

What do



you do?

It's often the first question asked when people meet. It establishes common ground. It gets to the center of how we define ourselves, how we conduct our life's work, our pastimes.

At IBM, it's a question we frequently ask our customers. And in many ways, it's the most important one, especially now, at this moment when all of us are rushing forward into a networked world.

That's because the benefit of all this connectivity – to people, to the world's enterprises, to knowledge – isn't in the technology, as dazzling as it may be. It's in how we apply it, how we use it to vastly improve the way we work, learn, buy, sell, entertain and communicate. The things that fill our lives. The things we do. Every day.

Dear Fellow Investors:

Last year I told you that the transformation of IBM had progressed to the point where it was time for everyone in the company to focus on our strategic vision – a networked world that transforms the way people work, interact, learn and do business.

I said our vision wasn't some slogan or a flashy-but-improbable dream. Rather, it was our view, grounded in decades of experience, of where technology and commerce around the world were headed, and that we would help our customers use network computing to improve what they do and how they do it.

And, I said, implementing this strategic vision would fuel future IBM growth.

We are indeed growing. For the second consecutive year, IBM reported record revenue – \$75.9 billion, up 6 percent. Revenue increased 9 percent after adjusting for the effects of currency, our highest rate of growth since 1985.

Our earnings, however, were essentially flat, excluding one-time charges associated with acquisitions last year and in 1995. We're not happy with flat earnings. There were two primary problems: Our European business was weak, and our semiconductor business was buffeted by factors largely outside our control, especially declining memory chip prices.

We ended the year with more than \$8 billion in cash – and that's after \$6 billion in capital expenditures to strengthen our existing businesses; \$1 billion for acquisitions like Tivoli, a leader in systems management software, and Edmark, a leading maker of education software for children; and nearly \$6 billion to repurchase IBM common stock.

Our stock price rose 66 percent in 1996. As a result, our ultimate report card, IBM's market value, grew \$27 billion last year. That brings the total increase since our major restructuring in 1993 to more than \$50 billion.

Perhaps the most encouraging sign that our strategies are taking hold is the broad base of our growth and our continued strength in businesses that represent the greatest long-term growth potential:

- Services revenue increased 25 percent to nearly \$16 billion – the fourth consecutive year services grew more than 20 percent. We signed contracts worth \$27 billion in 1996. The total value of professional services business already booked for 1997 and beyond in areas like systems integration and outsourcing of customers' data center operations is more than \$38 billion.

- Software revenue grew 3 percent, driven largely by strong sales of Lotus and Tivoli products. Revenue from Tivoli's flagship systems management products was greater in the fourth quarter of 1996 than for all of 1995. The installed base of Lotus Notes doubled for the second consecutive year to a total of about 9 million.

- We continued to improve the competitiveness of our hardware lines, from the new Aptiva S Series for the home to large-scale enterprise servers (mainframes). In fact, shipments of mainframe computing power grew 50 percent. We were the first major company to introduce a network computer – the IBM Network Station, a new kind of desktop device that provides access to networked applications and processing power while dramatically reducing the cost of desktop computing.

- Our PC business, after several lackluster years, righted itself. Shipments expanded significantly worldwide and we grew share. Our storage business also re-focused itself and turned in an exceptional performance, particularly in hard disk drive sales.

- We continued to grow rapidly in the world's emerging markets. Last year we became the leading PC vendor in China. Our operations in Central Europe and Russia have built a network of more than 1,000 business partners.



As part of the \$4.7 billion IBM invests in research and development, we support projects and programs that further our understanding of how the world and the universe work, and explore phenomena that may one day lead to advanced information technologies.

LOUIS V. GERSTNER, JR.
Chairman and Chief Executive Officer



To further fuel growth, we hired more than 26,000 people last year, and we will hire thousands more in 1997. Our total workforce grew to 241,000 at the end of 1996, up from 225,000 in 1995. I'd like to add here that I am very happy – and proud – that our transformation has created job growth.

For the second consecutive year we increased our capital expenditures, nearly all of it for strategically important areas like expanded disk drive manufacturing capacity. We also spent \$4.7 billion on research and development. I note here that for the fourth year in a row, IBM received more U.S. patents than any other company, and we surpassed our own record for patents awarded in any year. This says something good about our future.

Even as we grow we are relentlessly continuing to fine-tune our operations to improve our efficiency and productivity, mostly through our reengineering efforts.

Overall, it was a solid year.

Now, it's at this point in annual letters to shareholders

where a CEO might be tempted to announce some bold new direction. I'm going to resist the temptation and report to you that I believe we should stay the course. To be sure, our transformation is far from complete. We must and we will pick up the pace and intensity of everything we do.

