WILL THE INFORMATION SUPERHIGHWAY BE THE DEATH OF RETAILING?

No way. But get ready to do a whole lot of shopping on-line as interactive merchandising booms.

By Stratford Sherman

BILL GATES, billionaire chairman of Microsoft and semipro visionary, leans forward to describe the future of shopping: "You're watching *Seinfeld* on TV, and you like the jacket he's wearing. You click on it with your remote control. The show pauses and a Windows-style drop-down menu appears at the top of the screen, asking if you want to buy it. You click on 'yes.' The next menu offers you a choice of colors; you click on black. Another menu lists your credit cards, asking which one you'll use for this purchase. Click on MasterCard or whatever. Which address should the jacket go to, your office or your home or your cabin? Click on one address and you're done—the menus disappear and *Seinfeld* picks up where it left off.

"Just as you'll already have taught the computer about your credit cards and addresses, you will have had your body measured by a 3-D version of supermarket scanners, so the system will know your exact sizes. And it will send the data electronically to a factory, where robots will custom-tailor the jacket to your measurements. An overnight courier service will deliver it to your door the next morning. And because this system cuts out so many middlemen, the jacket will cost 40% less than the off-the-rack version you'd find in a department store."

As Gates readily admits, that particular future may never arrive. But with cable TV and telephone companies, including US West, Time Warner, and Bell Atlantic, investing billions to provide America's neighborhoods with two-way data communications, interactive shopping of some kind is inevitable. After all, interactive shopping is just a high-tech extension of direct marketing, the familiar practice of selling to consumers through such media as catalogues and TV shopping channels instead of stores.

Once wires carrying two-way TV signals reach most U.S. households, direct marketers will be able to deliver their pitches on demand, using a rich electronic palette of text, video, and sound. Consumers will gain the power to browse databases filled with everything from movies to videogames to product information, and will also be able to transmit their orders instantly.

REPORTER ASSOCIATE *Stephanie Losee*

By promising customers more convenience and merchants greater efficiency, interactivity could revitalize the troubled retailing sector. "When we make it *really* interactive, shopping in the home will dwarf revenues from entertainment," predicts Sol Trujillo, CEO of US West Marketing Resources, a subsidiary of the Bell operating company, which says it will invest $12.5 billion on its part of the information superhighway. Last year Americans spent almost $60 billion through catalogues, TV shopping channels, and other direct-marketing alternatives. That's only 2.8% of the nation's $2.1-trillion-a-year retail marketplace, which includes supermarkets, mall outlets, car dealerships, department stores, warehouse clubs, boutiques, and much more. Merchants and technologists expect conventional retailing to hold steady or contract slightly over the decade as the industry's shakeout continues, while technocharged direct marketing surges to capture some 15% of total sales. That would make the new business one of the world's biggest, with annual revenues of well over $300 billion.

But your guess may be as good as any expert's. Screenwriter William Goldman's famous summation of the movie business—"Nobody knows anything"—increasingly applies to the twilight zone where telecommunications, computing, entertainment, and merchandising converge. Says Duncan Davidson of Gemini Consulting, an adviser to big technology companies: "There just isn't much information available yet. That's what makes this situation so much fun. All great technologies, from the railroads on, start with a mania. There's no other way to open up new markets." Consumers, who haven't been given much chance to express their opinions, will ultimately decide what kind of electronic shopping makes sense.

The timing and force of the onslaught will depend on the speed with which the information superhighway—the infobahn, as it's being called this month—gets built, and how it is designed. A decade or more may pass before even the needed networks or wireless links are in place. The main hurdle is financial: Building the infobahn could cost at least $100 billion, and telephone and cable companies must find business justifications for the stupendous investment.

Despite the fancy name, the infobahn is simply a network, like AT&T's long-distance phone system. This one is defined by fiber-optic cables and high-capacity switches and computers that can carry video, audio, and data signals into and out of our homes. Two-way video is the technology that gets merchants cranked up. American adults already devote more time to TV than anything but work and sleep, an average of 4½ hours daily. Interactivity could intensify TV's appeal. As Spencer Sherman, 7, says, "Computers are better than TV because you can control what you see."

Hidden behind tomorrow's TV screens will be tremendous computational power that will let viewers search through vast databases by answering multiple-choice questions and pointing and clicking with a remote control. Potentially, such systems could automatically comparison-shop for us, popping up the names of merchants offering the mix of price, quality, and service that most closely matches our needs.

