The Chief Executive Guide

VISIONS OF THE INTERNET AGE

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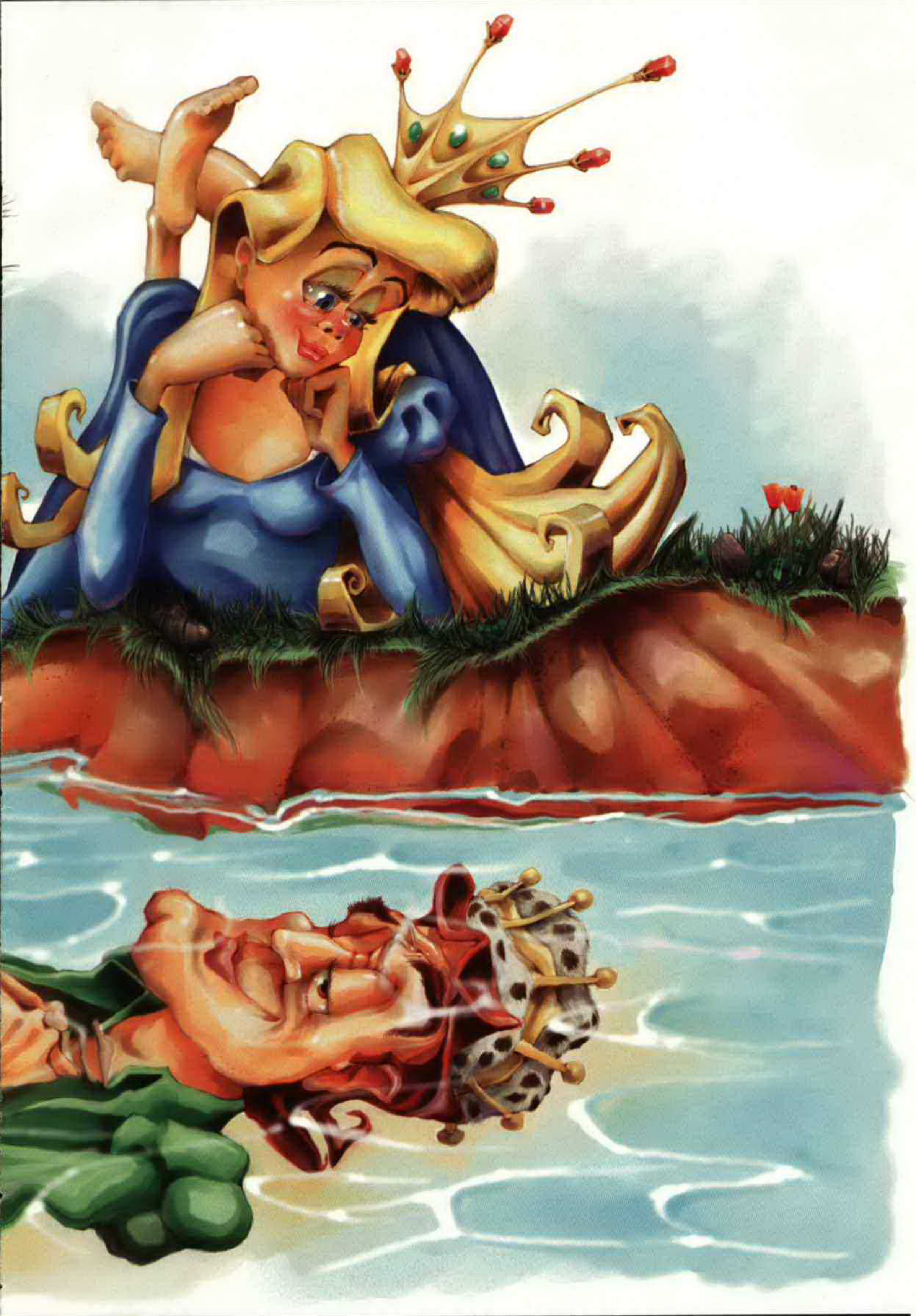

The VISION

Illustrations by
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ADAM AUEL
MILLENNIUM PICTURE GROUP

inside their organizations and beyond—to new technologies and business models—to grasp what is possible. They must adapt to new ways of working and leading. And they must create a vision of where they want their companies—and themselves—to be as the e-business evolution unfolds.

Every day, it seems, more and more headlines are about on-line retailing—and with good reason. For companies hawking their wares on the Web, the future is bright indeed. By 2004 on-line retailers will sell something like $184 billion worth of products. Not surprisingly, companies are rushing to stake their claims on Internet customers—and the rewards Wall Street showers on the leaders.

As big as on-line retailing is, however, many observers see it as just the tip of a very large iceberg. Electronic business is finding its way into every part of company operations, from marketing and customer service to logistics, human resources, and finance. As it spreads, it is leading to fundamental, far-reaching change—and to an era of e-business in which the lines between electronic commerce and business are disappearing and the two are becoming one and the same thing.

"It's not just the Internet; it's what it is doing to every business we look at, how it is changing the way those businesses are managed and the way they operate," Jeffrey C. Walker, managing partner of Chase Capital Partners, recently told an "e-summit" conference at the University of Virginia. Co-sponsored by PricewaterhouseCoopers, the e-summit@virginia gathered alumni business leaders to examine the impact of the Internet on business and society. "People are now able to make decisions in a less bureaucratic fashion," Walker said. "And that changes the way businesses operate."

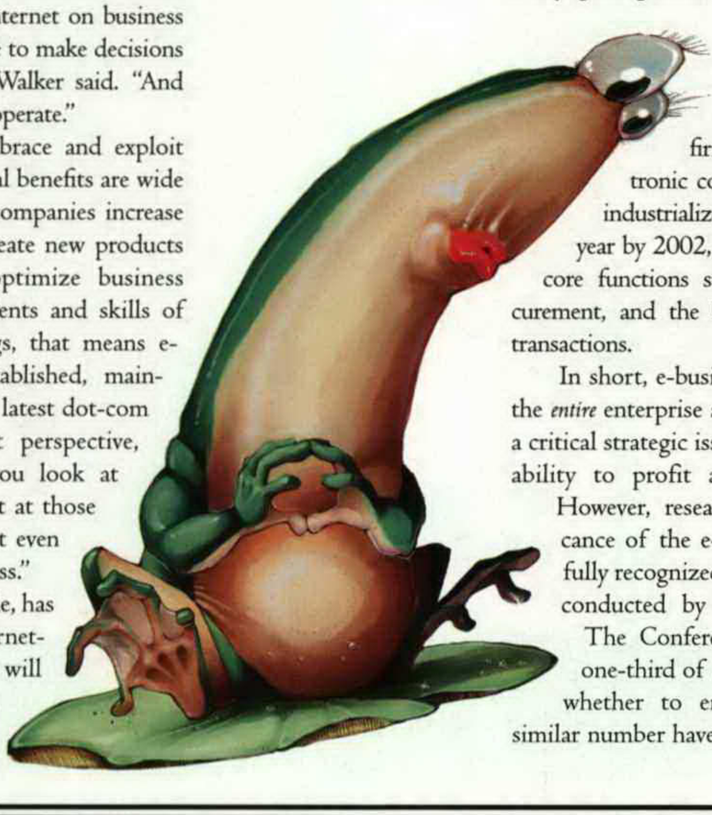
For organizations that embrace and exploit e-business concepts, the potential benefits are wide and deep; e-business can help companies increase sales, build customer loyalty, create new products and services, manage risk, optimize business processes, and tap into the talents and skills of employees. Among other things, that means e-business is important for established, mainstream companies as well as the latest dot-com startups. From an investment perspective, Walker pointed out, "when you look at opportunities, you look not just at those that are pure Internet plays, but even the ones that are in basic business."

General Motors, for example, has launched TradeXchange, an Internet-based supplier network that will allow GM suppliers, dealers, and other business partners to conduct business with each other on-line, taking advantage of GM's global purchasing operation to reduce costs and increase efficiency. In addition, GM plans to launch SupplyPower, a portal that will enable real-time communications with its supply chain, allowing GM and suppliers to share information on purchasing, engineering, finance, production control, and logistics. Called the largest e-business project in the world, this virtual marketplace is using e-business to transform the automotive landscape. E-business is also impacting Sealed Air, a manufacturer of packaging materials. CEO Bill Hickey recently told a *Chief Executive* roundtable that the Internet is bringing about "a sea change in how we go to market and how we do business in terms of reducing cycle time, reducing lead times, taking costs out of the channel and, in a way, getting closer to our customers."

MEASURING UP

Today, the top two metrics used to measure e-business success are the number of customers/users and revenue. However, 85% of executives say that profitability will become a key metric in the next five years.

SOURCE: JUPITER COMMUNICATIONS



Those types of benefits are expected to add up fast. According to Giga Information Group, a research firm in Cambridge, MA, electronic commerce will save businesses in industrialized nations some $1.25 trillion a year by 2002, due largely to improvements in core functions such as order processing, procurement, and the handling of routine employee transactions.

In short, e-business is a concept that involves the *entire* enterprise and virtually *every* enterprise—a critical strategic issue that will affect a company's ability to profit and compete in the future. However, research suggests that the significance of the e-business revolution is not yet fully recognized in the executive suite. A study conducted by PricewaterhouseCoopers and The Conference Board found that about one-third of executives are undecided about whether to enter the e-business arena; a similar number have decided to dive in but are not

CREATING

The world of electronic business promises huge benefits, from greater efficiencies to new markets and increasing revenues. To succeed, however, CEOs must understand that e-business is rapidly becoming an integral part of their core business. They must look

sure when. And, of the companies that have embarked on e-business initiatives, many are "focusing on incremental improvements to infrastructure, driven by opportunism rather than policy," the study notes.

Part of the problem is that executives often see e-business initiatives as standalone experiments that take place off to the side of the company's "real business." A 1999 report from Jupiter Communications, a New York-based research firm, says 76 percent of CEOs are involved in strategic decision-making for their on-line initiatives, but only about a fourth measure on-line initiatives as an integrated part of the overall business. As a result, they often misunderstand the real value of those efforts. "Using independent metrics may wrongly isolate the on-line initiative from the company's traditional business," a Jupiter analyst notes. By looking at an initiative in its broader context, "many companies will find that the on-line initiative deserves credit for cutting costs, acquiring customers, or building the brand for the traditional business," the report says.

Executives also may be stunned by how quickly e-business has become central to business, says Cathy Neuman, deputy global leader of the e-business initiative at PricewaterhouseCoopers. "A year ago, this was just an information technology or marketing problem. Now, you have to be willing to start with a clean sheet of paper in terms of your strategy and your organization and your business model, and that is sometimes hard to understand and even more difficult to implement. It's also hard to understand that even if you are doing well now, that's not good enough."

ORGANIZING THE VIEW

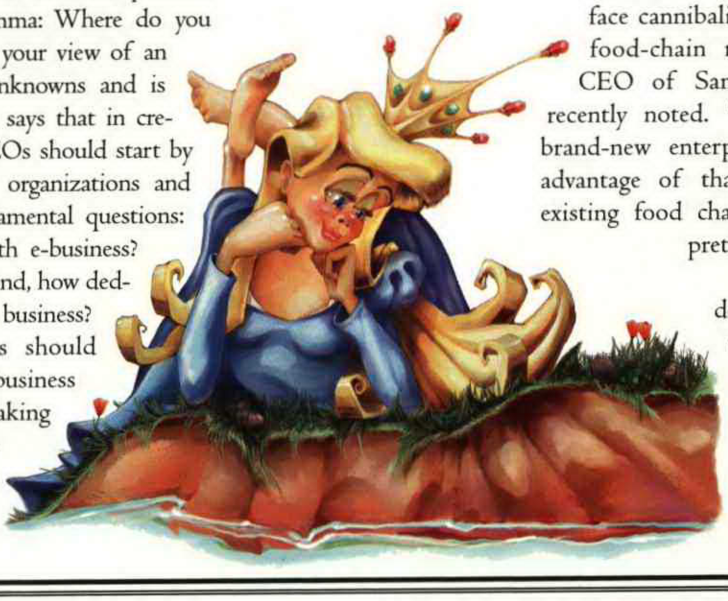
The newness of e-business, combined with the fact that it touches every aspect of business, presents executives with another dilemma: Where do you begin? How do you organize your view of an issue that is fraught with unknowns and is about "everything"? Neuman says that in creating an e-business vision, CEOs should start by taking a hard look at their organizations and asking themselves three fundamental questions: How deep are you going with e-business? How different is your focus? And, how dedicated are you to changing the business?