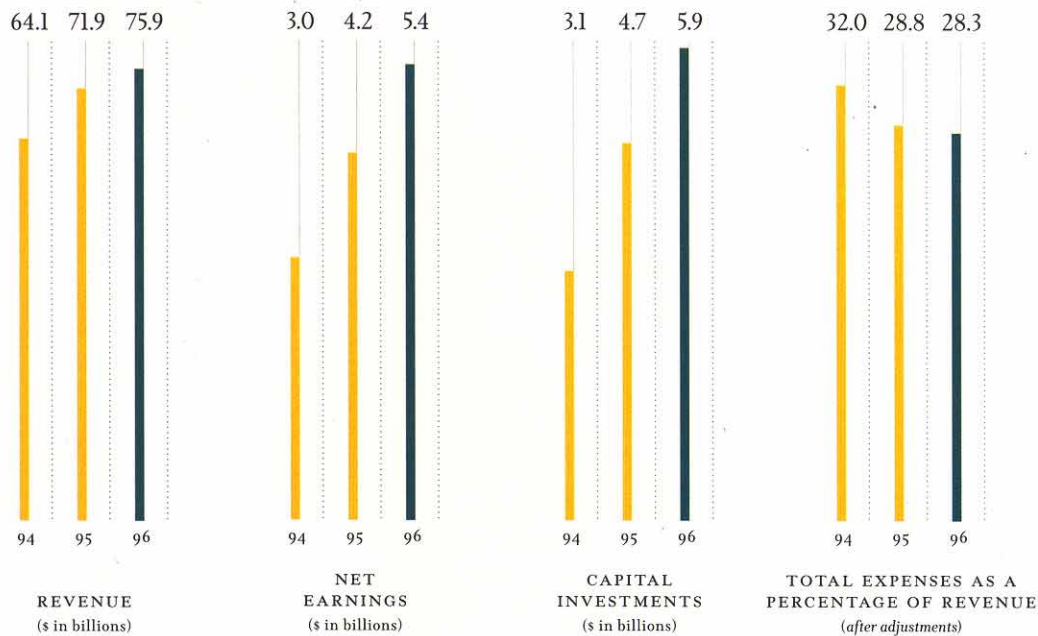
But I believe that we have made enormous progress over the last four years – in part because of the grit and determination and talent and teamwork of IBM employees, and also because we set a strategic direction for the company that was right for us, right for our industry and, most importantly, right for our customers.

I have met with thousands of customers, and throughout 1996, the single most-asked question I got was: "Exactly what is network computing and is it something I should be paying attention to?"

It sure is.

The term says it all. Network computing is a new model of computing based on networks, most notably the Internet. It is not the same as merely hooking computers





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together so they can talk to each other. We've been doing that for a long time.

Rather, network computing is a big change in *how* computing is used and *where* it takes place.

It changes *where* computing takes place because it shifts most of the work – the processing, the data, the applications – from desktop machines to computers, called “servers,” laboring behind the scenes in the network. This saves customers a lot of money because they don't have to replace desktop computers and desktop software every time a new upgrade comes along. All of that can be done once, on the server. This also gives our business customers greater control of their critical business data because the information is no longer distributed – sometimes haphazardly – over hundreds or thousands of individual PCs.

Network computing changes how computing is used because it connects tens of millions of people to other people, to information and to the world's businesses and

institutions. Networks within companies – they're called “intranets” – enable employees to work faster and smarter as teams, unencumbered by time zones and borders. Networks also improve efficiency and speed between a company and its suppliers, distributors, retailers and other business partners. And by setting up a single storefront on the Internet, a company can offer its goods and services to millions of potential buyers. We call all of this electronic business – “e-business.”

What's the value of a wired world? What will these connected millions of people (soon to be a billion!) do? What will they want? What will they pay for?

The answer, we believe, is: all the things people do every day. Buy things and sell things. Renew driver licenses. Bank and pay bills. Explore literature. Learn, teach, work together, access entertainment. Make money. In other words, people will value applications – interactive, transaction-intensive applications that enable them to get meaningful things done.



NEW MATH It took two years of non-stop number crunching – but when the bits had settled, a massively parallel computer and a team of IBM researchers had identified an elusive atomic particle called a “glueball.” The calculation was the largest single numerical feat in the history of computing, and the first instance of a particle being discovered by a computer.

