



User Trends Go Under Microscope

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Tracking services shed light on Web site performance and customer behavior.

Classmates.com has become a successful Web enterprise, thanks to 2 million paying subscribers. They use its database services to re-establish contact with high school or college classmates or current and former members of the military service.

But many of those classmates would remain disconnected had not the sites operators discovered the link between Web site performance and customer behavior, according to Depik Rai, director of member acquisition at Classmates Online Inc., in Seattle.

There is a growing realization by IT managers and business marketers that a Web sites performance and what its users do—whether browse or buy—are closely related. But they have thus far remained separate fields of inquiry: Performance is the domain of IT and customer analytics that of marketing.

The study of how Web sites perform is called performance metrics. Its chief measure is response time, either to a page request or a Web site application service.

The customer behavior side of the ledger is often referred to as Web site analytics. The analytical data tells members of the marketing staff who the customers are and what they're doing on the site. The chief source of Web analytical data is the log file of the Web server, but it can also be drawn from IP sniffers, application servers and load balancers.

Classmates.com improved the rate at which users signed up for its \$36-per-year Classmates Gold Membership through an end-user-based performance metrics system—WebHancer Corp.s e-Business View service. Classmates.com suspected there was a link between the presentation of its form to sign up as a gold member and the number of visitors who completed the form. By observing that members who voluntarily clicked on a button to become a gold member showed a higher sign-up rate, Classmates.com repositioned that option to optimize the sign-up process, Rai said.

The other way to sign up was to click on a service on www.classmates.com that was limited to gold members. Then, instead of the service appearing, a sign-up form popped up. By analyzing user responses and tweaking this approach, Classmates.com "found a number of ways to reduce the page abandonment rate" in these cases as well—with the overall rate dropping about 10 percent, Rai said.

"Its a matter of tying the performance data to the users behavior [buried in the Web server logs]. Its a matter of overlaying the two," Rai said. But for many companies, its a struggle to match performance data to customer data because the two types tend to be collected by dissimilar systems.

e-Business View from Ottawa-based WebHancer captures the activity of the end user rather than focusing on server log data. It does so by loading a small application called Customer Companion onto users desktops and tracking their movements on sites around the Web. This information is uploaded periodically from users desktops to a central repository at WebHancer for analysis.

The tracking software is bundled into downloads of such freeware as MP3 music file players or business fax applications. The user is notified during the download that the tracking software is included, said Stephanie Bigusiak, WebHancers vice president of product management. With 50 download partners participating, WebHancer is now collecting click-stream data from 8 million end users, Bigusiak said.

At Classmates.com, Rai hasnt implemented an analytical system to complement his e-Business View performance metrics, but, he said, "theres an opportunity there." He would like to know, for example, how he might appeal to customers on a geographical basis, such as those who attended college in New England or California. Or he might be able to learn what segment of customers are interested in Classmates.com based on age.

Only a small percentage of companies have a handle on all the data theyre generating on their Web sites, said Usama Fayyad, co-founder and president of DigiMine Inc., an online service that sells an analytics service.

Less than 2 percent or 3 percent of all businesses are doing analytics, Fayyad said. Doug Laney, an analyst for Meta Group Inc., of Stamford, Conn., however, said the figure is much higher for the Fortune 500 companies doing business on the Web, probably as high as 70 percent.

Other users and analysts agree its no trivial undertaking. Sprint Communications Co., of Overland Park, Kan., accumulates a terabyte of customer information on such things as calling patterns and charges every six days, according to John Thompson, vice president of worldwide marketing for WhiteCross Systems Ltd., an online data mining service serving Sprint.

Another user-based service is PeerReview from Porivo Technologies Inc., of Durham, N.C. Its user base is smaller than WebHancers and different in that it comprises volunteers who are paid to let their desktops be used in the background by an agent that visits Web sites for testing purposes. A total of 15,000 end users volunteer to host a Porivo agent on their PCs in exchange for small payments. The agents dont track end users the way WebHancer does. Rather, they are activated by a central Porivo server to access various target Web sites and report on the results of their simulated use of the site. At any given time, about 6,000 agents are actively testing sites, said Sam Kirby, vice president of marketing.

Porivos user-based metrics were able to discover delays for customers of Global Knowledge Network Inc., of Cary, N.C., as they tried to access the companys courseware. Global Knowledge is the worlds largest provider of IT training, and it used Porivo metrics to persuade its ISPs in Asia and France to access caching servers elsewhere in the users country instead of downloading content from U.S. servers, a move that brought "a 10 to 25 percent improvement" in download times for users there, said Michael Fox, vice president of worldwide e-learning.