Being deep. Executives should strive to make sure that e-business concepts and practices are taking hold throughout the organization, Neuman says. In other words, do more than simply put up a Web site to sell products. Think in terms of using intranets to streamline internal processes and enhance knowledge management. Create links with suppliers to facilitate cooperative planning. Gather behavioral information from your Web sites to enhance your understanding of customers. And integrate it all to provide a global view of operations and foster collaboration across the entire value chain. Says Neuman: "A number of traditional companies that have done well with e-business might not seem like the usual high-flying startups that 'get it' in terms of the Internet—organizations such as the U.S. Post Office, Fingerhut, Office Depot, and Land's End. Why are they successful? Because they have gone deep with their strategies to integrate e-business throughout their core businesses."

Being different. "In general, winners in the e-business space think and act differently," Neuman says. This means going beyond improving current practices to adopting new business models that can thrive in a fast-paced electronic economy. Neuman says examples of new business models include the "integration model," which creates close links across the organization and the supply chain; the "spin-off," which allows a company to get into e-business free of the culture and processes of the parent company; and the "network organization," where a company tries to understand what it does best, outsources everything else, and excels at managing partnerships and relationships. At the far end of the spectrum is the "full transformation model," which means giving up the old and creating something new. "Egghead Software did this when it closed the doors on its existing bricks-and-mortar business, saying that that didn't work anymore, and started over as an on-line business," Neuman says.

"There are existing businesses that have to face cannibalization, channel rearrangement, food-chain rearrangement," Tim Koogle, CEO of Santa Clara, CA-based Yahoo!, recently noted. "It's a great opportunity for brand-new enterprises to be formed to take advantage of that, and to work around the existing food chain—and fundamentally, it's a pretty cool thing."

Being dedicated. "This has to do with putting the vision on the wall, making that vision stick, and getting the leadership and the company behind it," Neuman says. Executives should consider e-business as an integral part of business,



FORMULA FOR SUCCESS

Companies that lead in e-business tend to have several key qualities, such as:

- Strong CEO support for electronic business.
- An e-business or e-commerce executive.
- Spending on e-business of at least $5 million.
- A number of dedicated "e-teams" that involve at least 2% of employees.
- The use of new business models.

SOURCE: META GROUP

making sure they allocate the right resources, establish the right metrics, and give it ongoing senior-management attention, rather than shunting it off to a division or department, she says. "This has to focus on your vision and your strategy—where the company is going—and it has to have the right leadership."

Executives should decide whether they are ready to do more than simply dabble in e-business and make a solid commitment to changing their companies. The importance of that kind of commitment was clearly understood by Oracle CEO Larry Ellison as the company began its shift to Internet-oriented products and operations. At the time, Ellison proclaimed that "if the Internet turns out not to be the future of computing, we're toast. But if it is, we're golden."

SIMPLY PUT...

The Internet "took what was difficult, expensive, and sophisticated, and made it cheap and ubiquitous."

—FDX PRESIDENT AND CEO **FRED SMITH**, *CHIEF EXECUTIVE* E-CONFERENCE

LOOKING AT THE LEADER

As CEOs answer those three questions, they may find that they lead to another line of inquiry—one that points to a need for new ways of managing people, thinking about strategy, and leading the e-business.

First and foremost, e-business demands increased speed and a willingness to take risks. "It took 38 years for 50 million people to listen to the radio," Neuman says. "It took 18 years for 50 million to get hooked on TV. It has taken just four years for 50 million users to be Web-enabled." With customers and markets moving that fast, the first-mover advantage is greater than ever—which makes rapid decision-making and a heightened focus on action a must.

What's more, the need for speed is only increased by the all-encompassing nature of the e-business revolution. "I don't think there's any institution, including governments or universities, that in some way will not be forced to be transformed," Halsey Minor, CEO of San Francisco-based CNET, told the University of Virginia e-summit. "There's a lot of value in transforming yourself and doing it first, [rather] than having others transform you."

That's a view that Wall Street has clearly taken to heart. Neuman points to Cayman Islands-based Xcelera.com, formerly the Scandinavia Company, "which is essentially a holding company and not that well known. They made an investment in a company called Mirror Image, which helps content providers improve the speed of delivering content. Based on that investment, their stock went from $17 million overall to $550 million overall in the last year. They weren't rewarded for their core business of being a holding company. They were rewarded for the kind of decision-making that changed their business."

For chief executives, then, the world of e-business is a world where risk is rewarded more than ever, and even failure is acceptable—as long

The E-Business Learning Curve

When plotting out an e-business strategy, it's helpful to think in terms of four stages, says PricewaterhouseCoopers' Cathy Neuman. Those stages constitute a kind of evolutionary continuum. As companies move along that continuum, they become more heavily involved in e-business and reap increasingly broad business benefits. "There are huge differences between those steps, and most of the world is still at step one, maybe just getting into step two," Neuman says. "We are just at the very beginning of e-business and what it means to be doing business." Neuman says the stages of e-business are:

Presence.

Here, companies use the Web to present relatively static information about products and perhaps conduct some on-line sales.

Integration.

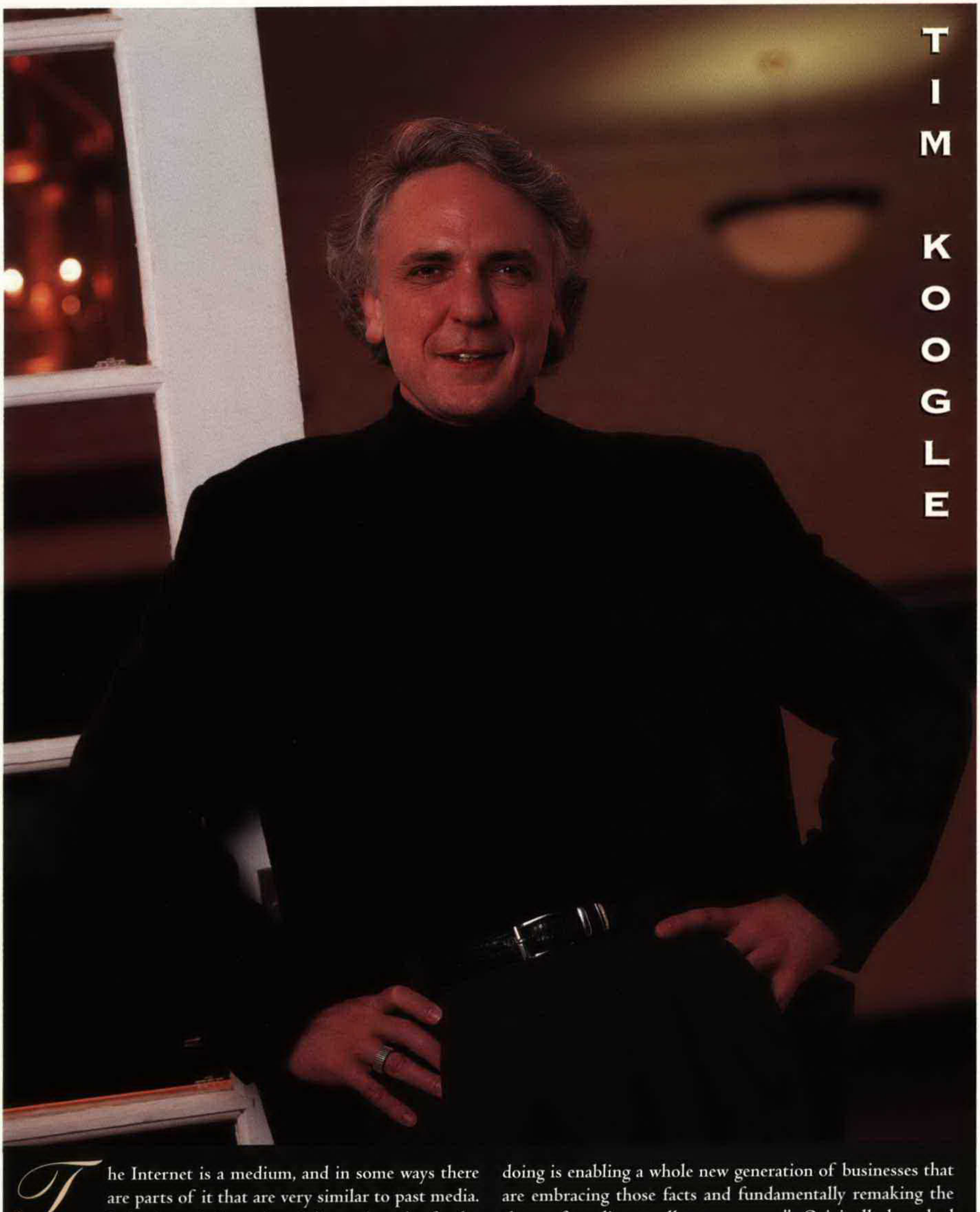
Companies create links between their Web sites, their back-office systems, and their suppliers, and they begin to integrate buying and selling processes. They are able to provide personalized, interactive content that allows customers to track shipments, access service and support, receive tailored product recommendations, and more.

Transformation.

Building on the integrated e-business infrastructure, companies unbundle operations, outsource noncritical activities, and create supply chain communities. These changes begin to reshape entire industries.

Convergence.

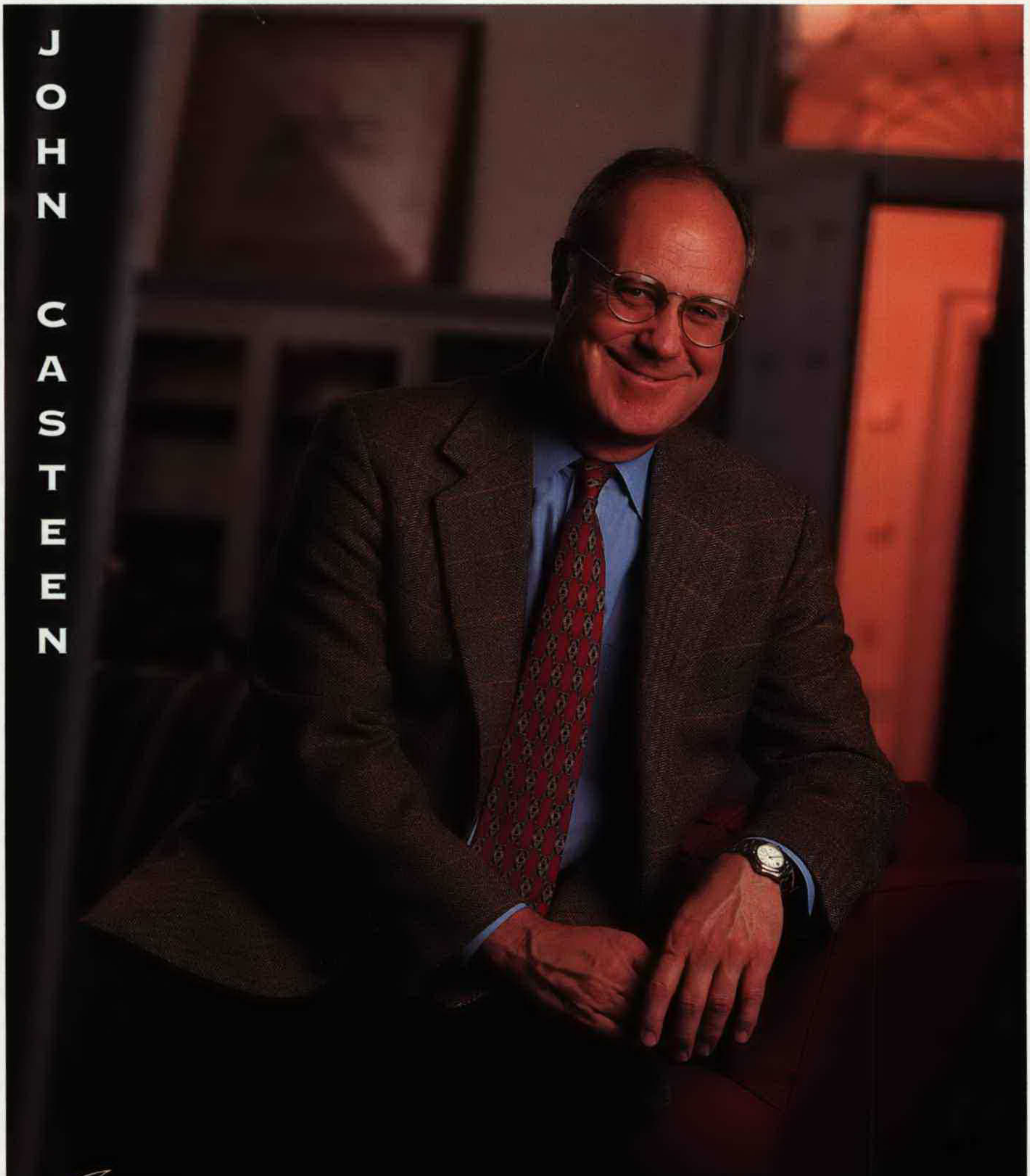
E-business lowers the barriers that have traditionally separated industries, making it easier to link with disparate business partners, move into new markets, and combine products and services from different industries.