(Dollars in millions except per share amounts)

For the year:	1996	1995
Revenue	\$ 75,947	\$ 71,940
Earnings before income taxes	\$ 8,587	\$ 7,813
Income taxes	\$ 3,158	\$ 3,635
Net earnings	\$ 5,429	\$ 4,178
Per share of common stock	\$ 10.24	\$ 7.23
Cash dividends paid on common stock	\$ 686	\$ 572
Per share of common stock	\$ 1.30	\$ 1.00
Investment in plant, rental machines and other property	\$ 5,883	\$ 4,744
Average number of common shares outstanding (in millions)	528	569
 At end of year:		
Total assets	\$ 81,132	\$ 80,292
Net investment in plant, rental machines and other property	\$ 17,407	\$ 16,579
Working capital	\$ 6,695	\$ 9,043
Total debt	\$ 22,829	\$ 21,629
Stockholders' equity	\$ 21,628	\$ 22,423
Number of employees in IBM/wholly owned subsidiaries	240,615	225,347
Number of common stock holders	622,594	668,931

The driving force behind the creation of most applications – and certainly of the best applications – is customers who have decided to seek competitive advantage by fundamentally changing the way they work.

Think about it: If a billion people are going to do online banking, banks have to change the way they deal with their customers. If a billion people are going to access education, universities have to change the way they teach. If workers inside an enterprise are going to use an intranet to change how they work (and not just look at online newsletters), that enterprise has to change how it operates.

If all this happens – and I believe it will, but not as quickly as some in our industry predict – the Information Revolution will be as important and all-encompassing as the invention of the printing press and the Industrial Revolution.

Every day we see new leaders emerge in specific industries – not because they are the biggest or have the most money and the best traditions, but because they

were the first to embrace e-business with applications that helped people do what they want to do.

We're adapting and enabling every hardware and software product in our portfolio for "the Net." Today, all our server platforms, from PC servers to supercomputers, are web servers and offer price/performance competitive with any in the industry. Together with Tivoli, we're enabling multi-platform systems management across the corporate infrastructure and out to the web. All our key software products – for example, databases and transaction systems – are web-enabled. Our Lotus team continues to innovate and extend its lead in groupware. More important, Notes and Domino have become the platform of choice for building Internet applications.

All of this work to transform enterprise computing is really important to our customers. Some 70 percent of the world's business information is already managed by IBM databases. IBM transaction processing software handles more than 20 billion mission-critical business transactions



a day. We're working to make these systems stronger and more scalable to handle the incredible workload network computing will generate.

We are also inventing new technologies for the wired world, beginning with the innovations needed to make technology more secure, more reliable, and much easier to use.

But if you really want to track IBM's moves and progress in the networked world, look first to the e-business solutions we are building for, and with, our customers. Solutions require more than raw technology. They are combinations of hardware, software and services that we integrate to attack a customer's business issues. Many are covered in the pages of this Annual Report.

Backed with \$1 billion of our R&D funds, more than 70,000 IBM professionals are developing solutions with some of our largest customers in 11 industries. At the same time, we're working with more than 45,000 business partners to develop e-business solutions for small and mid-sized businesses.

The networked world is also creating huge demand for services, our fastest-growing business. Customers want help in everything from consulting and systems integration to network services and education. We have more than 90,000 people in services. We hired 15,000 in 1996 alone.

Our industry is about to crack the trillion-dollar mark. We see the industry growing by about \$400 billion – to \$1.2 trillion in the next four years. About half of that growth – \$200 billion – will be driven by network computing. And the majority of *that* growth will be in solutions and services.

Those are big stakes.

And I like the cards in IBM's hand. The industry is coming back our way, to our traditional strengths, to the things that IBM does best – solving customer problems with innovative technology. We have the right strategies and are focused on them and have committed resources – people and money – to implementing them.

What makes me most optimistic, however, is that within the corridors of IBM, this is all energizing stuff. We have a lot of bright people who have the wherewithal to make a difference – who understand the stakes, the demands, the pace. We are energized not because we like doing the same old things, but because we can apply our whole array of resources and smarts to an entirely new set of challenges.

We understand that leadership is not a birthright. There is only one way to claim it – or reclaim it – and that is to take it.

I am convinced that IBM people, working side by side with our customers, will do it.

* * *

As I mentioned in my letter last year, this networked world is not without its problems. It raises important public policy issues like privacy, security and access for all.

Technology can help resolve some of these issues. We're developing new technologies – encryption software is one example – and we're working with government leaders and others in our industry to reach agreement on how best to use them.

But I also believe responsible public policy can only be developed through vigorous, open discussion. And since the networked world will touch everyone – parents, businesspeople, educators, students and citizens – it's important that we all speak up.

IBM has established a website (www.ibm.com/ibm/publicaffairs) where we offer thoughts on – and propose solutions to – many of these issues, from personal privacy and security to the effects of technology on education and health care. I hope you'll visit the website and join in the debate.



