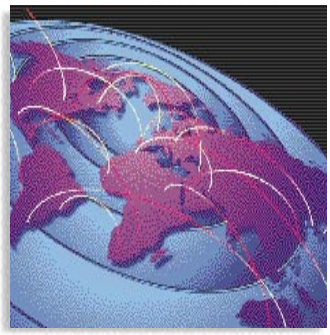
The Killer App that Almost Killed Us



The Internet is spawning a class of compelling applications that can tie up your network and cause Web management migraines.

In late February, a colleague came into my office almost giggling with delight. "It's the best application I've ever seen!" he said. This curmudgeon never gets excited—I couldn't believe it. So I installed the application on my system and immediately became a believer. Unfortunately, our enthusiasm also set in motion a chain of events that fundamentally changed the way we look at Web use from an MIS standpoint.

The application in question is the Pointcast Network (http://www.pointcast.com). Pointcast essentially lets you create your own version of CNN Headline News. You decide what news it downloads to your computer, either automatically (if you have a modem hookup or a T-1 connection to the Internet) or manually. You update your system whenever you want. You can monitor stock prices, complete with charts, news articles about the companies, and highs and lows over the last month. You can read industry news in any of about two dozen industries. The weather in as many cities as you like is available, complete with maps. Sports scores from your choice of the sports you want to monitor scroll across the bottom of your screen.

The network, which also doubles as a screen saver, is supported by advertising from companies such as Fidelity Investments, Prodigy and Quarterdeck. Advertising is sent in a proprietary streamed format and is much more interactive than the rest of the advertising that is currently online.

Pointcast is one of a new breed of Internet applications—Personal Excite and Microsoft Network's Personal Home Page are others—that put you in control of the information you receive without making you navigate the Internet to locate that information. These applications are similar to Internet mailing lists, except they send you multimedia information instead of just text. Simply tell the application the information you want, and it gives it to you periodically. This is similar to intelligent agent technology that uses "bots," "spiders" and other programmed intelligence to find information for you. Since surfing the Web can be time-consuming and frustrating, many Web observers believe that this type of service is something that users will demand. Web sites that don't offer the ability for customers to automatically receive information from them may not survive.

Unfortunately, these active applications also put a tremendous load on the Internet at large and on internal traffic as well, and have major ramifications for MIS. While users are in control of information that they receive, they receive updates frequently. Frequent updates result in network traffic, and increased network traffic results in network overload.

The Rest of the Story

Within a few weeks, Pointcast was proliferating throughout our company. Our system administrator jokingly called Pointcast a "virus." He didn't know how correct he was. In our office in Indianapolis, both incoming and outgoing traffic used the same T-1 line. This quickly became a problem now.

I started noticing that the traffic on our Web site was decreasing, the first time this had happened in nearly a year. When traffic had decreased by more than 30 percent in a two-week period, I asked everyone in the company to turn off the automatic updating capabilities in Pointcast. Traffic increased by 20 percent the next day. Two days later, we separated incoming from outgoing traffic by putting our Web server on a separate T-1 line from our in-house users. Traffic immediately increased another 10 percent.

The sudden increase in Internet usage, due to hundreds of people using Pointcast and its automatic updating feature, had brought our Web site down. While server load was not high and the T-1 was not saturated (it was operating at 30 percent of capacity), temporary increases in traffic and a sudden increase in the number of packets being transferred across our T-1 had wreaked havoc on our server and had made it very difficult for users to access our site.

We also noticed that surfing the Net was not as efficient as before. I spent days attempting to reach Web sites that I had had no problem reaching before. This also was due to the load on the T-1 that was placed by hundreds of people inside our building accessing Pointcast in a short period of time.

Pointcast is not the only culprit in this

By Jordan Gold

matter. Increased numbers of users on the Web have resulted in lots of network traffic jams. Internet backbone problems appear to be making the Internet more difficult to navigate. These problems, largely suffered by MCI's network routers, are apparently being fixed. (Perhaps these routers will be able to accommodate the increase in Internet traffic.) The result of all this was that traffic continued to fluctuate wildly even after we separated the server from in-house traffic, and it even returned to the lows we suffered when we shared the T-1 for a day or two. However, our traffic rebounded dramatically a few weeks later and soon reached the levels of a few months before.

A good solution to having many users accessing the same content on the Internet is to set up an in-house proxy server. A *proxy server* is an internal server that goes out to high-traffic locations such as Pointcast and downloads information on a regular basis. Then in-house employees can access the proxy server instead of saturating the Internet. This puts a heavy load on internal networks, but it reduces overall Internet traffic.

Consider installing a proxy server in your organization. There are too many compelling applications being created and deployed on the Internet to avoid this. Then start planning on upgrading your internal networks. Your only other option is to ban the Internet. IT

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