Chapter 11
Web Analytics for Web Site Quality Improvement

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ABSTRACT

Web plays an important role in running business organizations, governments, societies, education sector, scientific organizations, social networks etc. As soon as web application has been deployed into the production environment, some or all of its features are available to the users. Web analytics is used to understand the usage pattern and its behaviour of users. The Web analytics is a procedure of measuring, collecting, analyzing and reporting of Internet data to optimize the business processes and maximize their revenue. Web Analytics is processes of inspecting, analyzing, tracking, measuring and reporting of web data for the purpose of discovering useful information, understanding web site quality, assess and improve the effectiveness of a website.

INTRODUCTION

Web analytics is the measurement, collection, analysis and reporting of web data for purposes of understanding and optimizing web usage. Web Analytics is the science and the art of improving websites to increase their profitability and usability by improving the customer’s website experience. It is a science because it uses statistics, data mining techniques, and a methodical process. It is an art because, like a brilliant painter, the analyst or marketer has to draw from a diverse pallet of colors (data sources) to find the perfect mix that will yield actionable insights. It is also an art because improving websites requires a deep level of creativity, balancing user-centric design, promotions, content, images, and more. Besides, the analyst is always walking the fine line among website designers, IT personnel, marketers, senior management and customers.

As soon as a Web application has been deployed into the production environment, typically by the end of its development, some or all of its features are available to the users. By observing and analyzing...
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the application usage over a certain period of time, it is possible to extract users’ behavior patterns. Using these patterns to modify the application increases the chances to best meet users’ expectations and thus improve their satisfaction. (Michael Beasley; Ypsilanti 2013)

BACKGROUND

History

Web analytics started about 10 years ago with the emergence of the Internet, when its audience started to grow significantly and other media were showing increasing interest and concern for the World Wide Web. Web analytics tools have been designed to gather and parse Web servers log files, compute metrics from the extracted data, and generate text reports. With technologies’ evolutions, new data-gathering methods have been developed and reports have been enhanced with tables and graphics. It focuses on in-depth comparison of available visitor data, referral data and site navigation pattern. The diagram below (Figure-1) gives a visual look of how web analytics has advanced with time (Web Analytics & usability Blog).

Evolution of Web

Web is the largest transformable-information construct that its idea was introduced by Tim Burners-Lee in 1989. Much progress has been made about the web and related technologies in the past two decades. Web 1.0 as a web of cognition, web 2.0 as a web of communication, web 3.0 as a web of co-operation and web 4.0 as a web of integration are introduced such as four generation of the web since the advent of the web. Overall Evolution of the World Wide Web during its existence can be categorized into three phases (FIGURE 2).

Figure 1. Transformation of web with time