LOUIS V. GERSTNER, JR.
Chairman and Chief Executive Officer



DIFFUSE INTERSTELLAR BANDS It's a puzzle of cosmic proportion: many of the universe's bright, young stars seem to be missing light in certain colors of the spectrum – diffuse interstellar bands (if you're up on your astro-physical lingo). Two IBM scientists now propose that hydrogen, the most common molecule in the universe, is the culprit – scattering the light in a process similar to what makes the Earth's sky seem blue. Their model may help astronomers explain unusual light emissions in the known universe. (You mean the sky's not really blue?)



“We get

I direct. I act. I host. I process. I order. I check. I record. I instruct. I dance. I orchestrate. I compose. I tinker. I organize. I arrange. I advise. I govern. I promise. I

Konatsu Kenji, Minako Sakai, Shizuka Takashima
passenger traffic agents, Japan Airlines, Tokyo

Japan delivered by way of a website. Just click. And peruse a flight schedule. Click. Get information about tours. Click. Book your reservation (even select your seat). Welcome to

www.jal.co.jp — built by JAL and IBM on an ambitious three-month timeline (integrating Internet-based systems into existing reservation systems is a task that usually takes far

longer). JAL's system is up and running, serving and pleasing thousands of customers every month.



people from there to here.”

, I draw. I illustrate. I plan. I negotiate. I strategize. I coach. I solve. I support. I connect. I photograph. I edit. I landscape. I explore. I realize. I produce. I need



Now that tens of millions of people are connected, what's next?

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alk. I direct. I act. I host. I process. I order. I check. I record. I instruct. I dance. I orchestrate. I compose. I tinker. I organize. I arrange. I advise. I govern. I promise.

10.

A year ago, hallway conversations started with, "If the Internet takes off..." Today, the conversations start quite differently: "How can we make money on the Net?"

Ponder the facts: There are more than 40 million people connected to the Net – and their numbers are climbing fast. Unquestionably, consumers on the Net are a large, untapped market. Yet they're only part of the picture. By connecting companies to other companies, the Net is also reshaping business-to-business commerce – it's an opportunity that's 10 times larger, in fact, than the consumer market. In total, electronic commerce purchases are forecast to exceed \$300 billion by the year 2000.

What's going on? The Net is an efficient way to set up a retail outlet within a mouse-click reach of every consumer. Suddenly, the Davids of business have a way to slay the Goliaths of business. Companies can open new markets with brainpower and processing power, not just manpower. And entrepreneurial teams can strike from nowhere to capture market share.

At IBM, we're developing technologies to enable Net-based electronic commerce. More than that, we're helping thousands of businesses make their first strategic moves onto the Net:

The Net means convenience. For instance, in 1996, IBM worked with Charles Schwab to build a web-based brokerage service, so customers can execute stock trades from home.

The Net lets our customers efficiently reach out to their customers. In November, L.L. Bean's enhanced website, based on IBM's Net.Commerce software, came online in time for the holidays. More than just a website, it connects to an intelligent inventory database. As consumers click to place an order, the most up-to-date information is fed to them, drawing on the latest inventory information about what colors, sizes and items are in stock.

It can complement traditional sales processes. IBM's Auto Loan Exchange solution is changing the way cars are financed. Customers can apply for a loan right from the

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e. I draw. I illustrate. I plan. I negotiate. I strategize. I search. I repair. I support. I connect. I photograph. I drive. I edit. I landscape. I explore. I solve. I produce. I ne

showroom floor via the Internet. Electronic applications are whisked away, and approvals returned in minutes rather than in the hours, or days, it traditionally takes.

The Net makes it easy to handle routine tasks, too. For example, it's changing how people interact with governments. From Ontario, Canada, to Copenhagen, IBM systems let citizens renew their driver licenses, register their vehicles, apply for jobs, and get up-to-date information, all on the Net, without having to wait in a single line.

Similar transformations are shaking up business-to-business transactions.

With work under way in 24 laboratories worldwide, IBM is developing key technologies and infrastructures that will bring efficiency and security to business-to-business commerce.

CommercePoint is an end-to-end IBM solution that ensures security through the whole buying and selling process. It includes services such as World Distributor –

based on the power of Lotus Notes and Domino – that give wholesalers a complete system for electronic commerce.

Our World.Registry service issues digital certificates that verify the identities of all parties involved in an online transaction.

IBM is working with entities large and small to bring efficiency to the procurement process. The government of Singapore, as just one example, adopted IBM technology to streamline its civil service's purchasing processes – from catalog searches, to placing orders, to post-order tracking.

In the last couple of years, we've seen business pioneers make their move to the Net. In 1997, we think the Net is going to reach the heart of the business world. Mainstream businesses. We'll be there with them.

11.

