in the organization's website efforts.

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March 2004**

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Introduction

In the world of tourism information the Internet plays an important role in the dissemination of information. A tourism web site can communicate the features of a destination efficiently and effectively. The destination website has become a powerful tool that works in alliance with other marketing efforts such as advertising or public relations. Destination marketers have to evaluate and monitor the function of their website in order to know whether it is achieving its goals (e.g. creating awareness, generating greater visitor numbers to a destination).

The purpose of this bulletin is to better understand some of the terminology used in website evaluation and advertising, to assess the strengths and weaknesses of measures currently used in evaluating website performance, and to suggest some courses of action regarding improving web marketing efforts. It is important to understand some of the terminology used in web site performance. The following list of definitions is an attempt to clarify the meaning of these terms.

Measurement web terms (alphabetically)

Click-throughs: Click-throughs are the number of times web site visitors clicked on a link and were transferred to an external web site. It is a custom made measurement application.

Click count: It refers to the number of files/features that the user specifically requested by clicking on them in a web session.

Exposures: Exposures are the total number of times an external link was displayed to visitors on a web site. It is a custom made measurement application.

Home page hits: Number of times a website's home page was visited.

IP address: It is an Internet Protocol number. A computer's unique address when connected to the Internet.

Link popularity: The number of external links on the web pointing to the web site analyzed.

Page views: Hits to files designated as pages. In other words, display of the full webpage.

Path Analysis: The path a visitor takes from the entry page of the website to the exit page.

Unique visitors: Individuals who visited your site during the report period. If individuals visit more than once, they are counted only the first time they visit.

Visits: Number of times a visitor came to your site. If a visitor is idle longer than the idle-time limit, it is assumed that the visit was voluntarily terminated. If the visitor continues to browse the website after reaching the idle-time limit, a new visit is counted. Visits can be used interchangeably with the term web sessions.

Visitors: Individuals who visited the website.

Visitors Who Visited More Than

Once: Number of individual visitors who appear more than once in the log file. Individuals can be tracked by IP addresses, domain names, and cookies. Cookies provide the most accurate count.

Web Sessions or User sessions:

The session of activity that a user with a unique address spends on a website during a specific period of time.

Technical web terms (alphabetically)

Cookies: They are small packets of data that are deposited on the computer hard disk of the user when he/she goes to the website (Inan, 2002). They contain the unique user identifier which identifies the user to a website.

Log file: A file that lists actions that have occurred on a website. For example, Web servers maintain log files listing every request made to the server. With log file analysis tools, it's possible to get a good idea of where visitors are coming from, how often they return, and how they navigate through a site. Using cookies enables Webmasters to log even more detailed information about how individual users are accessing a site. Webtrends and Livestats software are popular tools that can offer this type of analysis.

Tiles: A tile is a graphic area on a web page, usually rectangular, which links to a page internally (same website) or externally (different web site). Tiles are usually used to promote the linked content.

Tracking: Activity, service or software, designed to find out where a link is coming from. Used to reveal effectiveness of web marketing efforts.

Web browser: Software that gives a user access to the World Wide Web. Web browsers provide a graphical interface that lets users click buttons, icons and menu options to view and navigate Web pages. Netscape Navigator and Microsoft Internet Explorer are popular Web browsers.

Web server: A computer that delivers (*serves up*) web pages. Every web server has a unique IP address and possibly a domain name.



Measures of website effectiveness

The previously mentioned terminology may be familiar to destination marketers. However, the use of these terms, especially those related to measurement, might not be as obvious and distinct. There are different ways of monitoring how well a tourism website is doing. In 1999, TIA conducted a mail survey on all states' tourism websites (TIA 1999). Most of the tourism agencies (71%) used *home page hits* as an indicator of the website's traffic, while 69% used the number of *user sessions*. Web site evaluation studies, however, discuss that the *hits* indicator is not as reliable (Mateos, Mera, Gonzalez and Lopez 2001, Perdue 2001, Rohan 1999, Tierney 2000, Warth 2000). This is because a *hit* counts every element that is part of the web page (e.g. banners, frames, graphics). This means the total number of *hits* does not reflect the actual number of visits to the website. A better indicator for measuring traffic in a website is the number of *user sessions*. *User sessions* is more effective measurement because it shows the activity of unique visitors in the website during a specific period of time. Another measure that can be used to monitor visitor's behavior on the website is *path analysis*, which means to monitor the path a visitor takes from the entry page to the exit page. This measure shows how the visitor moves through the website pages.

Some of the research articles on traffic measurement indicate that an alternative measure for *hits* is *link popularity* (Mateos, Mera, Gonzalez and Lopez 2001). *Link popularity* is defined as the number of external links on the web pointing to the web site analyzed. The more web sites linked to the organization's website the more traffic it will potentially receive (Mateos, Mera, Gonzalez and Lopez 2001). This notion of *link popularity* is tangentially related to the term of *click-throughs* (explained in the web related terminology list). A click on an external link on a website (e.g. Travel Michigan web site) will lead to an external travel industry website generating more traffic for that website and resulting in a potential increase of awareness about a destination. The process of link popularity can also be found in the literature as *referrals*. Another accurate measure of activity in a web site is the *click count* method. This measure is useful because it indicates how many people visited the website and the popularity of specific features since it counts the number of clicks on these features.