TIM KOOGLE

"The Internet is a medium, and in some ways there are parts of it that are very similar to past media. It is about information delivery, but the fundamental difference is that it is about content delivery, commerce, transactions, and communication simultaneously," says Tim Koogle, CEO of Yahoo!. "What [the Internet] is doing is enabling a whole new generation of businesses that are embracing those facts and fundamentally remaking the shape of media as well as commerce." Originally launched as an on-line directory, Yahoo! has evolved into a leading portal offering a variety of content to 80 million visitors a month and selling some $500 million in advertising a year.

JOHN CASTEEN



John Casteen is the president of the University of Virginia, which was founded by Thomas Jefferson—a visionary who would probably be very much at home with today's Internet pioneers. "I suspect that Jefferson would have embraced the Internet, not simply as a novel technology but also as a treasure trove of information. I think that he would have seen it as an empowering force and as one that was essential to the well-being of a free people. He once wrote that 'knowledge is power, knowledge is safety, knowledge is happiness.'" The university recently hosted an e-summit that examined the broad impacts of the Internet on business, education, and society—"a conversation about the capacities of people to create, to reason, to understand, to invent the artifacts that change our lives."

as you learn quickly from your mistakes. It's a world in which the chief sin is inaction, which means executives no longer have the luxury of lengthy deliberations based on detailed information. "The long and the short of it is, you have got to get into it, and you have got to realize that this environment is still very fluid," says Chris Everett, global leader of the e-business effort at PricewaterhouseCoopers. "Whatever you do today, you can count on throwing it out six months from now because there are going to be better things. You need to be playing in this space, and sooner rather than later, and more rather than less. But as you play, you need to trade off analysis for speed, and efficiency for flexibility. You can't study things to death. Set a strategy, but be ready to re-do that strategy. The benefit from doing that will outweigh the costs."

The point is to keep learning, both from your own experience and that of other companies. "You have to be willing to be a fast follower, as you start to see things that work for other companies," Everett says. He suggests setting up a group to assist the CEO in tracking e-business trends—a group charged with keeping an eye on on-line competitors, emerging technologies, and, especially, "challenging the status quo and the way things are being done in the organization."

"There are little mutations happening all the time which you can think of as experiments," according to Yahoo!'s Koogle. "There are tens of thousands of them being thought of every day. There will be companies formed that will fail, some that will get consolidated, and some that will grow to huge companies and enterprises that people see as having value out in the future. It's a Darwinian process that's well under way."

In the end, a willingness to understand that Darwinian process, to be flexible and able to adopt a new perspective, may spell the difference between tomorrow's winners and losers—which, after all, has always been true in business. Neuman likes to point to the example of John Sutter of California Gold Rush fame. "Sutter went out to California in 1839, with his mind set on building a vast agricultural empire. That was his dream," she says. As part of this dream, he sent a group off to the north to start building a sawmill, and, of course, they came back saying they had found gold nuggets. "There are a lot of stories of people getting very rich off that—not just miners, but people like Levi Strauss, who sold supplies to the miners. It was a new paradigm, and folks learned how to make money in new ways. But Sutter, who was the first out there, never really got involved in the Gold Rush because he couldn't take his mind off of where he had been—the dream of creating a vast agricultural empire. And he ended up being no better off than when he got there. So you have to keep your eyes open, and keep looking for new opportunities."*

TALK VS. ACTION

In spite of the attention paid to going on-line, most e-business initiatives "do not reflect fundamental business model redesign or enterprisewide thinking," and about two-thirds of companies spend less than $1 million a year on e-business projects.

SOURCE: META GROUP

Fresh Faces, Fresh Ideas

Not long ago, the Harvard Business School instituted a new and rather telling rule: Teachers could no longer act as paid consultants to a certain group of especially dynamic companies—those run by their students.

The rule underscores a basic fact of e-business: Fresh thinking and technological savvy are tremendously valuable assets in the new economy, and young people have both. As Don Tapscott writes in his book *Growing Up Digital*, young people have always had information technology around them, and they are therefore far more familiar with it than their elders. "For the first time in history, children are more comfortable, knowledgeable, and literate than their parents about an innovation central to society," Tapscott explains. As a result, students are doing so well in the technology-fueled business world that Harvard felt it had to avoid conflicts of interest.

"In e-business, it is very important to listen to the young," says Chris Everett of PricewaterhouseCoopers. "So almost any task force or project around this ought to include people in their 20s and 30s, not just the old grayhairs in their 40s and 50s." In addition, executives should look for ways to keep the lines of communication open with employees in the younger ranks, he says. "This is a concept that needs to be woven into the organization. You have to make sure young people understand where the organization is moving. You have to find ways to let their ideas bubble up and not be killed. And you have to share your success with them."*

BEHOLD

Traditionally, the corporation was a solid, self-contained bastion on the competitive landscape. But as executives survey the world of e-business, they see opportunities to forge links that reach far beyond the company's walls, as

The VIEW

AND *Real-Life* CASE STUDIES
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well as deep within the company itself. As a result, tomorrow's leaders are shedding the old fortress mentality and using the tools of e-business to bring customers, suppliers, business partners, and employees together for the good of all.

There is an awful lot of hype around 'e-this' and 'e-that,' but at the end of the day, what we're really talking about is technology-enabled business," says PricewaterhouseCoopers' Chris Everett. "And the truly new element in the game is the connectivity that e-business brings between the company and its customers, suppliers, partners, and employees. E-business enables new ways of dealing with every one of those constituencies, and changes those relationships from both a time and openness perspective."

When executives examine how they work with those constituencies, and how they might work with them in an era of connectivity, they can develop a broader, more inclusive view of e-business opportunities and benefits. Often, such an examination will reveal that a great deal of friction can be taken out of the processes that connect everyone. For example, when Milpitas, CA-based Adaptec, a maker of data transfer hardware and software, established e-business connections with key suppliers in Hong Kong, Japan, and Taiwan, it reduced cycle time by 50 percent and cut $10 million from its inventory costs.

In a global survey of CEOs, the World Economic Forum and PricewaterhouseCoopers found that servicing existing customers and creating channels to new customers topped the list of reasons for pursuing e-business initiatives. In the rush to grab on-line customers, however, companies sometimes overlook internal activities, where the benefits can be substantial. At Oracle, for example, a Web-based travel-management system for employees is expected to shave direct and administrative costs by at least 15 percent. And Cisco Systems is using the Internet to conduct "virtual manufacturing" and manage 34 plants around the world as a single operation. Cisco is also using an intranet to link internal departments, which allows the company to close its books in just one day—down from 15 days a few years ago. This fast turnaround has reduced costs by 50 percent and makes it possible for executives to spot problems and opportunities much sooner.

One internal area getting particularly strong attention from executives these days is human resources. At a growing number of companies, employees can use an intranet to select health care plans, check 401(k) balances, look up company policies, view their pay stubs, and update their personnel files. "In the e-business environment, you can have greater efficiency and effectiveness in the way you interact with employees—which is by far the greatest, and hardest-to-find, asset for a lot of companies today," says Everett. "You can look at everything from recruiting to the maintenance of benefits, career development, and communication mechanisms. And you can provide employees with access to services and products that may not even be part of your company, such as banking." These systems not only help the human resources department run more smoothly, they make the company more attractive to skilled, talented employees as well.

@WORK.EDU

As the workforce shortage increases, corporate "e-learning" will gain in importance and drive a market expected to surpass $7.1 billion by 2002.

SOURCE: INTERNATIONAL DATA CORP.

EXTENDING THE VISION

Looking outside the corporate walls, many observers see great promise in increased connections with suppliers and business partners. Indeed, business-to-business electronic commerce is expected to dwarf business-to-consumer sales in the coming years, with sales in 2003 projected to be on the order of $1.2 trillion—about seven times the predicted amount of on-line consumer spending.

Several factors are behind the growing interest in intercompany connections. For one, linking one business to another is in many ways simpler than linking to consumers because the fundamental relationships are already well defined—often, by contract. In addition, most large companies see the potential to squeeze a huge amount of costs out of the supply chain, which is traditionally marked by redundant activities, paperwork, handoffs, large buffer stock, and other

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CASE STUDY

TETRA PAK

E-BUSINESS E-VOLUTION

It was all so much easier in the old days. Of course the old days of e-business were barely four years ago, and migrating a company or part of a company to cyberspace *was* easier then.

"Less than four years ago," says Greig Oppenheimer, VP of Roll-Fed packaging systems for Tetra Pak, the $11 billion liquid food processing and packing company, "we thought we could implement an e-business strategy ourselves and do it very inexpensively."

Even cheaply. "It's important to remember," Oppenheimer says, "that in the mid-'90s e-business pretty much meant getting a couple of high school or college students to set up a Web site and you were done."

Then, the Web was as much a positioning statement as anything—a company had to have a Web site because every other company was getting one. What they were going to do with the Web site was another matter.

"Basically, you were looking at putting a catalog on-line," Oppenheimer says. "And not much more than that."

It was indeed a simpler time—and it didn't last long. "By 1998 it had become clear to us that the Web was changing dramatically," Oppenheimer says. More importantly, it was clear that the Web was going to change business dramatically. "We began to actively pursue a strategy for establishing our e-business initiative."

Crucial to that strategy was deciding how to incorporate e-business into Tetra Pak, a global company based in Lausanne, Switzerland.

"You have two approaches to making the transition," Oppenheimer says. "You can take an evolutionary approach, in which you use the new technologies to enhance your current business model. Or you can take a transformational approach, where you completely reconfigure your business and value propositions, and use the technology not only to reconfigure but also to reinvent your business."

Both strategies are important to consider, Oppenheimer argues. The two approaches, which require different timetables, skill sets, and levels of investment, come with different kinds of risks, he says. "Not every business can survive on an evolutionary strategy alone, while the risk of a transformational strategy is that of a do-or-die, alarmist approach, a mindset within which management generally doesn't function well."

While continuing to study the transformational approach, Tetra Pak focused on an evolutionary introduction of e-business into the company's existing business model. "This approach lets you continue doing what you currently do, but with technology that lets you do it smarter."

The decision made, Tetra Pak focused on the specific areas where e-business would be introduced. "Here is where it becomes essential that your teams span the company, not just the information technology department," Oppenheimer says. "It is vital that top management be involved at every stage, meeting with the vendors as well as with the internal teams."

Top management's involvement, Oppenheimer believes, serves a couple of crucial purposes. It sends a signal that management is behind the strategy. "But it also serves to remind everyone that this is a business strategy, not a technology issue. Management must keep everyone focused on relating the implementation to the company's core business, to its central strategic imperatives and goals."