In October, we partnered with American Express to pilot smart cards for ticketless air travel. No paper boarding pass. No delay. Passengers proceed directly to the gate after showing identification.





“I inform.”

I arrange. I compete. I listen. I instruct. I mend. I study. I govern. I harvest. I read. I propose. I build. I calculate. I explore. I dance. I serve. I illustrate. I write.

Lisa Hill
general manager, KR SourceOne, a division of Knight-Ridder, New York

It's 2 a.m. You're in pursuit of a particular document for some research you're doing. What to do? If you're a Knight-Ridder customer, you turn to the Internet, to a research tool Knight-Ridder

built with IBM. Drawing on the strength of Lotus Notes and Domino, KR SourceOne lets you instantly search an online catalog of more than 1.5 million business and research documents.

You place your order (it's tracked through the whole process by Notes). Your request is sent to the appropriate archive, your document is retrieved and sent to your e-mail address.



I lead. I analyze. I coach. I plan. I process. I protect. I record. I repair. I draw. I manage. I speak. I direct. I defend. I talk. I negotiate. I communicate. I act. I coordinate.

“I protect your money.”

Per Ladegaard
CEO, Danish Payment Systems, Copenhagen, Denmark

Online bandits. Hackers. Impostors. In the wired world, just like the real world, there are some bad seeds. Just ask Danish Payment Systems. Their job has been to process 300 million card transactions each year. They're now expanding their busi-

ness to secure electronic commerce transactions. Working with IBM, they've developed a system based on the international Secure Electronic Transaction (SET) technology developed by MasterCard, VISA, IBM, and other financial and

technology companies. It ensures that buyers are, in fact, who they claim they are. That vendors get paid for goods they sell. And that every aspect of the transaction — from customer information to card number — is kept completely secure.



It used to be that managing a team meant bringing in some comfortable chairs, desk lamps, an experienced manager – and witnessing productivity soar.

Today, it's not so easy.

Teams span buildings, sometimes oceans. They're far more fleeting – squadrons are assembled to attack an issue, then redeployed once the mission is accomplished. And many include partners, vendors and suppliers.

In such a world, networks can be a team leader's secret weapon. They can provide the physical connection between people. But teams need more than that; they need tools to enhance and support the way people work together. They need groupware.

When we merged with Lotus in 1995, we gained a valuable team of inventors who pioneered groupware more than a decade ago. Lotus Notes is a "human-

transaction system." It connects people to people, and people to knowledge.

For the first time, Notes made it possible for companies to facilitate and accelerate teamwork across the enterprise. To streamline processes (from submitting expense reports to building aircraft engines). To share ideas, documents, findings, research. Suddenly, things that took days could be done in hours. The idea caught on, and millions of customers adopted Notes.

Then along came the Internet – and the network computing model for business. The Internet represented a way to connect team members. Company-to-company networks built on Internet standards (but protected by the security of corporate firewalls) represented a breakthrough way to connect teams within one company to teams within another. But, there was one thing missing – the groupware to help people do what they do.

I paint. I arrange. I compete. I listen. I instruct. I mend. I study. I govern. I harvest. I read. I promise. I build. I calculate. I explore. I dance. I serve. I illustrate. I shop.

(Unite

What's the best way to get everyone to work together?

Last year, that void was filled with Lotus Domino. It's a web-application server that extends Notes applications to the Internet, to intercompany networks and intracompany networks. Now a company can build virtually any kind of application. It's instantly deployable on the company network, and making it accessible on the Internet – so outside partners can use it – requires only a few lines of code.

Clearly, Notes and Domino appeal to customers – and by the looks of it, to competitors, as well. Some are scrambling to put together Notes-like and Domino-like offerings. But, as you'd expect from the team whose original thinking spurred a whole new model of computing a decade ago, Lotus is not standing still.

IBM and Lotus strongly believe there is no such thing as one-solution-fits-all, and that's particularly true in groupware. On one end, there will be customers who want to use fully loaded personal computers – known

affectionately in industry lingo as “fat clients” – decked out with full-blown applications. On the other end are customers who want to use very “thin clients” – lean network computers that depend on the network and servers to bear the burden of work. And there will be a whole range of systems in between. Lotus is making software for the whole spectrum.

Lotus recently announced a set of Java-based productivity components that work seamlessly with Notes applications and web browsers. The idea is to create small, efficient tools tailored to very specific tasks – writing, sending e-mail, keeping a schedule, conferencing. Users will be able to draw on these tools while working in a Notes application or browsing the web.

These next-generation tools will enable people to work together even more effectively. Across time zones. And borders. To think together, work together and create.

t. I lead. I analyze. I coach. I run. I process. I protect. I record. I construct. I draw. I manage. I speak. I direct. I defend. I talk. I negotiate. I communicate. I act. I coo

teams.)