Another user-based metric supplier is Keylime Software Inc., of Carlsbad, Calif. An enterprise using Keylime Softwares Xtract or Limelight loads a small JavaScript application in the browser of a visitor to its Web site to capture the visitors click stream. The data is fed into the host application running on a central Keylime server, which analyzes it and summarizes it in reports for the marketing department. "Do visitors who interact the most with technical support pages buy more?" asked Ray Ghanbari, senior vice president of engineering at Keylime. In many cases they do, indicating the company should invest more in its technical support pages, Ghanbari said.

The ability to let the users computer do much of the work sets these companies apart from the companies that have pioneered the field of analyzing data on the use of Web sites. DigiMine, of Bellvue, Wash., and WhiteCross, of Chicago, take data from their customers Web server logs and analyze it, returning reports as an online service. MicroStrategy Inc., of McLean, Va., is also an online service, but it sells tools that let customers build their own reports by accessing the MicroStrategy servers.

NetGenesis Corp. pioneered the field of Web server log analysis, followed by WebTrends Corp., of San Jose, Calif.; WebSideStory Inc., of San Diego; and Accrue Software Inc., of Fremont, Calif.

Other vendors, including suppliers of customer relationship software, such as Siebel Systems Inc., sell applications that let companies perform their own data analytics, a field that Framingham, Mass., market research company International Data Corp. said will grow from \$126.3 million in 2001 to \$463 million in 2005.

WebHancer, already established in user performance metrics, announced March 26 that it is trying to bridge the divide by offering a complementary product, X-Path, for Web data analytics.

The Porivo and WebHancer end-user-based systems not only track users on a target site, but they can also capture where they go next. If they go to a competitors site, they can track what they do there, noted Jasmine Noel, director of systems and application management for the Hurwitz Group, a research company also in Framingham. Porivo informs end users of the terms of its client offering and pays them, provided they are online 4 hours a day, and gives them a regular report on how much they have earned. By most standards, the amounts are paltry, a few dollars a month, but Porivo provides an additional dollar payment for each reference to a new PeerReview client sign-up.

WebHancers method of bundling its client into free software downloads has been the subject of privacy concerns. It duplicates in some ways the end-user tracking that was the target of a class action suit against DoubleClick Inc. in U.S. District Court in New York, a case that was decided in favor of DoubleClick.

When an enterprise collects data on visitors who come to its Web site, its doing what businesses tend to do, whether they are brick-and-mortar or online, said Lee Tien, senior staff attorney at the Electronic Frontier Foundation, a privacy and digital rights advocacy group in San Francisco. But tracking users from site to site gives the managers of a central database power to review their actions, an intrusion into the privacy of Internet users, Tien said.

WebHancer officials said users who initiate free software downloads with the WebHancer client included are informed that a program will be working in the background on their computer and are shown a license agreement that they must accept with a checkoff box before the download may proceed, said Jonathan Black, WebHancer director of product management. WebHancer is interested in only aggregate data, not individual data, Black said. It posts a strict privacy policy on its site that states any "personally identifiable information is cleansed" from its systems, and no information on individuals is forwarded to third parties. "Nor do we permit collected information

to be correlated with other information to identify browsing habits of any specific individual," the privacy policy states.

Until the privacy issue gets sorted out, however, WebHancer, Porivo and Keyline offer one of the simpler and less expensive means of examining user behavior.

For example, Keyline charges start at \$2,000 per month. Porivo charges \$199 per home page, which is monitored by its agents, and charges \$995 for a five-step transaction. WebHancer charges \$1,995 per month for e-Business View metrics and \$4,995 per month for its new X-Path analytics service. In contrast, DigiMine and WhiteCross, the online data mining services, both charge starting between \$25,000 and \$35,000 per month for their services.

In the future, data analysts, working with a well-engineered data warehouse, could reach some of the same conclusions as the end-user tracking systems if the analysts knew what questions to ask. Marketers know the questions they'd like to have answered, but they have no idea how to approach the mass of data, WebHancers Bigusiak said.

However, with so much valuable data available, its just a matter of time until effective analysis is brought to bear, said WhiteCross Thompson. "There will be forward-looking organizations that figure it out."



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