At Tetra Pak, customer satisfaction is the core goal being pursued by the evolution of e-business. Working with PricewaterhouseCoopers, Tetra Pak's teams began in 1998 to plan a two-year, four-phase implementation that would use the Web to address ever larger customer relationship issues and opportunities.

"With customer satisfaction as our initial e-business imperative, we divided the evolution into four distinct phases of implementation, each phase to take three months from sign-off to up-and-running," Oppenheimer says. Tetra Pak is midway through the four-phase approach.

The first phase was simple accessibility. "We wanted first to make information available to our customers," he says. "Our goal was to use the Web to allow them to know what was going on, to give them easier access to information, pricing, product lines, and so on. Basically, this phase was to let our customers *iness Under*

know that Tetra Pak keeps its customers well informed."

Next came interaction. "Here we enhanced the customer's ability to interact with Tetra Pak," Oppenheimer says. "We used the technology to make it easier to do business with us, to facilitate order placement and order modification."

The third phase will be transactions. "By the end of this phase the customer will be able to complete an entire transaction on-line," Oppenheimer says. "The information is accessible, the interaction is efficient, and the systems are in place for the entire process."

Finally comes collaboration. At this point the technology will permit the company to move beyond sales and fulfillment. "At the close of this phase, the technology lets us work with our customers to achieve common goals, to see beyond current transactions and look toward product improvement and innovation, all as a result of customer feedback derived from the e-business system."

In pursuing the four-step plan, Tetra Pak has learned—and applied—some critical lessons about implementing an evolutionary e-business strategy, Oppenheimer says.

"First," he says, "it's important that you select the right vendor. You have to involve them in discussing and challenging your strategy and goals, but make it clear that you'll be working with them at every step of the process. You know your business better than anyone else, which means that you know better than anyone else how to apply and adapt your vendor's solutions to your core business. You can't do this yourself—and would be foolish to try—but a company that delegates all of its e-business implementation to an outside vendor is in for a very rough time."

Next, he says, is prep time. This can—and possibly should—take more time than the actual phases of implementation. "Break the process down in serious meetings and reviews that address everything," he urges. "Business strategy, resources allocated to the process, impact on current business, decisions regarding what sorts of information will go on-line and when—all of it has to be on the table, and the earlier the better."

At this point, perspective helps a lot. "Don't set out to build a whole ship," he advises. "Instead, separate the process into areas or phases, and approach each as a framework for making decisions. Make it an iterative process, not an all-or-nothing process."

At Tetra Pak that meant putting the four phases into a manageable, and achievable, implementation plan.

Within each phase, work has to be tailored to fit available resources, Oppenheimer says. "This is one of the points where top management's participation counts for so much. If necessary, top executives can review and expand the resources needed to accomplish the phase."

But equally important is freezing the scope of each phase once it has been finalized, Oppenheimer says. "This helps control the project and gives you the ability to proceed with planning each subsequent phase even as the current one is in process of implementation."

Another key step in planning is to ensure that more than one executive is prepared to complete the process, rather than having a single champion or expert, he says. "This sort of innovation and implementation often does have a single entrepreneur or advocate within the company. But once you start to raise the child, you need to be sure that at least a couple of members of top management have the knowledge to finish the job. Just in case."

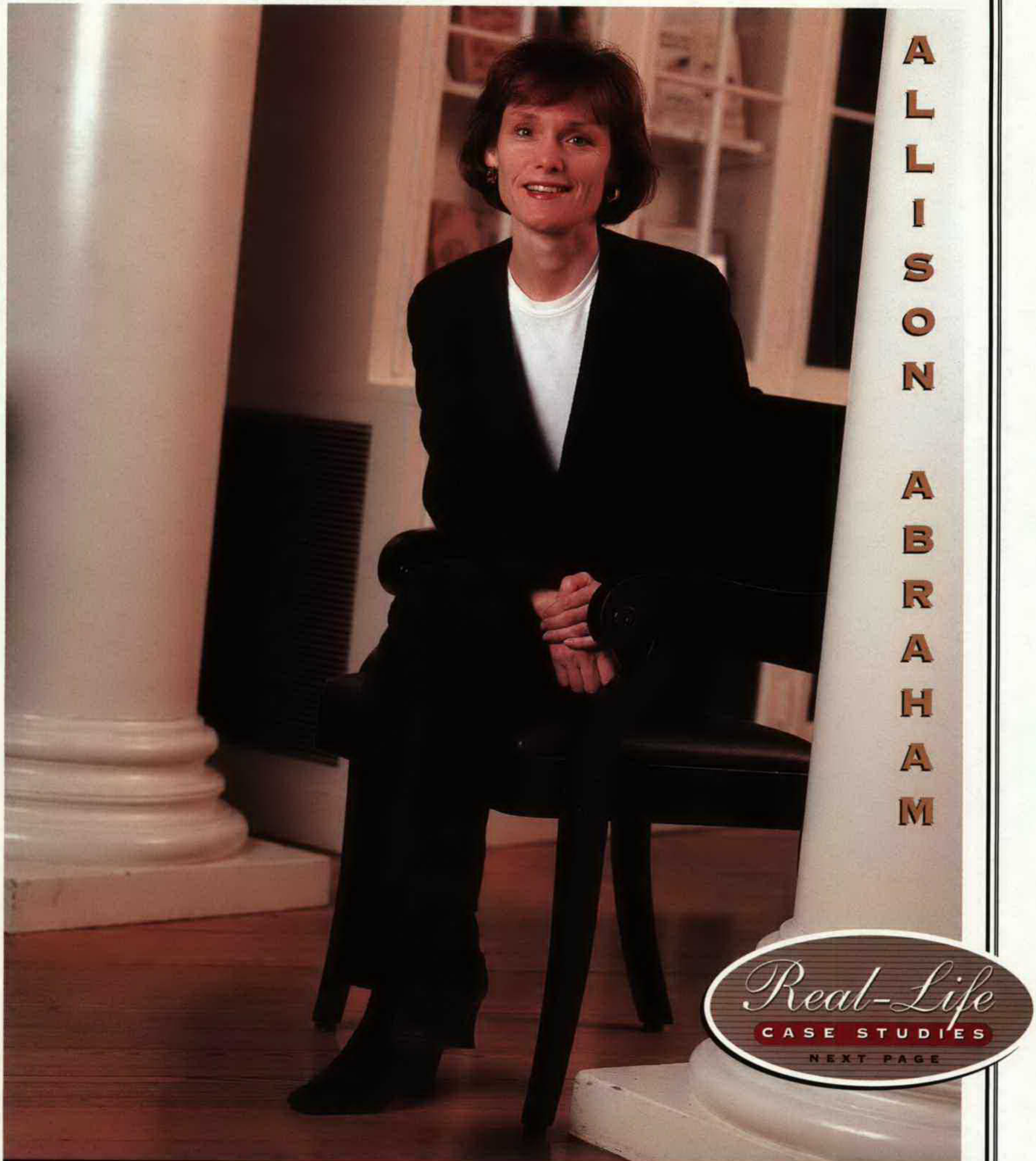
Above all, be aware that the most important issue your company faces will not be technology, resources, benefits, or potential, he says. "It's resistance. Not necessarily internal objections to the e-business strategy or simple resistance to change, but resistance coming from inertia, other priorities, differing perceptions of value, resource constraints—the entire spectrum of reasons.

"Management's ability to overcome these areas of resistance is perhaps their greatest responsibility," Oppenheimer says. "They have to fully understand what this is all about, and they have to communicate that it is a major opportunity for the business. This has to be done at the CEO level. If it's not done there, the process is not going anywhere. At the very best, the whole strategy will be internally crippled."

But with top management's backing, the process becomes something special—an evolutionary process filled with opportunity and potential that involves the entire company. (An added benefit here, Oppenheimer notes, is that CEOs find it easier to hold onto valuable younger executives and employees who are almost as a breed obsessed with being at Web-savvy companies.)

"The CEO's involvement and understanding reminds all concerned that e-business is about business, not technology," Oppenheimer says.

"And eventually," he says, "we'll all drop the 'e.'"*



In e-business, companies succeed by bringing people together and building a community-which is the idea behind iVillage, a site designed around the interests of women. For example, says iVillage COO Allison Abraham, "we've run a 'community challenge' and had 56,000 women dieting together every day. What happened over that period of time is that they looked to iVillage as a very trusted environment, very helpful and credible for them." That in turn "facilitates all types of different transactions to go with that, and [it] becomes a very strong environment for advertisers and for commerce. The companies that are able to be consistent, establish the brand, and provide a very strong consumer experience will keep them coming back every day—and that integration into [the customer's] lifestyle is going to make the company successful."

the Magni

CASE STUDY

SARA LEE

ELECTRONIC EVIDENCE

Don't scan the channels for an action drama called *Forensic Accountants*—yet.

"Electronic data discovery is where it's at in commercial litigation," says trial lawyer John Stephenson of the Atlanta office of Alston and Bird. "It has utility in almost every business case."

When Stephenson was hired to represent food and apparel giant Sara Lee's interests in an array of sublicensing arrangements in connection with the 1996 Summer Olympics, he soon found himself embroiled in a litigation that drew upon not only the rule of the law, but also the rapidly evolving world of electronic data storage, deletion, manipulation, and retrieval.

"On the eve of the Olympics," Stephenson says, "Sara Lee had reason to suspect that some sublicensees were selling outside of acceptable channels, selling licensed merchandise without reporting the sales, and so on. We filed actions in federal court, obtaining temporary restraining orders against several sublicensees."

Most of the disputes were quickly resolved. One company, however, fought the lawsuit and filed counterclaims. Stephenson, on behalf of Chicago-based Sara Lee, subpoenaed its hard disks.

Sara Lee's case was helped not simply by the fact that the company was in the right—but also by the fact that forensic accountancy had been involved in the case from before the first restraining orders were sought. Stephenson had retained PricewaterhouseCoopers' forensic experts as the case took shape.

"Because virtually all business data is electronically generated," Stephenson says, "it is crucial that your forensic accountants enter case preparation at the earliest possible stage. Entering sophisticated and complex commercial litigation without them on your side from the beginning would be like going into court with one hand tied behind your back."

Based on examination of the physical hard disks, the electronic data retrieval team was quickly able to prove to the satisfaction of experts and the federal court judge that not only had false and duplicate books been kept, but that files had been altered and deleted *after* the lawsuit was filed.

Obviously, the era of simple paper shredders is long gone.

Sara Lee won across the board. "It was a grand slam in terms of litigation results," Stephenson says.

But the end of that day four years ago was barely the beginning of the role electronic data and data recovery plays in modern business—and business litigation.

"If you're going into business or commercial litigation," Stephenson observes, "the first thing you ask for is electronic data. Even paper trails in business are now generated electronically. The greatest source of any company's data is electronic."

To that end, whether facing litigation or not, it is vital for a company to have consistent, clear, and *published* electronic document retention policies in place, Stephenson says.

"Those policies have to extend not just to business records, but also to e-mail," he says. He recommends that the policy be endorsed from the very top of the company.

Employees should be instructed in what is and what is not appropriate to include in electronic correspondence. "Employee e-mail is the most difficult employee factor for a company to control," Stephenson says. "But it's also the most dangerous from a litigation exposure level."

Retention and deletion of e-mail is equally important.