15.

In October, Lotus debuted Weblicator, which brings world-class replication technology to standard web browsers. Users can download copies of websites and browse them later without being connected to the Internet.



st. I solve. I forecast. I explore. I heal. I create. I innovate. I think. I program. I teach. I research. I tinker. I rescue. I order. I cook. I critique. I sing. I sculpt. I advise.

“We deliver.”

Team leader Patrick Veronica and two teammates
Capespan International, Cape Town, South Africa



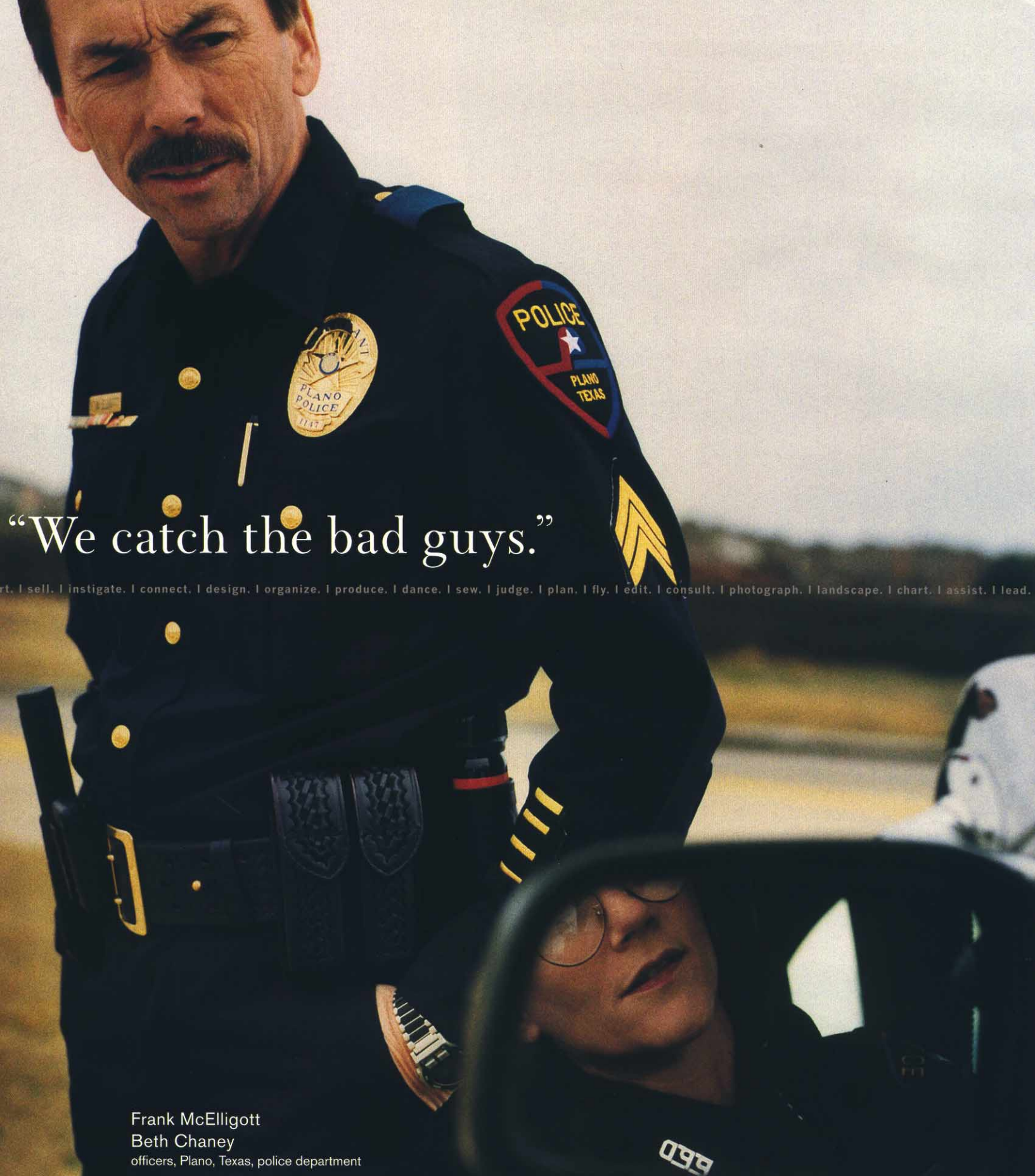
Valentino Simeoni
fruit vendor, Rome, Italy

Fruit is picked in a quiet orchard in South Africa. Over the next few weeks, it traverses the equator, and is delivered into the experienced hands of Valentino, who has been selling fruit for 45 years in Rome's *Campo dei Fiori* market. Capespan

International is the company that makes sure it arrives without a blemish (Valentino is pretty choosy). This is accomplished through the IBM Global Network, which connects Capespan to 80 fruit agents who work with some 3,500

European fruit vendors. From fruit growers to agents to people like Valentino, everyone knows where a shipment is, at any given time. Handoffs run like clockwork, so fruit arrives when it's at the height of flavor.