To shop the way Bill Gates imagines, consumers will probably have to use a specially designed remote control to let the system know what they want. Once they master the on-screen "user interface" that translates their instructions into commands computers understand, they will be able to pluck other sorts of data from the network and gain access to whatever information businesses offer, including details about products. For business, the hard part is designing interactive systems complex enough to give consumers a wide range of choice yet simple enough to operate with a beer in one hand.

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WHAT WILL GET people to learn the necessary skills? Richard Notebaert, CEO of Ameritech, the Bell operating company based in Chicago, says many will learn on the job: "Air conditioning started in office buildings. So did cellular phones, VCRs, and PCs. Once people get used to a new technology at work, they want it at home." Some interactive-shopping enthusiasts think new forms of entertainment will entice consumers. Most appealing may be video on demand: the ability, for a fee, to

ILLUSTRATION BY TONY MIKOLAJCZYK; HAND BY JEREMY SHATAN call up a movie or TV show at any time.

Douglas Briggs, head of electronic retailing for QVC, the popular TV shopping channel, can't wait for truly interactive shopping to arrive: "We're constrained now by the fact that we can show only one product at a time on TV. This is interactivity in its crudest form. Once the customer has control, our business will explode." QVC's enormously profitable main channel is nothing more than an ordinary cable TV program in which announcers hype jewelry, clothes, and housewares, plus the 800 number that will send it all home to you. The company is now converting its separate fashion channel into a testing ground for still more selling shows. This summer, rival Home Shopping Network is adding a second channel in which the sales pitches will be set in a mock shopping mall. MTV Networks and others are developing shop-a-thon channels too. None of these channels give viewers control over what they see when.

In a truly interactive system, product pitches could be recorded in advance and stored, much like voice-mail messages today, in powerful central computers called servers. Then anyone interested in, say, rodeo belt buckles with cubic-zirconia adornments could zip straight to the relevant video. Interactive video is a medium made for merchandising. Want to see how those Eddie Bauer waders look on Cindy Crawford? Just click. In the market for a vintage El Camino like Bill Clinton owned in the 1970s? Click and ye shall find.

LOTS OF RETAILERS are watching the action from the sidelines. Some, including Leslie Wexner, chairman of the Limited, are technology-savvy but see little point in rushing into a marketplace that hasn't yet been defined. Others, including CEO Richard Sharp of Circuit City Stores, which sells electronic products and appliances, believe their wares will always sell best in conventional stores. The wisest of the doubters are participating in small-scale experiments that enable them to master new technology while monitoring the infobahn's progress. One such is Andy McKenna, senior vice president of Home Depot. Says he: "What's amazing to me is that in many cases this technology is a solution looking for a problem. The fundamental question we haven't answered is, What does the consumer really want?"

The diverse enterprises contributing to the infobahn's design—Bell operating companies, cable TV operators, PC software companies, and Hollywood studios, among others—fall into two opposing camps, whose philosophical differences have enormous financial and technical implications. Call them Suits and Surfers. The Surfers are mostly wonks at companies such as Microsoft, Hewlett-Packard, and AT&T, who expect the market for interactive technologies to develop much as the personal computer business did. Having themselves felt the transforming power of PCs and access to information-packed databases, they want to deliver the experience to the masses.

Surfers don't pretend to know what peo-

QVC moves goods at the rate of $39 per second by broadcasting product pitches around the clock from its television studios in West Chester, Pennsylvania.

THOMAS HOEPKER—MAGNUM

ple will want to do with their interactive TVs, but they're less fearful than the Suits of exposing consumers to technological complexity. They figure that if the consumer is in the driver's seat with a souped-up TV and broad access to a world of computerized content via networks, interesting products and services will arise spontaneously and lots of people will get rich. That's how things work in the PC market, with software developers and hardware designers introducing an endless stream of new products.

The Suits can be found mostly at the phone and cable TV companies that intend to finance and build the new networks. Facing little competition in local markets, these corporations are not used to taking cues from customers or to providing network access to other businesses without charge. Says Richard Bodman, chief of strategy for AT&T: "Anybody who's investing billions of dollars is looking at control of access. Control is what's driving people into spending the money."

That attitude is pushing cable and phone companies to design electronic Disneylands, self-contained cyberspace theme parks that keep things controllable by limiting consumer choice. Two key experimental systems now under construction follow that model: one by Viacom in Castro Valley, California, and one by Time Warner (parent of the publisher of FORTUNE) in Orlando.