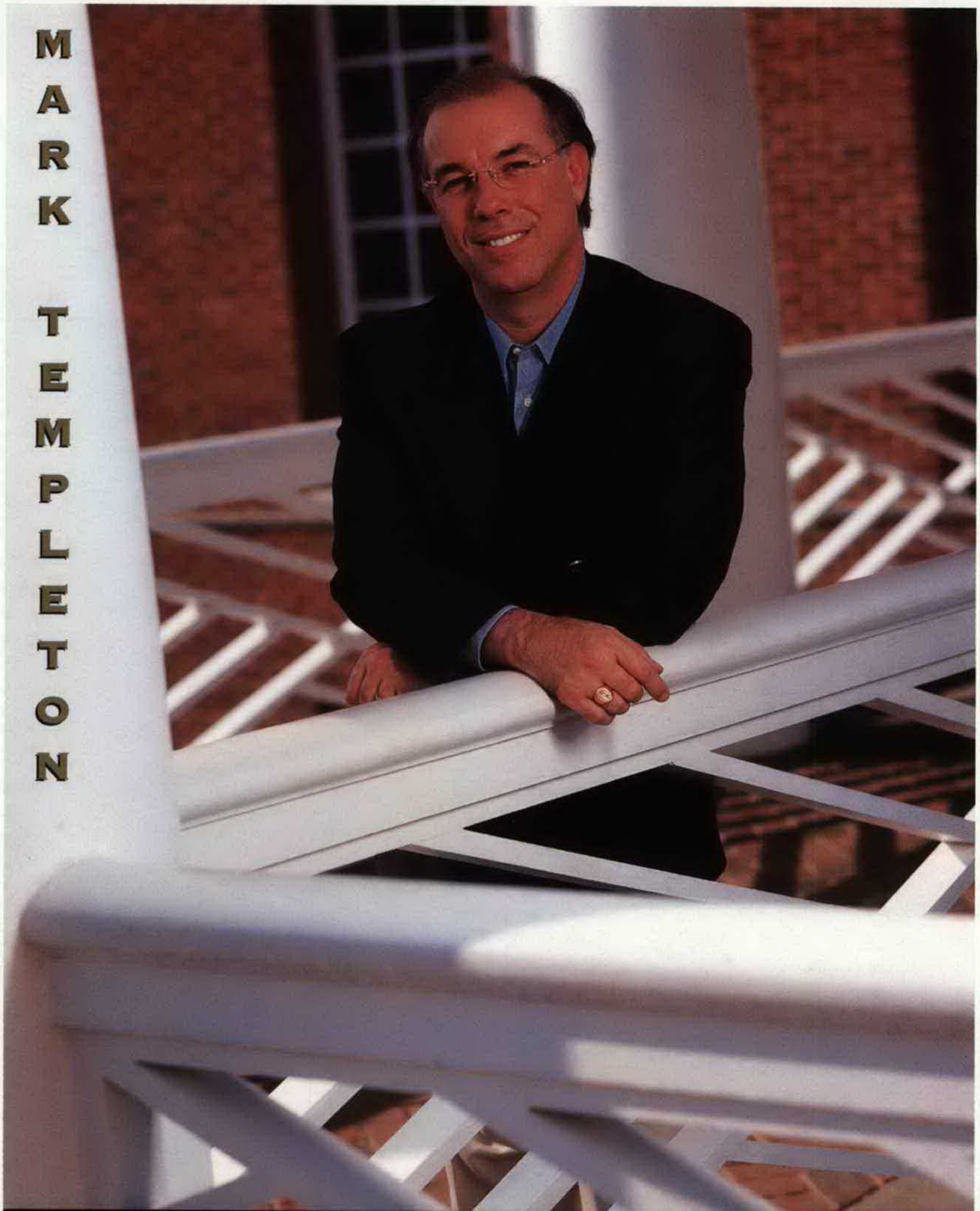
"A company's policy must include guidelines for deletion of e-mail files on a systematic basis that represents legitimate business practice," Stephenson says. Haphazard or inconsistent deletion practices can leave a company exposed to charges of spoliation of evidence should a lawsuit be filed.

"And once a suit is filed," Stephenson says, "nothing can be altered—or even accessed—without creating a potential spoliation problem. Your company is under an obligation to preserve all data and documents that could be relevant to the case."

Again, he asserts that the policy must be published and must flow from the top.

"The document retention policy," Stephenson says, "not only has to be in place and consistently applied. It has to be backed up by employee education at every level." *

M A R K T E M P L E T O N



Mark Templeton, president and CEO of the Citrix Systems software company, has steered his company into the Internet market and established an iBusiness unit. Over the years, he has learned some lessons about the kind of attitude it takes to succeed in e-business. His career, he says, has been "a journey of getting exposed to a tremendous number of people, places, things, and technologies; trying things and having them not work and letting that go; not worrying about failures; and coming up with your next idea and charging forward and keeping your eyes that way. Like I tell a lot of people who work in our company: That's why God put our eyes on the front of our head, to keep us looking forward."

lying Glass

CASE STUDY

KPN ROYAL DUTCH TELECOM

LET THE REVOLUTION BEGIN!

"The only acceptable speed in implementing e-business practices is top speed," says Franz Cornelis, manager, Commercial Office, KPN Royal Dutch Telecom.

Even for a large and Net-sophisticated telecom, the dynamic growth of e-business prompted a dynamic response.

"Somewhat over a year ago, KPN reorganized itself completely to cope with the future challenges in Europe," Cornelis says. "We already had medium-sized businesses helping our customers to 'get on the Net.' Therefore, a 'telecommerce' business unit was formed to leverage the skills and knowledge developing in those businesses. This unit is now one of the fastest growing parts of KPN, with a turnover of hundreds of millions of dollars."

Forming that unit was only one phase in an ongoing process, one that quickly came to involve all aspects of the Netherlands-based company.

"Our decision was to start from the customer end," Cornelis explains, "and to integrate the separate initiatives into a logical e-business front end."

That focus proved invaluable in reinforcing KPN's perspective. "All units faced the fact that customers increasingly do not want to deal with our organization chart, but want to be recognized across the various channels they may use," Cornelis points out. "The advent of one-on-one marketing techniques and customer relationship management thinking led to a desire in most units to be able to use state-of-the-art systems to serve the customer regardless of where he 'belonged' on the organization chart."

Other aspects evolved as the plan was implemented. Cornelis explains: "Our own business plans changed in that the new platform also turned out to be a major catalyst for some long overdue rethinking of our internal supply processes."

Simultaneously, KPN faced the challenge of ensuring that the strategies implemented were capable of keeping up with both the continuing evolution of technology and the growth of the e-business marketplace.

"We scoped the project to be easily scaleable to up to 100 times current traffic and transaction levels," says Cornelis. "The technology and the markets evolve so fast that any implementation period of over one year makes your volume projections unreliable and your technology outdated when you are just starting. Therefore, we started on an 'ideal' time frame of seven months."

KPN saw to it that since every area of the company would be affected by the transition, every area was involved in making the transition a smooth one.

"A lot depends on keying in different expert groups into the project group at different times," Cornelis says. "Meanwhile, the executive sponsors and the project team leaders have to spend a lot of time communicating with the various stakeholders in the customer base and in our organization."

KPN did not rely solely on its own resources during the implementation.

KPN makes extensive use of a coalition of outside partners, including PricewaterhouseCoopers, Cornelis says. "That is because of the speed we need to achieve. Many of the initial foundation platform design and implementation activities are a one-time effort. Finding and training these people ourselves would take time that we do not have."

Attitude also plays a part; Cornelis refers to mindset as "the most important item to watch in order to know if KPN stays future-proof." He says, "Our mindset must be that this is not so much an e-business strategy, but a business strategy. It is even more a marketing necessity than a technology trick. For our businesses, the times that you could sell 'any color, as long as it is black' are over. The customer, corporate or individual, wants to be put in control of his orders. KPN intends to achieve this, and to teach others how to do the same."

While KPN has taken every care to approach the implementation of its overarching e-business strategy prudently, guided by sound business practices, the company nevertheless understands, and even embraces, the boldness of its approach.

Says Cornelis: "There is no slow and careful way to join a revolution." *

Continued from page 12

inefficiencies. "What do you get out of business-to-business [connections]?" Ned Lautenbach, chairman and CEO of Burlington, MA-based Dynatech, a communications equipment company, recently asked a *Chief Executive* roundtable. "You get real stuff: You get lower costs of doing business. You get much better service. You can look right inside your company. You can see where your business is, where it stacks up, where you can get it to be much more efficient. And all of a sudden, you're a much easier company to do business with."

Beyond efficiency, companies are also looking to business-to-business links for the more strategic benefits of speed and flexibility. With an e-business-enabled supply chain, it is easier to coordinate and plan activities between companies, integrate processes across company boundaries, and form new alliances to take advantage of fast-moving opportunities. "More than ever, companies will need to have their suppliers anticipate their needs in order to meet the customer's needs," says PricewaterhouseCoopers' Everett. "With e-business, the whole supply chain will be much more responsive."

A NEW VIEW OF THE CUSTOMER

Of all the constituencies that companies can connect with, the most challenging is clearly their customers. As any chief executive knows, customers today are sophisticated, demanding, and ready and able to switch vendors at a moment's notice. In a recent survey by PricewaterhouseCoopers and The Conference Board, more than two-thirds of senior executives cited "meeting customer demands" as a top challenge. The tools of e-business make it possible to meet that challenge. Companies can interact with and understand customers, and therefore they can do more than simply push products at them.

In particular, companies can let customers help themselves—by empowering them to find and get exactly what they want. To a large extent, that means giving customers on-line access to more information than they could get through traditional sales channels, such as in-depth product descriptions, photographs, diagrams, videos, and reviews from experts and other customers who have used the products. Taking things a step further, some companies even let customers design their own individualized products. Compaq customers, for example, can use the company's Web site to configure their own PCs before ordering. They can pick the memory, monitor, hard drive, and so forth that they want. Customers seem to like that kind of approach: When a global high-tech company recently put self-serve kiosks in 5,000 retail locations, it saw $20 million per month in configure-to-order purchases. And for the seller, letting customers do it themselves can reduce the cost of sales and improve order accuracy. At Cisco, going on-line has helped reduce error rates in orders from nearly one in four to about 2 percent.

The upside doesn't stop there. A company can track these on-line interactions to gather information about customers, such as how long they stay at a site, what they buy, and how much they spend. That is, companies can collect information about how customers actually *behave* as they shop, as opposed to what customers say in surveys and focus groups. A company can then use this information to understand customer needs and provide targeted offerings, such as product recommendations, e-mail notices of new products that fit their profile, and bundles of products and services that might interest them. "We're no longer in the mode of mass marketing. With e-business, we are heading toward a much more targeted, one-to-one kind of marketing," says Everett. "A business will be able to proactively respond to customers' interests and desires, instead of having to take a broadcast advertising-type approach."

"More and more, it's about the service that you put around the product," Halsey Minor, chairman and CEO of CNET, the Internet technology news and products company, told the University of Virginia's e-summit conference. Effective offerings, he said, will have "some sort of service component that is brought about by using the Web in a novel, unique, and ultimately value-added way." He pointed to the example of Dell, "who I think has done a wonderful job. You buy a Dell PC, and that's great. But it's also great that they send you an e-mail when it's shipped, and you can go on their Web site and watch it through every step of the development process. They've gone out of their way to make sure that you can get help from them directly off of the Web site. It's not the act of buying the PC that holds its value—it's the experience of buying. It's all the accoutrements that the Web, in fact, allows."

The point is to make the customer's life easier, simpler, and more productive—to build and manage the

MILES TO GO

More than 80 percent of surveyed companies are using some form of e-business with customers—but far fewer are using it with their partners (43%), suppliers (52%), and internal processes and employees (57%).

SOURCE: META GROUP

Technology: Four to Watch

The technology used to connect companies, employees, and customers is constantly evolving. PricewaterhouseCooopers' Chris Everett suggests that CEOs keep an eye on four key areas:

Bandwidth. With the ability to send more data over a network, "you are going to see lots more streaming, a lot more graphics and pictures," Everett says. "Today's experimental abilities will be common. You'll be able to test drive automobiles on-line, for example."

Access tools. A growing number of access devices—handheld computers, Web television, cell phones, etc.—will allow people to tie into networks wherever they are. "The day when your refrigerator is Web-enabled, so that when you finish a bottle of milk, you scan the UPC code past it and order another one, is really right around the corner," Everett says.

Software. Voice recognition, artificial intelligence, personalization software, chat capabilities, and a whole range of evolving applications "mean that there's going to be more things you can do and easier ways of doing them," he says.

Infrastructure. "We are starting to see businesses and systems develop that deal with issues of trust, privacy, security, payments, and services capabilities. All that is going to make things simpler and safer to use," Everett says.