“We catch the bad guys.”

rt. I sell. I instigate. I connect. I design. I organize. I produce. I dance. I sew. I judge. I plan. I fly. I edit. I consult. I photograph. I landscape. I chart. I assist. I lead.

Frank McElligott
Beth Chaney
officers, Plano, Texas, police department

Plano, Texas, was just named one of America's 10 safest cities. Its population is skyrocketing, yet crime is down. The local police intend to keep it that way. They've worked with IBM to create a sophisticated intranet that stores vital

information about criminal records, crime reports, mug shots and gang activity. That data can be pulled up by investigators from their workstations or at the crime scene on a laptop. And it's shared, thanks to the network, with

neighboring police departments — so that all officers in the region have the latest information to fight crime.



construct. I solve. I give. I invest. I drive. I manage. I arrange. I learn. I connect. I defend. I drive. I sculpt. I check. I shop. I process. I research. I support. I strategize. I

“I sculpt.”

Pablo Guardiola Santillan
glassmaker, Grupo Vitro, Monterrey, Mexico

Grupo Vitro makes glass. Glass for blenders. Glass of every shape and size. It's a complicated operation. Hundreds of suppliers. Thousands of products. Thousands of customers. And to manage it? Hours of phone

calls. Mounds of paperwork. Faxes, lots of faxes. Until last year. By setting up an "extranet" for its customers, Grupo Vitro has eliminated a lot of complexity. Customers can place orders directly over the Internet without

having to fill out paperwork (they can even check on the progress of orders). This has reduced Grupo Vitro's costs because a lot less management time is spent pushing paper. And customers get around-the-clock service.



What's the best way to take advantage of the Net?

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If you're a consumer, it's easy to join the networked world: Get a web browser, and get connected.

If you run a business, it's a bit more complex. Do you want to use the Net to sell your goods or services? Provide better customer service? Align internal teams with outside vendors?

The hard part is, to achieve any of these you probably have to change how your business thinks. Old models out, new models in. And you already have quite an investment in technology that you can't (and don't want to) throw out.

In the process of building some of the world's most depended-on systems, we've learned customers basically have two choices: 1) Start with the bits, bytes, hardware and software of network computing – and work backward to a solution. 2) Start with core business issues, and work your way outward.

The second works far better. Which is how the 70,000 professionals in our solutions teams approach their work. They ask a lot of questions about a customer's business problems, and then develop the right technology strategies

to tackle them. They focus on specific industries – finance, manufacturing, health care, petroleum, education, insurance – and they're fluent in the language of each.

Sometimes customers come to us with a very specific problem. For instance, last May, North America's National Hockey League asked us to find a way to leverage one of its most critical assets – information. The solution? A website (www.nhl.com) designed by IBM that will use IBM Digital Library technology to archive photos, video clips, scores, plus a wealth of NHL statistics on virtually every factor that affects the outcome of a game. While they're logged on, visitors can also purchase NHL merchandise, thanks to IBM e-commerce technology. With nearly 3 million hits a day, the site is becoming a significant revenue generator. We consult on thousands of these kinds of unique problems every year.

Sometimes we fill a need within an industry:

– For instance, IBM's Global Campus solution helps colleges and universities unleash the power of networks. Currently, 36 universities in the United States, Australia,

In August, we opened an online laboratory to give the world free test drives of new IBM web technologies. When software from the alphaWorks site (www.alphaWorks.ibm.com) hits the market as a real product, the wired world's feedback is built in.

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Latin America and Europe are developing programs with IBM Global Campus.

– With the energy network exchange service from IBM and Siemens, electric utility companies use the Internet to post “wanted” and “for sale” ads for electric transmission capacity.

– IBM Health Data Network solutions connect health care professionals, hospitals and insurance companies in a single network that streamlines paperwork and improves the health care every patient gets. To date, we connect more than 4,000 physicians and more than 600 hospitals and clinics – and their patients – with Health Data Network solutions.

Sometimes we build solutions that bring many players within an industry together. We help establish common frameworks and standards. Our role as an adviser gives us a vantage point to find solutions to problems all organizations within an industry face:

– For example, in 1996, 16 banks and IBM came together to form the Integrion Financial Network to deliver home banking to more than half of the retail banking population in North America.

