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## Technology; A Toll Collector on the Information Highway

By TERESA RIORDANAUG. 22, 1993

MATTHEW P. LAWLOR, whose phones have rung almost nonstop lately, sounded a bit giddy when he fielded yet another call about his company's new patent. "It's a very broad patent," he explained for perhaps the 10th time that day.

Mr. Lawlor, 45, is president of the Online Resources and Communications Corporation, a small privately-owned company in McLean, Va., which early this month received a patent that could make him and his investors fabulously rich. On the face of it at least, the patent appears to cover any at-home transaction in which consumers debit their bank accounts through an automated teller machine (A.T.M.) network.

Currently, Online's system employs a telephone with a small display screen, which is operated very much like an A.T.M. terminal at a bank. But because the patent covers not the device, but the entire transactional process, the patent potentially applies not only to home banking but also to pay-per-view television, home shopping, interactive TV games, securities trading and a host of other services available through telephones, personal computers or other terminals. Any company using the patented process to receive payment would be subject to Online's licensing fees.

"I equate it to a toll road," said Neal Chambliss of Payment Systems, Inc., a market research and consulting firm in Tampa, Fla. "If it's the best way to go, you're going to pay the toll."

If this be the information superhighway, Matt Lawlor is the digital toll collector.

"Even I didn't understand that this was a patentable concept originally," said Mr. Lawlor, co-inventor of the system, who set up Online in 1989. "But I was explaining it to a patent attorney friend and he said, 'Why don't you patent this?' I said, 'You can't.' He said, 'Oh yes you can.' He

Not everyone, of course, is yet willing to concede the game. A score of companies have home-banking terminals on the market, each hoping its system will become the standard in what is an infant -- but infinitely expandable -- business.

One Online competitor, US Order, based in Herndon, Va., said the new patent would not affect it because it debits customers through an automated clearinghouse, which can take a couple of days, rather than an A.T.M. system, which acts in real time. "The market is wide open," said US Order's president, Fraser Bullock. "We don't believe that one particular company via a patent or any other means is going to lock up the market."

But others in the financial services industry appear to be taking Mr. Lawlor's claims seriously enough to fly their legal eagles home early from August vacations to pore over the document. Citibank and Mastercard International are among those said to be taking note, although no one seems willing yet to say anything publicly.

"By and large, people are keeping a low profile," said Sean W. Kennedy, president of the Electronic Funds Transfer Association, a trade group in Herndon, Va. "That suggests they are in a mode of studying the patents to determine whether they're infringing, looking for ways around it and deciding whether it's defensible."

For nearly 20 years, headlines have heralded the imminent arrival of at-home banking, which will allow consumers to pay bills directly from their living rooms. With consumers daunted by both the cost and complicated software associated with the concept, however, the market has so far proved elusive. Chemical Bank in New York, for example, threw at least \$70 million at the idea before dropping it in 1989. But experts now see a convergence of computing and communications technologies that will soon make all sorts of at-home services a reality.

At most, only a half-million households around the nation now have some sort of terminal-based home-banking service, according to Jupiter Communications, a market research firm in New York. But by the end of the decade, half of American households are expected to be doing at least some of their banking from home.

Gene DeRose, an analyst with Jupiter Communications, sees Online Resources as a company with the right process at the right time. "This is probably the most efficient way right now for banks and service providers and consumers to make all sorts of debit transactions from home,"

Online makes its own screen phones, which function as miniature at-home A.T.M. machines. The phone does not dispense cash, but it does allow the consumer to pay bills directly. Debits are noted as A.T.M. transactions on the customer's monthly bank statement, which also lists the name of the payment recipient.

The phone costs a bit less than \$100 and service is \$6.95 a month. Online currently has about 4,000 customers through a Washington-area bank, the MNC Financial Corporation. Since securing its patent early this month, the company has also announced an alliance with the regional telephone company Southwestern Bell, although details are not out yet.

Online's is what the patent attorneys call a "process" patent, meaning that it applies to a method of doing business rather than a specific technology. In this case, the process is the act of using any home terminal -- a PC, a TV, a telephone -- to pay bills, buy goods or conduct banking business through an A.T.M. or similar network accessed by a personal identification number.

Mr. Lawlor, formerly president of Chemical Bank's division for overseas investment, said he came up with the concept sometime in the mid-1980's, after he left Chemical. He and his co-inventor, Timothy E. Carmody, who is no longer with Online, originally envisioned a patent that covered only at-home banking.

But that was before they brought in Allen (Alex) J. Seltzer, a 41-year-old Stanford M.B.A. who has an undergraduate degree in computer science from the Massachusetts Institute of Technology, to work out the technical aspects of the patent application.

"I took a more general view," Mr. Seltzer recalled. "We're basically creating a gateway for any time these three entities -- the consumer, the service provider and the bank -- come together over a home terminal." Online Resources filed for the patent in December 1989.

There are about a dozen major regional A.T.M. networks and two national ones, but apparently no patent has ever been issued for the concept or process of an A.T.M. network.

Among those possibly subject to Online's toll on the information highway could be a home banking service known as Master Banking, a joint effort of Mastercard and the Checkfree Corporation, which operates a clearinghouse for electronic bill payments. Master Banking would use the national Cirrus A.T.M. network owned by Mastercard. Like most others in the industry, Checkfree declines to comment on the new patent.

"The fact that this patent is somehow outside of the industry could be a little unnerving," said Mr. Kennedy of the Electronic Funds Transfer Association.

Some analysts conjecture that Online's patent may push the nascent home-banking industry toward an industrywide standardized system, which many consider an essential step for consumer acceptance.

If so, Online's patent is still only "a small step for mankind," said Richard C. Ross, who heads a working group on home-banking standardization for the American National Standards Institute, a private-sector adjunct of the Commerce Department that establishes standards for a wide range of industries.

"There's a great more to be done before consumers will accept this technology," Mr. Ross said, noting that there are now more than 40 types of what the industry calls "home transaction appliances." A.T.M. machines themselves became popular only after the technology became similar from network to network, he noted.

On the other hand, Mr. Lawlor says he doesn't see how standards can be set until it's clear what consumers will buy. "Successful markets," he said, "precede standards."

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