As the technology evolves, it is not only getting more powerful, but more ubiquitous as well—and that will open new avenues for staying connected. In the near future, Yahoo! CEO Tim Koogle recently explained, "I doubt that anyone will be saying 'I went to the Internet to do something.' They'll be saying they did something, period. You'll take it for granted, and there will be a plethora of devices and connection points, wired and wireless, all seamless, worldwide, and I think that it will be woven into people's lives." *

relationship with the customer, and thereby increase the amount of business the company does with him or her. "If you look at Amazon, the business is really about understanding its customers. And once it understands its customers, it can eventually sell them whatever it is they need," says Cathy Neuman of PricewaterhouseCoopers. "The CDs and toys and gifts and everything else are just a way of trying to figure out who an individual is and what their preferences are. The end goal is the relationship."

With that sort of approach, a company can begin to truly build the business around the customer. Like Amazon.com, several on-line companies are beginning to combine content and products from a variety of vendors. But instead of establishing on-line versions of general department stores, they are creating sites that cater to specific areas of interest. At Travelocity.com, for example, the interest is travel. Customers can make airplane, car, and hotel reservations, and they can peruse a destination guide that offers text and video presentations. At iVillage.com, which co-founder Nancy Evans has called "the largest collection of women gathered together in one place ever," women can find a range of "solutions for life," including advice on work, family, romance, and finance; chat rooms; and shopping.

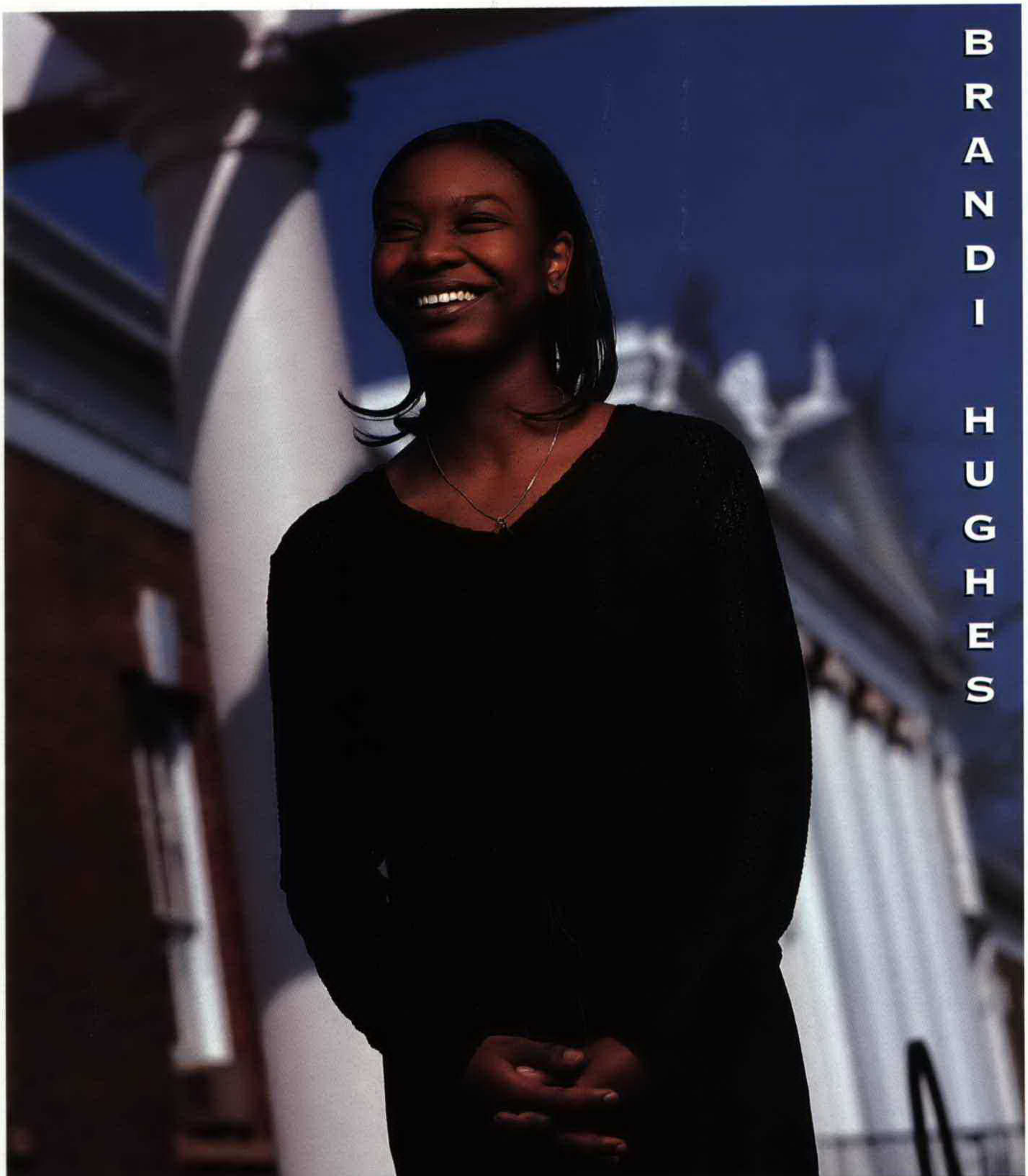
With the flexibility of Web technology, it is becoming possible to instantly rearrange such content for individual visitors. "Instead of going to a site and picking a book, a customer will have tailored offerings delivered to her that match her needs, her interests," Kathryn Creech, CEO of VitaminShoppe.com told a *Chief Executive* roundtable. "Instead of coming to a site and looking at a broad array of products, she will have a personalized store that exactly matches her interests and needs and reflects her previous patterns. It's 'me.com.' It's the message that says, 'Did you take your vitamin today? Did you trade your stock today? Did you buy your mother's birthday present today?' It's a one-on-one medium that each of us has to figure out how to plug into."

INSIDE JOBS

The top four uses of corporate intranets are information sharing, information publishing, e-mail, and document management.

SOURCE: INTERNATIONAL DATA CORP.

As e-business evolves, this emphasis on relationships—on the value of lasting, well-managed connections—is emerging as a central principle. In e-business, companies will prosper by building communities; constantly expanding their view to nurture and grow those communities; and continually bringing suppliers, customers, partners, and employees together. "There is a law—Metcalfe's Law—that says that the utility of a network is the square of the number of users," says Everett of PricewaterhouseCoopers. "What that means is that every time you get another person on board, it makes everybody else on board a little bit more connected, and the whole thing a little bit more valuable. When another business comes on board a supply chain community, the supply chain can offer more things. We are at a point now where this is a snowball rolling downhill, and it's picking up momentum. And it not only goes faster, but it gets bigger as well. That's exactly what's going on here." *



Executives must understand that the workforce of the near future will be connected, collaborative, and accustomed to using technology to explore new avenues. "The growing incorporation of the Internet in traditional class settings points students to yet another medium in which they can be innovators," says Brandi Hughes, a third-year student at the University of Virginia's College of Arts and Sciences. "The Internet pushes the student to be both explorative and creative in the learning process—rather than passively consuming lectures and textbooks. I believe that as an influence on my generation, the future workforce, the Internet is teaching us the value of synthetic thinking and to be more demanding in seeking opportunities to lead and create."

SIGHTS

For traditional companies and Internet startups alike, e-business is uncharted territory. That means that new opportunities to improve operations and reach customers abound. But it also means that there are new challenges and new dangers to face. Murky legal issues. Increased vulnerability to hackers. Complicated and conflicting regulations. The specter of information being abused for commerce and power. Before

UNSEEN

setting out on the e-business journey, executives need to be ready to meet the pitfalls of today, and the lurking, unseen perils of tomorrow. Forewarned is forearmed, and by taking a realistic, thorough view of the challenges to come, CEOs can not only create the e-business, but protect and nurture it, and thrive in a fast-changing, exciting, and sometimes frightening world.

Think way, way back to the mid-1990s, when companies started offering goods over the Internet. At the time, a lot of consumers were worried about security and, especially, having their confidential credit card information stolen as it moved over the network. Today, an observer might conclude that such fears have more or less evaporated, with millions of people going on-line to spend billions of dollars.

That observer would be wrong. Concerns about security and privacy are still very prevalent, and a great many people worry about keeping personal information safe from abuse by criminals, companies, and even governments. Indeed, 64 percent of on-line consumers are "unlikely to trust a Web site," according to a Jupiter Communications report.

The success of America Online is evidence of that concern, says Mark Templeton, chief executive of Citrix Systems, a Fort Lauderdale, FL-based software firm. Just a few years ago, many pundits thought that the growth of an open and free Web would be the end of proprietary on-line services such as AOL, Templeton explained at the University of Virginia e-summit. But AOL has thrived. "I think that what makes AOL work to a large degree is that it's a safe place to go. It's like going on a tour. Why do so many people sign up for a tour to London, rather than just get on an airplane and go to London? It's because [they know it is] a safe, secure kind of agenda. 'Someone's going to take me through, show me what I should see and not see, keep me out of bad areas.'"

For companies, however, such comforts are hard to find. E-business is a brave new world, and it involves many unknown perils and as yet unseen challenges—starting with privacy and security, which are serious issues for businesses as well as consumers. That's because collecting and storing information about customers—their tastes, where they go, what they buy—is the lifeblood of on-line business, the key to target marketing, customization, and personalization. However, those activities also mean that a tremendous and growing amount of information about customers is being kept in corporate databases. And if a company can't keep its data safe, customers will quickly go elsewhere. In many cases, "elsewhere" might not only mean another vendor, but court. In 1998, a U.S. jury awarded an identity-theft victim $50,000 in actual damages and $4.47 million in punitive damages. The reason was that the defending credit-reporting agency had "failed to follow procedures to maximize accuracy" and thereby "willfully defamed the defendant," according to a report by PricewaterhouseCoopers.

