Chapter XI

Using Server Log Files and Online Experiments to Enhance Internet Marketing

Charles F. Hofacker
Florida State University, USA

Jamie Murphy
University of Western Australia, Australia

Abstract

Unlike most traditional media, the Internet is both digital and interactive. Here we do not simply refer to interactions between consumers and a Web site or e-mail, but also between the marketer and the firm’s Web site or e-mail. Furthermore, the digital nature of the Internet records every interaction. These two characteristics — interactivity and digitization — facilitate research possibilities that would be cumbersome and costly using earlier media such as print, radio and television. On the Internet, marketers receive instant feedback on any tactical decision in the form of server log data. We believe that due to technical hurdles, both practitioners and academics under-utilize
this omnipresent data residing in server log files. This is unfortunate for practitioners because their online efforts are far less efficient and effective than they could be. This is also unfortunate for academics because even small sites can generate massive amounts of rich data in relatively short times. This chapter introduces readers to server log files and how the basic information in these files helps management achieve goals for their Web sites and e-mail communication. Next, the chapter uses examples to illustrate how server log files make running online experiments easier than one would expect. The chapter closes with a call for more use of server log files in interdisciplinary research, and collaboration between industry and academia.

**Introduction**

Industry (Newell, 2000) and academics (Hoffman & Novak, 1996; Kotler, Jain, & Maesen, 2002) argue that interactivity makes the Internet unique and more powerful than the pre-wired mass media. This interactivity extends beyond consumer interaction with Web sites and incoming e-mail, to include marketers interacting with the firm’s Web site and outgoing e-mail. The Internet gives marketers direct and instant feedback on tactical decisions for their Web site and outgoing e-mail. Unlike most marketing, Internet marketing offers a fast-paced cycle of optimizing based on objective feedback.

Direct Internet connections, especially Web and e-mail, support this fast-paced cycle and contrast markedly with traditional mass media. Internet channels flow directly between the marketer and the audience — without third party intermediation from a broadcaster, network, entertainer, publisher or billboard owner. In addition, this software-based channel can track and store communication with each consumer. In stark contrast, marketers can attempt to track what happens when a particular mass media advertisement travels towards a particular consumer, but it is an extremely expensive process.

Similarly, Internet sales channels can flow directly between marketers and consumers without intermediary wholesalers or retailers (Alba et al., 1997). In theory, manufacturers can track the activities of individual consumers, but once again, it is an expensive process. In contrast, Web servers automatically and inexpensively track each encounter, even encounters that do not end in a sale. Figure 1 illustrates the typical information contained in a server log file.

The direct Internet marketer-to-consumer connection parallels direct marketer-to-consumer connections (Hofacker & Murphy, 1998; Marinova, Murphy, & Massey, 2002; Novak & Hoffman, 1997; Tizende, Smith, & Murphy, 2002). The direct marketing field has long noted the ease that one can test everything from envelope formatting to offer pricing (Kotler, 2003). The Internet offers millions of opportunities to do essentially the same thing, along with added benefits such as automatic data entry and real-time feedback.

Server log data provide this instant, direct and automatic Internet feedback. While authors promote mining huge quantities of online data (Cooper & Guiffrida, 2000; Newell, 2000; Scharl, 2000), log data are also invaluable for fine grained analysis with little data...
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