

Once-elite Net now hits mass market

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THE transformation of the Internet from a province largely reserved for university researchers and defense contractors to a commercial medium looks complete.

Just five years ago, much of the global computer network was ruled by the National Science Foundation's "Acceptable Use Policy," which actually forbid using large chunks of the network for profit-making purposes. The network was for education and research. Indeed, people who tried to use the network to make money were warned that they were jeopardizing its very existence.

Service

providers

hope to

break the

Net's biggest

logjam:

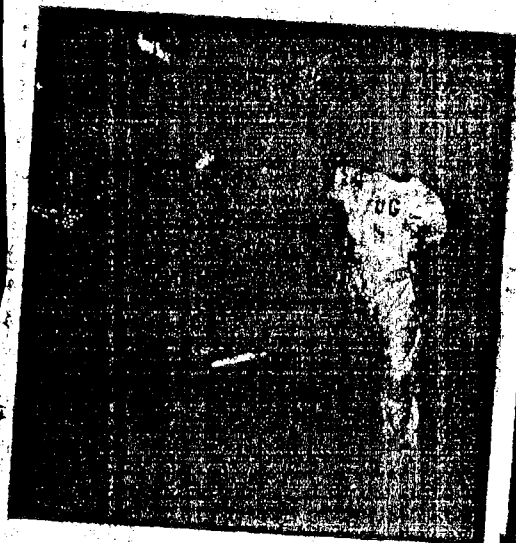
slow-poke

modems.

Today things have changed . . . dramatically. At this year's Internet World, the topic that dominated the conference was how to use the Net to make a fast buck. Although there are significantly more universities and high schools on the network, they now represent just a tiny fraction of the Net's users.

According to a survey recently completed by CommerceNet and the A.C. Nielsen Co., there are now 37 million Americans (17 percent of the nation's population) who

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have access to the Internet.

But perhaps most importantly for the Net's future was the survey's finding of people using the World Wide Web, the Internet's interactive text and graphics service. Those using it are affluent, educated professionals with large amounts of discretionary income.

Numbers like those mean money to marketers, which may explain the reason that businesses have been tripping over themselves in recent months to get a presence on the global network. Nevertheless, a brief tour of Internet World revealed that the businesses making money on the Web aren't those selling products on-line. Instead, it's the businesses selling access to the Internet itself, and selling the hardware that makes the global information infrastructure work.

PSINet, one of the nation's leading Internet Service Providers, threw a Halloween bash at the Boston Science Museum to celebrate its good fortune, demonstrate its power and announce a series of new partnerships with gaming company Spectrum Hobyte and Mpath Interactive.

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At the same time, PSINet also announced another more unusual partnership with Iran Contra figure Oliver North, who will be using PSINet as the official home of his World Wide Web site (<http://www.northamerican.com>). The reasoning behind the announcement is simple, said Martin L. Schoffstall, PSINet's co-founder and chief technical officer: There's more money to be made in gaming and entertainment than in providing information and electronic mail.

"On-line gaming, service distribution and the addition of strategic content represents the next generation for the Internet," said Schoffstall. "We're building the

tracks to move this train called the Internet forward."

Internet service providers are also working furiously to break the biggest logjam that's hampering the network today: slow-poke modems that consumers use to dial into the network from their homes and office. Only six months ago, consumers were being wowed by the newest generation of modems — new boxes that could support the V.34 standard and send data at a dizzying 28,800 bits-per-second. But that's not nearly enough speed to send video or the new programs built with Sun Microsystems Inc.'s new Hot Java programming language.

Companies like Farallon Computing Inc. are now introducing the next generation of communications devices — which use Integrated Services Digital Network, or ISDN, a digital telephone system that can transmit up to 128,000 bits-per-second over copper telephone lines.

Farallon's new hot box is the Netopia, a sleek box that connects a small business or home office local-area network to the Internet using ISDN.

An even faster way of connecting to the Internet was unveiled this summer by Hughes Network

Systems. Called DirecPC, the system uses the Galaxy 4 satellite to blanket the entire United States with a high-speed Internet footprint.

To use DirecPC, consumers must purchase a special satellite dish and a card that plugs into their PC, which together cost about \$1,000. When the user wants to surf the Net, his or her computer places a call to the DirecPC 800 number. Information that the user transmits to the Internet, such as outgoing electronic mail, goes over the telephone lines.

But the return data, such as pages surfed on the World Wide Web, are sent to the satellite and then beamed down onto the country. Each user's information is encrypted, so it can't be accessed by anyone else in the country. The effective speed of the system is 400,000 bits-per-second, or about 13 times faster than today's V.34

modems. Typical cost is \$39.95 per month, plus \$2.95 per hour to access the 800 number.

Meanwhile, an increasing number of companies are trying to make money off the Internet by creating World Wide Web pages.

More than a dozen companies at Internet World were selling some kind of program designed to take the pain and drudgery out of formatting text into HTML, the Hypertext Markup Language used by the World Wide Web. These companies included Microsoft Corp. and Novell Inc., which have created World Wide Web filters for their Word and WordPerfect programs; Adobe Systems Inc., which is developing a \$99 HTML editor for the Macintosh called PageMill; Softquad, a Canadian firm that has developed a series of programs for editing HTML directly; and Vermeer, which has developed an integrated system that makes knowledge

of HTML virtually obsolete.

These systems should help reign in the salaries of those 20-something HTML consultants, who have been getting \$50,000 a year and up because of their HTML mastery. The need to know HTML has been one of the real barriers for businesses that have wanted to publish on the Web.

Indeed, programs like these are another sign that the Internet is changing from a plaything of academics and the technological elite to a tool used day in and day out by American businesses and consumers.

Like the telephone network or the national highway system, the Internet will increase the efficiency of American businesses, bring people together and make it possible for businesses to exist that couldn't exist before. For now, however, the firms that seem to be cleaning up are those paving the highway.