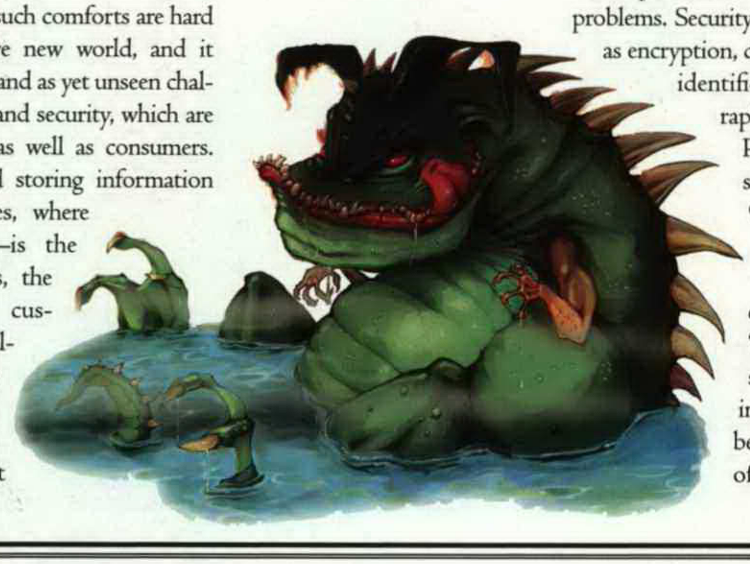
PAYING THE PRICE

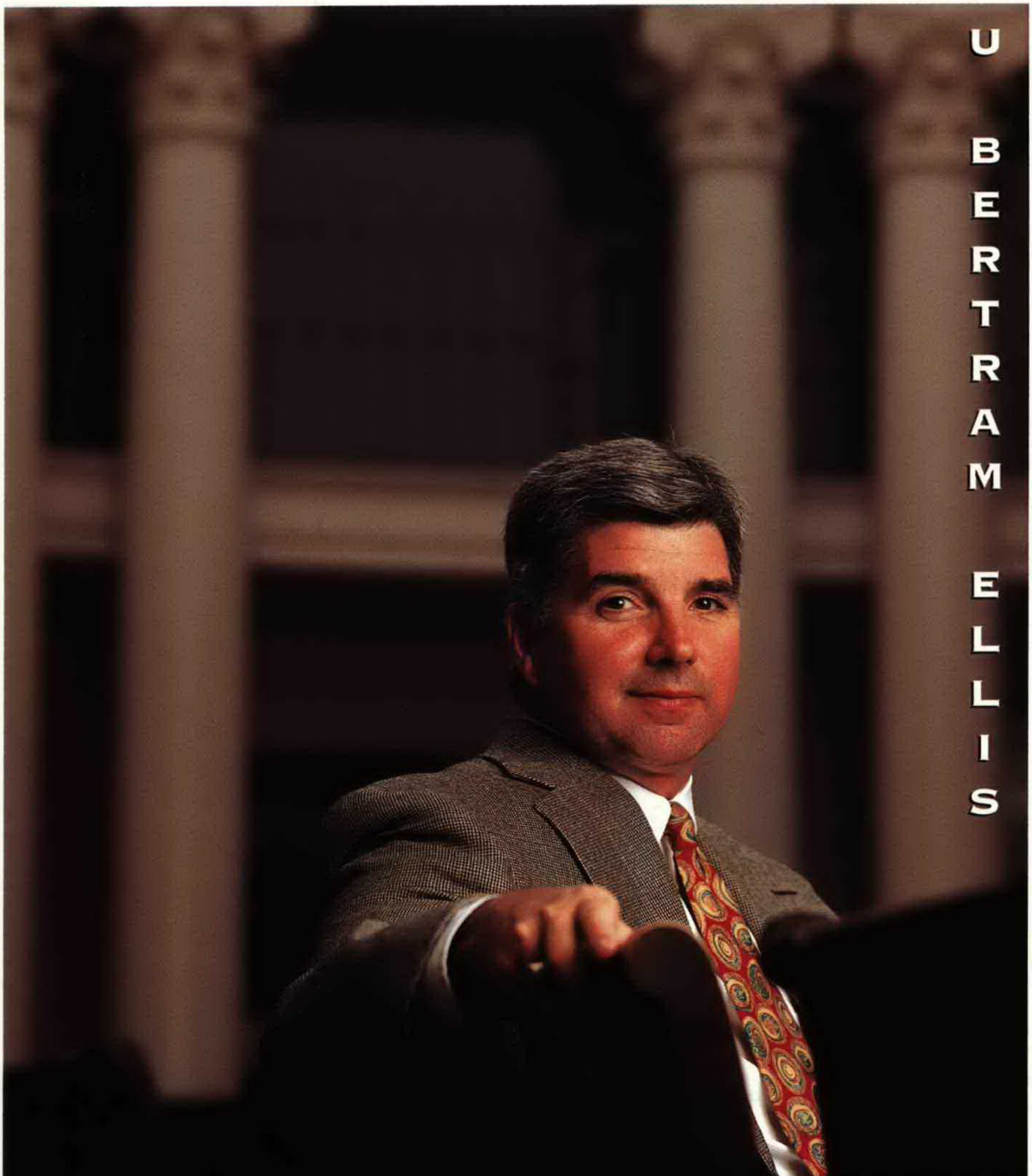
Companies that conduct Internet e-commerce are 57 percent more likely to experience a proprietary information leak and 24 percent more likely to be hit by hackers than companies that don't do business on-line. The average security breach results in a $256,000 loss.

SOURCE: ICSA/INFORMATION SECURITY SURVEY

There's a good chance that security and privacy issues will receive more attention in the coming years, simply because they will become relevant to more people. "The Internet right now is optional, and someone might say, 'Well, you don't have to use it—there's no gun to your head,'" says Larry Ponemon, a PricewaterhouseCoopers partner. "But I predict that in five or 10 years, it will be the only way to operate. So if you don't have security and privacy and those ethical issues at the front, then you're looking at some very serious problems."

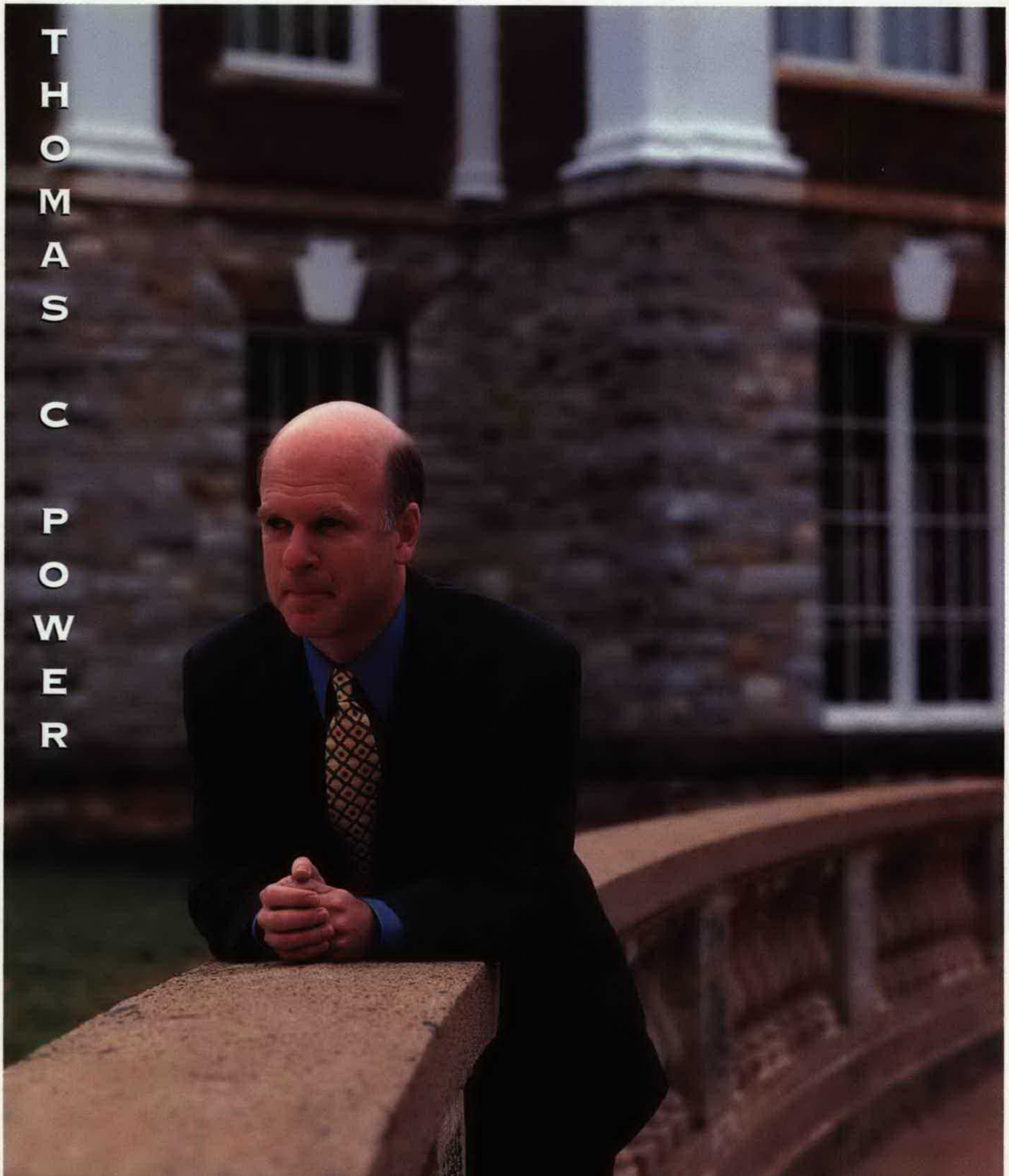
Companies can take steps to help avoid such problems. Security and privacy technologies such as encryption, digital signatures, and biometric identification systems are evolving rapidly. But nothing is perfect, says Ponemon. "The level of security that's required to have 99 percent reliability in a systemic sense just doesn't exist. And the reason why it doesn't exist is a random event called 'smart people.' There's always someone in the world who is inventing a better virus or is a better hacker. That's the source of the problem. You can't model





By 2003, U.S. higher education institutions will spend almost $5 billion on information technology-related products and services, a reflection of the changing needs of college students and the shifting missions of colleges and universities, according to International Data Corp. research. But that only addresses one aspect of education in an on-line world, according to U. Bertram Ellis, chairman and CEO of Atlanta-based iXL Enterprises, which helps companies take advantage of technology. "My biggest concern vis-à-vis the speed and pace and change that the Internet is creating is how it affects public education. I'm not worried about the colleges being able to adapt; I'm worried about primary and secondary schools. I'm worried about their embracing the change that the Internet requires and the speed it requires."

THOMAS C POWER



Broadband technologies will bring more services to consumers, but "even five years out, it's predicted that as many as 50 percent of people will still be using the old dial-up connection to get to the Internet," says Thomas C. Power, senior legal adviser at the U.S. Federal Communications Commission. "The goal that I think we're all shooting for is high-speed Internet access to the home, and the question is how best to get there." In general, he adds, Internet technologies are raising a number of new challenges for regulators. "I think we have to fight the urge to treat everything new the way we've treated everything old. You don't just slap the old regulations on the new technology."

it. You can't program it away. You can't do any of those good things that you can do in a kind of a steady-state situation."

The human variable is not always malicious, Ponemon continues. "The biggest privacy vulnerabilities that we see—and we see them over and over again—are not evil people. They are people who just didn't know." People make mistakes and save or use customer information when they shouldn't, he explains. For example, his company worked with a software firm that gave customers the chance to "opt out" of having their full registration information used in a marketing database. Yet, about half the registrations that had opted out were being entered into the system by people who were just doing things wrong. Even having a clear privacy policy in place doesn't always help, Ponemon adds. "We still have organizations that are big, and they can't control what is done on a daily basis within that organization. It's a big risk."

What can a company do? One thing, experts say, is to educate customers about privacy policies and let them know about the level of security risk in using a site. "You never betray that customer trust," Yahoo! CEO Tim Koogle told the Virginia e-summit. His company makes it a point to tell customers when they are giving Yahoo! information. "You remind them of that. You say what's going to be done with it and what will never be done with it. You give them the ability to choose to not give you the information, and then you never break the trust."

"There are lots of neat things you can do if [customers] are willing to turn over that information," added CNET CEO Halsey Minor. The key is to "identify up front that you're going to be extracting this kind of information, and make sure that you extract *only* that information."

HIDDEN DANGERS AHEAD

Privacy and security have been very much in the spotlight in recent months, but there are a number of other looming perils and problems to watch out for on the road to e-business—things that may only get more troublesome over time.

To begin with, CEOs need to consider the increased complexity of doing e-business across borders. E-business is global by nature, which means companies will find themselves facing a variety of business practices, laws, customs, and regulations. And they will not only be dealing with differing conditions from nation to nation, as multinationals do today, but with the conditions of many nations at the same time, due to the fact that the Internet allows them to reach many places simultaneously.

For example, in the European Union, the consumer-protection laws of each individual country remain in place, with transactions falling under the law of the country in which the consumer resides, says Karel De Baere, who heads up e-business efforts in Europe for PricewaterhouseCoopers. "So theoretically, anybody who wants to do e-business in the business-to-consumer space in Europe would be confronted with 15 different consumer-protection laws that it needs to satisfy. Or, in the advertising domain, you can't advertise pharmaceutical drugs in certain European countries, or there are restraints in terms of what you can do. Some places don't allow comparative advertising. So it's a complicated environment, and even if you try to act as ethically as possible, complying with all these different rules can be difficult."

Another complication of working across borders is the need to contend with a patchwork of tax regulations—especially value-added taxes (VAT) and sales taxes. "For American companies, dealing with the whole indirect taxation question is probably going to generate a much more complex problem than privacy issues," says De Baere. With European VAT rules, for example, "a book downloaded through the Internet could qualify as a service—and again, depending on the country, different rules apply. It seems trivial on the surface, but filling out the matrix of all the possible combinations is not a trivial thing."