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The test that emphasizes shopping is Time Warner's. It will offer access only to selected retailers, such as Spiegel and Eddie Bauer; the stores' on-line databases will provide a small fraction of the choices available in their regular inventories. If the experience of the on-line services CompuServe and Prodigy is any guide, Time Warner won't permit automated comparison-shopping, partly because merchants fear it might transform their wares into commodities.

ALTHOUGH THE USER interfaces in these and other experiments vary enormously, all sacrifice power for simplicity. The first step is replacing the computer and keyboard with the more familiar TV and remote control. That decision has a cost: Users who cannot type in their choices are forced to select items from menus. Locating a particular product—a purple cashmere turtleneck sweater, say, under $90—amid huge volumes of information can require laborious plodding through a series of menus nested within one another like Russian dolls. An extreme example is the Media Objects interface designed by Oracle, a leading maker of database software. Its remote control has only one button for data entry. By the time you'd clicked through enough multiple-choice menus to reach your sweater, your thumb might be blistered.

A more robust system may soon be found on Time Warner's experimental network in Orlando. Although the company refuses to comment, *The Hollywood Reporter* estimates that it will spend $750 million to wire just 4,000 homes. Even adjusting for Tinseltown exaggeration, the experiment is pricey. The system includes a whiz-bang network with true video on demand, computer circuitry by Silicon Graphics atop every TV, and user interfaces that present choices in innovative ways. In one variation, the system allows viewers to "fly" over and down into a futuristic 3-D metropolis in which buildings represent choices such as movies, a news service, or shopping. The cost of this system can be expected to plunge, but the distance between the $187,500 per home that Time Warner is said to be investing and the $101.06 per annum that the average American adult spends on cable TV suggests the scope of the challenge ahead.

To many Surfers, even Time Warner's system seems pathetically constricted, since it ignores some of the technology's most interesting possibilities. Says Robert Frankenberg, a Hewlett-Packard vice president: "I think some of the first interactive systems will not work out well, and then the market will open up to entrepreneurs doing cool stuff."

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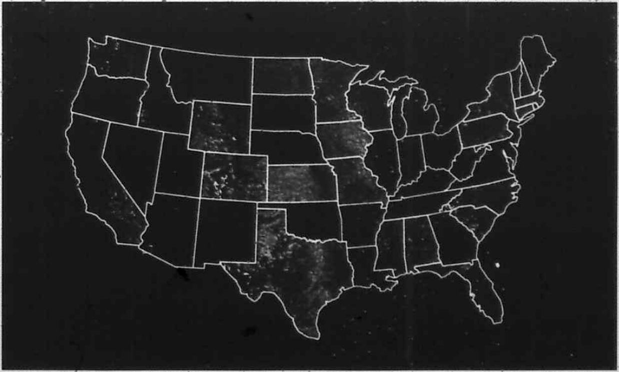
Reaching for a way to explain what's cool, Surfers often point to the Internet, the loose confederation of computer networks that links some 20 million computer users around the world. Anyone connected to the Internet can share files and E-mail with anyone else. By offering open access to mind-boggling amounts of information from university libraries, government files, and millions of other users, the Internet has fostered an on-line community whose members enjoy sharing information freely. Surfers see such unrestricted traffic in ideas as a powerful force for social good; to some, it's almost a religion. But you don't need to be a fanatic to sense the essential strength of their point of view: a commitment to letting people choose what they want. That's customer focus—precisely what's required to make any kind of merchandising successful.

Traditional retailers beware. The most radical thing interactive systems could do is whet consumers' appetites for the sort of customized products and services that Microsoft's Gates has envisioned. Let ordinary shoppers sift through the product information in databases. Give nontechies access to electronic bulletin boards where people pool their knowledge by candidly discussing their experiences with products. Do that, and

does it take...



MICHAEL GOLDMAN

CEO Walter Forbes says CUC's comparison-shopping services are ready for any interactive medium.

watch the mystery and cachet of smoke-and-mirrors merchandising evaporate. Products get clearly differentiated by quality, price, and details of delivery, while selling becomes an auction. Says Gates: "There will be an efficiency in this marketplace that people have to wrap their minds around."

The requirements for this Tomorrowland would be vast: a universal network linking homes and businesses to thousands of databases, technical standards enabling all the different computers to understand one another, interfaces that help ordinary users define their needs easily and precisely, and software that can find what users are seeking amid countless terabytes of computer files. All this would require much more computer processing and data transmission per transaction, which could translate into up-front costs even higher than Time Warner's.