Some disadvantages of website effectiveness measures

User sessions is generally considered a more reliable measure of website traffic than *hits*. However, there are some disadvantages in using the *user sessions* measurement, which managers need to know. Based on the provided definition a user session refers to the set of activities performed by a single visitor during a single visit to the website. However, visitors cannot be uniquely identified since the log information includes only the IP (computer) address. This means that a user profile cannot be easily generated over several sessions because there is not a positive indication on whether different sessions were conducted by the same user or not. Another issue that must be defined is when a session has stopped. Usually this time is 15 or 20 minutes from the last click. If another individual uses that computer before or after the end of 20 minutes, then the two user sessions would be treated in the analysis as one or two respectively (Cunliffe, 2000). Beyond counting sessions and hits the use of IP address can be challenging too. The disadvantage with the IP addresses is that it counts machines and not people. So it can provide misleading counting information regarding the number of users. AOL, for example, uses many servers (computers) to serve its users, which can result in inflation of the number of unique IP addresses.

Software that monitors web traffic

In order to be able to monitor how the organization's website is performing, the organization will need a software package that monitors how visitors behave in your website (e.g. how much time they spent there, what pages they visited, how many of them are repeat visitors, etc). A web host may offer such software within their web development and support services. Travel Michigan has this type of software and it is used to report on the website traffic, visitors' behavior while they visit the website, most visited pages and other traffic related measures. Some of the software programs (usually called log analysis) that are available in the market have a free trial period. During that period the organization can evaluate how to use this tool and how useful the statistical analysis (log analysis) is for the organization. One provider of such software is webtrends.com where the current cost for this type of software for small businesses is under \$600 for one year. After the first year the organization has to pay for the software updates and maintenance.

Other measures used in managing a website

The *user session* measurement has been widely used in evaluating a website's performance. Unique *user sessions* can provide an organization with information about the effectiveness of marketing efforts. Always check for patterns in everyday use (e.g. one day of the week might be more popular than others or investigate if there is any correlation with the time of launching an advertising campaign and increased numbers of visitors). Other measures of web site use that can help in managing a website more effectively include:

Measure which 10-50 pages are requested the most (the number of pages is decided by the organization). This measure can help the organization decide what resources are most useful to its web users in order to better cater to their needs. For example, the visitors might be looking more into activities or accommodation pages.

Percent of error rate on requested hits. This measurement is derived from the web log by measuring all requests for information that result in an error code (e.g. "404-Page not found error"). This measure can help the web site managers to measure overall site integrity and identify outdated or incorrect links.

Number of repeat visits. This is an indication of the value of the site to the users since measurement of repeat visitation over a specific period of time is usually an indication of satisfaction. (source: www.p2rx.org).

Single view pages: These are pages on the organization's website that visitors open, then exit from, without viewing any other page on the website. This measure is useful because it shows which pages the users want to "land" on directly. Measuring which single view pages are visited the most, website managers can increase the quality of these pages, add more links, more promotional material and take other actions pertinent to the content of that webpage.

Top exit pages: This is the last page visitors view before leaving a website. By observing this behavior, website managers can improve the content of the exit pages to keep the visitor longer on the website or take no action if the exit page is "deeply" located in the website and the action of exiting the website is a relatively anticipated and logical move on behalf of the visitors.



Beyond web site traffic reports

According to Murray (1997) there is a three-step process that will help the business/agency/organization go beyond the media planning evaluation methods of traffic reports and develop methodology for understanding the impact of the organization's Internet investment:

Create an exchange:

The organization should find ways to invite consumers to provide comments and information. The most important information to provide is a contact point (e-mail, telephone number or postal mail).

Engage and invite the consumer through:

Feedback mechanisms

- Be timely in providing feedback after their visit and queries
- Make it easy for users to communicate with the organization. For example, offer them various reply options: fill out an online survey, mail the questionnaire, call an 800 number....
- Consider that consumers on the Internet are changing. When the organization welcomes consumers to its site as valuable assistants or contributors, they respond favorably (for example have a feedback box on the website). Also, in order to detect the changes in the consumers' profiles the organization can conduct periodic follow-ups.

E-newsletters

- Be brief. Use messages that get right to the point. Time is an important factor that filters messages in a person's e-mail inbox.
- Offer an out: always offer the option of being removed from a participation list.
- Consider incentives when engaging website visitors in a website survey but keep it simple and small to avoid multiple entries.

Gather, listen and evaluate :

After the completion of the first two steps the organization can now begin learning about its consumers, its website and the impact the communications environment had on their behavior. This area of information collection moves us to the world of traditional research methodology, meaning that once an organization knows its consumers it can start asking them information about how they perceive its website.

Key point: if the organization does not engage the consumer it can never learn about the impact of communications' program relying only on traffic data measurement.

Conclusion

It is important to understand web terminology and the way the measures work.

Once a web site is created it will be a work in progress.

A tourism web site is the source of travel information and has to be constantly updated and monitored as to how much traffic it generates and what its effectiveness is.

The traffic measures for a tourism website can be *user sessions and link popularity*. For visitor activity while on the website, the measurements of path analysis and click counts can provide useful information to destination marketers.

Exposures and click throughs can provide information about the numbers of visitors that see and click on external links.

Most importantly, the website should be considered as a living organism that needs constant attention and care.



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**This is the fourth paper of the new Marketing and Research paper series created by Travel Michigan and the MSU Dept of Community, Agriculture, Recreation and Resource Studies to better inform Michigan's tourism industry on marketing research topics. The topics of the first, second and third research papers were on conversion studies, word-of-mouth and destination branding respectively. You can view these papers at the following web address:
<http://www.travelmichigannews.org/Research.htm>**