On another front, e-businesses will also find themselves having to break new—and often thorny—legal ground. This is largely uncharted territory, after all, and legal questions will arise around topics such as protecting information-based products, establishing alliances, guarding the integrity of brands, and ensuring the enforceability of transactions. Also, existing laws are often ill-suited to the world of e-business, which only complicates the picture, says De Baere. For example, when customers in many European countries buy products via a distance sale, such as through the mail or on-line, they have a legal refusal period of anywhere from five to 14 days—and the seller is not supposed to

TAKING ACTION

To address privacy issues, e-businesses should:

Educate consumers about privacy.

Build trust by promoting and highlighting privacy efforts.

"Over-comply" with regulation.

Support the creation of a standard approach to privacy.

Get involved in shaping/limiting government regulation.

SOURCE: JUPITER COMMUNICATIONS

invoice the customer until that period is over. For a company selling downloadable software over the Internet, that presents a real dilemma. Technically, that seller should not invoice up front, as the software is downloaded, but if the company waits a week or two to bill the customer, it runs the very real risk of having its product copied or used, and ultimately returned without payment.

Finally, from a macro viewpoint, e-business and the Internet are changing the context in which business is conducted—that is, changing society itself. And it may not all be for the good. Although some 500 million people are expected to be connected to the Internet in 2003, that is still less than 10 percent of the total world population. In short, if things continue on their current course, a great many people are not going to be able to use one of the world's most vital tools for prosperity. "Eleven percent of children in the inner city have access on an ongoing basis to the Internet. That's ridiculously low, and that's going to be a have/have-not kind of issue," Jeffrey C. Walker, managing partner of Chase Capital Partners, told Virginia's e-summit. "Are we going to help bring the have-nots into the system? Can we bring in this global community?" Humanitarian concerns aside, those kinds of disparities in access could contribute to increased uncertainties in business, such as instability in overseas markets and attempts by governments to exercise more control over the Internet.

THE ECONOMICS OF PRIVACY

"In a world driving toward connectivity, privacy becomes scarce, and scarcity gains value."

WATTS WACKER/JIM TAYLOR, *THE 500-YEAR DELTA*

BUILDING THE E-BUSINESS FOUNDATION

Overall, there are no simple solutions to these problems. Privacy, security, taxation, regulation—they all require vigilance. Companies will need to monitor the situation constantly, keep auditing and examining systems and policies, and move carefully in working across organizational and national boundaries. And they will need to get involved in efforts to help government and education cope with the social and political issues that will affect the future of e-business.

Planning and foresight that looks beyond new revenues and customer service, and incorporates the full range of e-business issues, will be key. Executives will have to think about not only creating a new business model, but about how to sustain and protect that model in a fluid and sometimes threatening environment. Doing so will, admittedly, require the kind of organizational self-discipline that can be hard to muster in a world where the need to move and act is paramount.

Indeed, most global companies still lack an effective e-business strategy, the META Group says. The Stamford, CT-based consulting firm found that 65 percent of the companies it surveyed spend less than $1 million a year on e-business initiatives. By comparison, the report says, such companies were routinely spending $100 million to $400 million on ERP systems. "E-

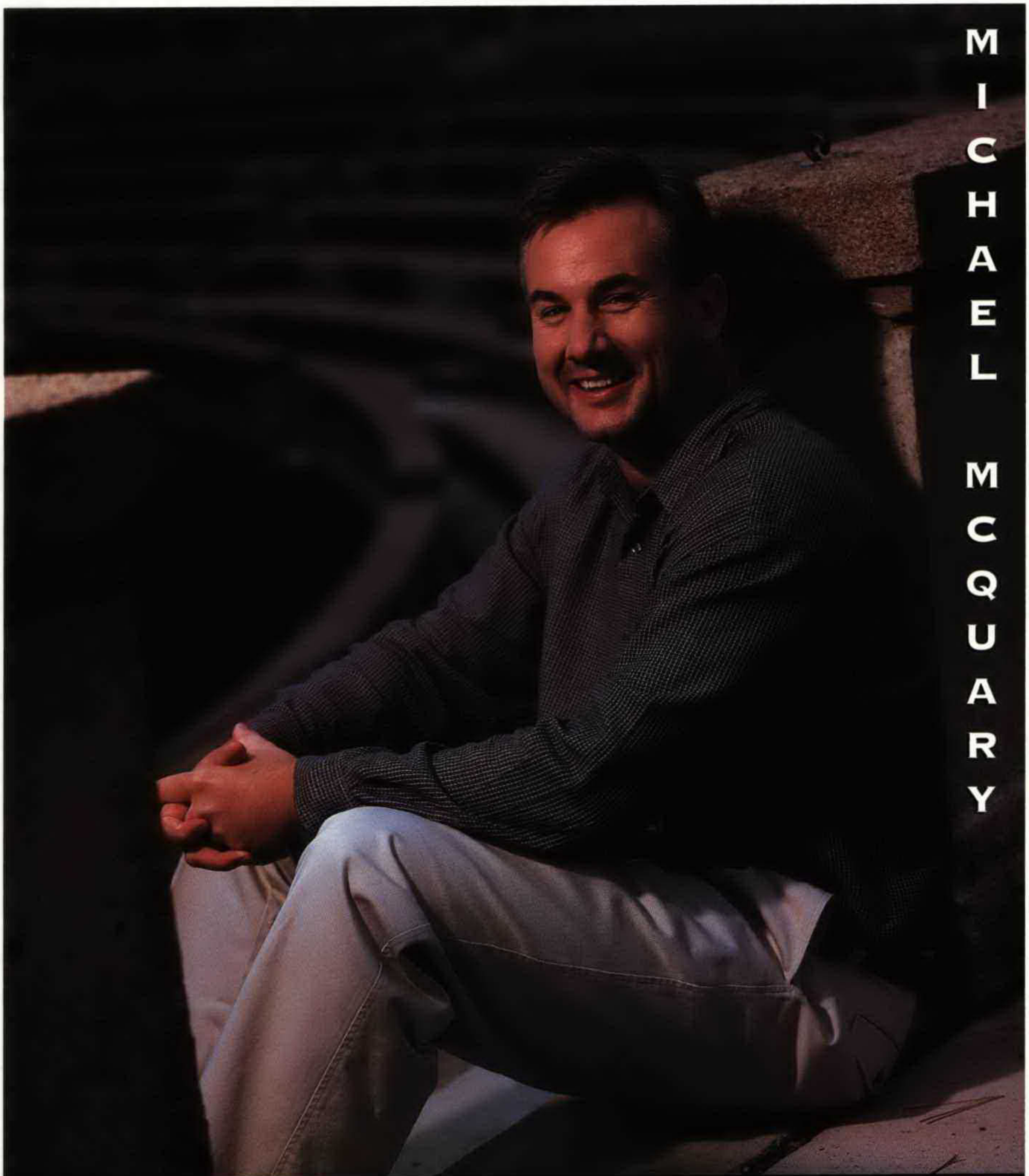
The Technology Disconnect

WHEN IT COMES TO THE PERILS AND PITFALLS OF E-BUSINESS, SOME ARE DISTANT AND UNKNOWN, AND SOME ARE CLOSE AT HAND—AND AT THE POINT WHERE THE OLD MEETS THE NEW.

"It's important to realize that e-business is not a substitute for good business practices," says PricewaterhouseCoopers' Chris Everett. "If your back-office systems aren't connected, just bringing up a Web site to get more customers is not going to be a successful strategy." What that often leads to is a kind of disconnect, where customers order on-line in minutes and then wind up waiting weeks for the order to be filled and shipped by traditional systems and processes. "I always say that your back-office systems are like a cake and the e-business-related systems are the icing," Everett says. "You need to have both, with good processes and procedures and systems in the back office tied into the Web technology."

A lot of companies have yet to make that connection. PricewaterhouseCoopers surveys show that only 25 percent of corporate Web sites are connected to customer databases, and only 7 percent of companies have their front-end Web sites linked to their back-office systems. That means 93 percent of them are rekeying information, faxing documents, and building electronic patchwork bridges to fill orders.

So far, companies have been able to keep up, except for some glitches around peak holiday shopping periods. But many will hit the wall in the near future, experts say. As more sales move to the Internet, Forrester Research notes that expanding product selection and the need to move large volumes of parcels—along with rising customer expectations about fast delivery-will add up to "order fulfillment chaos." Forrester adds: "Firms that fail to attack order fulfillment with the same vigor as on-line selling will experience customer defection, funding attrition, and distribution nightmares." *



Many Internet executives point out that government regulation of the industry would be problematic, to say the least. "There's no de facto governing body that can enforce anything in what we call the Internet community—the infrastructure providers and the users of the Internet," says Michael McQuary, president and COO of MindSpring Enterprises, an Atlanta-based Internet access provider. "The Internet community has a good moral compass and does take action quickly where it can. I think you will see that as more and more people get involved in the Internet, it truly is one of the most democratic vehicles and mediums, and the community can act quickly against things that it doesn't think are in the overall best interest and the common good."

Coming Soon: A Worldwide Web

Over the years, e-business has been something of a U.S. phenomenon, but that is changing rapidly. In the next three years, says International Data Corp., non-U.S. Internet commerce will account for 46 percent of worldwide e-commerce spending. And Europe will be leading that shift, with e-commerce there growing at a compound annual growth rate of 138 percent over the same period.

E-business is about to take off in Europe, agrees Karel De Baere, who heads up PricewaterhouseCoopers' European e-business efforts. He cites several factors, including high Internet penetration in several Scandinavian countries and the recent upsurge in the number of on-line users in Europe in general. In addition, he says, Europeans might not be as culturally opposed to on-line business as U.S. press accounts have suggested. "E-business-related turnover in France in 1997 was bigger than the total e-business-related turnover generated in the United States, through the French Minitel system," he says. The Minitel system is a nationwide on-line service that has been in place for years.

Especially significant is the widespread use of mobile phones across Europe, combined with the emergence of a standard technology for linking mobile phones to the Internet. "Mobile phones have a very significant and distinct advantage over traditional Internet connections," says De Baere. "They enable you to get in touch with somebody all the time, and you can localize content for users because you know where they are."

The exploding growth of the Internet in Europe and around the globe clearly presents major opportunities for e-businesses, says De Baere. But, he cautions, executives should remember that it can also mean increased risk and complexity in terms of legal issues, taxes, and business practices. "Companies should be prepared to adjust their content in various ways, including language and even a cultural perspective," he says. *

business has not yet become part of a larger corporate culture and strategy," says Kirk Reiss, senior vice president of META Group Consulting. "The low dollar investment in e-business is indicative of stopgap measures and patch-up thinking—a 'me-too' strategy where companies are doing e-business because they see that other companies are."

Similarly, the GartnerGroup, a Stamford, CT-based research firm, predicts a coming era of "e-business disillusionment" in the next few years, with 75 percent of e-business projects failing to deliver on their promises. The company reports: "Such failures will not be because transformation to 'e' is wrong, but because the business model, strategies, and implementation will have failed."

"You have to approach the e-business domain in a holistic way. That's probably the single biggest message," says PricewaterhouseCoopers' De Baere. "Looking at e-business as a sheer technology issue alone won't work. Looking at it from a purely tax and legal perspective is not going to work either. A strategy perspective, a process-improvement perspective, a skill perspective—none of those alone will work. You need the holistic view, which really means getting the strategy right and organizing yourself in terms of capabilities and skills and the organizational model you adopt, reviewing and reengineering processes—all of it."

"Like anything that's incredibly new and exciting, there are always two sides to the story," Citrix Systems' Templeton concluded at the e-summit. "I'd just challenge everyone to not respond to the hype of it, but to respond to the potential and the real content of it all. It's real easy to pour massive amounts of resources into something that seems cool without doing the proper sort of gut check, analysis check, etc. We all have to keep our wits about us. As wonderful as it all is and as fast as it's moving, we do have to make sure we're keeping our feet on the ground." *

THINK LOCAL, STAY LOCAL

Less than half of surveyed on-line companies make a profit on each shipped package, and 85 percent are unable to fill international orders—largely because their systems can't deal accurately with international addresses or price total international delivery costs.

SOURCE: FORRESTER RESEARCH

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