But the costliest systems of all will be those that fail to give customers what they want. "In the long term the consumers will win because they have all the money," says Steven Johnson, who studies interactivity for Andersen Consulting. Nicholas Donatiello Jr., CEO of Odyssey, a San Francisco research firm, recently completed a study of consumer attitudes about interactive systems. He warns that if the first systems are ill-conceived, consumers could lose interest in the whole idea. "It's much more important to be right than to be first. If errors delay widespread adoption in this market, the cost will be enormous."

Back here in Todayland, interactive shopping is still dismayingly primitive. The major innovations propelling direct marketing's growth are 800 numbers, overnight delivery services, and TV shopping channels—brilliant concepts all, but light-years removed from technology's leading edge. Most consumers make their purchases in ways that are more primitive still. Data from the Direct Marketing Association reveal that people place most of their orders by mail, not phone, and usually pay by cash, check, or money order, not credit card.

Sales of computer programs via electronic catalogues on compact disks amounted to less than $10 million last year, according to Mark Bronder, CEO of InfoNow, a pioneer in that business. Out of nearly 100 million U.S. households, one-third of which own PCs, only seven million people subscribe to interactive services such as CompuServe, Prodigy, and America Online (most Internet users don't connect from home). Prodigy, which is owned by IBM and Sears Roebuck, was conceived as an arena for information, communication, and direct selling. But after investing nearly $1 billion, the partners concluded that subscribers prefer exchanging messages to shopping on-line.

That will change as interactive merchants demonstrate compelling advantages to consumers. Says Nathan Myhrvold, a bearded former protégé of physicist Stephen Hawking who is Microsoft's senior vice president for advanced technology: "In the early stages of bootstrapping something new, it's very important to have a unique sales proposition. One of the most effective is a lower price."

POINTING THE WAY is CUC International, a company in Stamford, Connecticut, whose Comp-U-Card shopping service produces annual revenues of some $850 million. The company's primary mission is not to sell goods but to provide the information people need to comparison-shop. CUC maintains databases with detailed information on some 250,000 products, such as cars, TV sets, and air conditioners. In return for a $49 annual fee, each of the service's 30 million subscribers gets unlimited access to the information—usually by dialing an 800 number and speaking to a human being who consults the computer database. Those who wish to order products through CUC can do so by phone or computer; the company relays the order to the manufacturer. Says CEO Walter Forbes: "This is virtual-reality inventory. We stock nothing, but we sell everything." CUC is participating in several interactive tests, including Viacom's in Castro Valley, and plans to adapt to new merchandising media as they arise.

For most retailers, who make money by selling products, not information, interactivity may not produce big cost savings. Consider the case of conventional direct marketers, who devote some 25% of their revenues to costs like printing and postage for catalogues. Interactive networks could help cut such expenses, but the cost of mak-

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ing glitzy product videos could eat up the difference. For now, companies participating in such tests as the Orlando project may economize by using still photos and footage left over from commercials. Once interactive marketing becomes a business, though, viewers accustomed to Hollywood production values surely will expect better.

Interactive shopping won't revolutionize retailing overnight. It will probably take hold first in niches such as recorded music and software, which can be delivered via digital transmission, and personal computers, which often sell through direct marketing. Anything that is merchandised by TV or catalogue today could be sold interactively tomorrow.

Despite the high cost and uncertainties, retailers have powerful incentives to embrace the new medium. While available store space in the U.S. has increased 4% per year on average since 1987, merchants' sales per square foot declined at an annual rate of almost 3%.

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As much as one-third of the country's retailing space may be superfluous. Dan Nordstrom, 31, head of the direct-sales division of Nordstrom, the Seattle-based chain famed for personal services, sees an added imperative: "People's time seems to be increasingly constrained. They need to do more of their shopping from home."

The segments of retailing that are thriving are those most in touch with a timeless truth: Success in business comes from giving customers what they want. The understanding that people like saving money has propelled warehouse stores such as Sam's Club into a $33-billion-a-year business. When the infobahn starts to deliver the combination of ease of use and buying power that shoppers crave, it too will take off. Says Stanley Marcus, 88, the brilliant merchandiser who built Neiman Marcus: "You lose everything if you don't think like the customer. If customers don't want to get off their butts and go to your stores, you've got to go to them." ■