– Last year, we opened World Avenue, an online shopping mall designed to help retailers get on the Net more quickly and more affordably than they could on their own.

In all these cases, our solutions teams worked with customers to develop the strategic plan. Of course, once a smart plan is in place, there is still more work to do. The solution must be built, managed and maintained. Which is why there are more than 90,000 IBM professionals in our services business. They handle everything needed to build a solution from the ground up – from integrating piece parts, to testing the solution, maintaining it, and training people how best to take advantage of it. We can also outsource solutions altogether. These services are in high demand. IBM services revenue has grown by more than 20 percent each year for the last four years in a row.

21.

In December, we introduced the SecureWay Key Management Framework, a collection of applications, services and cryptographic engines that help make the Internet safe for electronic commerce.





... I sing. I sculpt. I organize. I produce. I dance. I connect. I judge. I plan. I fly. I edit. I paint. I arrange. I compete. I listen. I instruct. We mend. I study.

Halvor Jahre

geologist, Saga Petroleum ASA, the middle of the North Sea

Research. Exploration. Drilling. When you're out here, missteps cost millions. IBM's Petrobank and PetroConnect solutions are helping companies share the insights they've gained through exploration efforts. Information goes

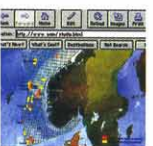
into a common database. Teams log on to our PetroConnect solution on the Internet and download new data sets and archived data. Companies have found cooperating on these activities dramatically reduces data acquisition

costs, yet doesn't compromise their competitive advantage. The result is they're able to make better decisions about where and how to drill without having to embark on costly exploration themselves. Avoiding an unnecessary

“I find buried treasure.”

n. I harvest. I read. I promise. I build. I calculate. I explore. I dance. I serve. I illustrate. I shop. I sculpt. I check. I solve. I process. I research. I support. I strategize.

well can save upward of \$6 million. Multiply that over the entire oil-producing region, and you can start to see just how much this solution is changing the world.





ost. I repair. I forecast. I explore. I dance. I orchestrate. I compose. I tinker. I organize. I arrange. I advise. I sculpt. I listen. I act. I tell stories. I write. I construct.

“We sell the great outdoors.”

Randy Dyer
web architect, L.L. Bean, Freeport, Maine



A world-renowned outfitter of gear and apparel for the outdoors, L.L. Bean has always been extraordinarily dedicated to its customers. This year, L.L. Bean worked with IBM and took that dedication online. At www.llbean.com you can

now buy L.L. Bean merchandise — boots, sweaters and jackets to brave the elements. As you place your order, the website draws on inventory information stored in a smart database. The result is a friendly, customized shop-

ping experience that lets you choose colors, sizes and styles — with up-to-the-minute knowledge of what's in stock.



“I build architects.”

orchestrate. I repair. I drive. I dream. I play. I construct. I landscape. I think. I illustrate. I learn. I guide. I strategize. I compose. I drive. I sculpt. I check. I stop. I go.

Thomas Fowler IV

assistant professor of architecture, California Polytechnic State University, San Luis Obispo

Architecture professor Thomas Fowler believes that self-discovery is the best way to learn architectural design. He has pioneered web-based curricula that architects can take — anytime, anywhere — to continue their education.

Thomas' work is part of a larger effort in the California State University system. CSU is taking advantage of IBM's Global Campus solution to build the virtual classroom of tomorrow. Aspiring to be one of the most innovative acad-

emic institutions in the country, the university intends, by the year 2000, to be not merely on the technology curve — but far in front of it.



What do the world's best network solutions have in common?

(Never

view. I document. I train. I mobilize. I experiment. I bank. I trade. I safeguard. I inspire. I illustrate. I pioneer. I report. I investigate. I coordinate. I experience. I disc

26.

Consider the beauty of the Net. You're sitting at a PC running Windows. Or UNIX. Or OS/2. MacOS. Or even a web-enabled TV. You click (say, to view a flight schedule to Paris). Your request is sent over the Net, across the world, where another PC, a mainframe or a supercomputer is awakened. And your schedule appears.

Now, there are a couple of very neat things about this (beside the fact you're going to Paris).

For one, by way of the Internet, now virtually any two systems in the world can talk to each other. Another benefit: the PC on your desk no longer has to shoulder all the work. It doesn't have to do all the processing. Or store all the data. Or run its own applications. That can all happen on the other side of the Net – on the server.

At IBM, we're working on the full range of technologies for the networked world. Most of our work is behind the scenes, in the network, on servers.

Enterprise servers. In 1996, IBM made much progress on this front:

- In September, we introduced our third generation of

microprocessor-based mainframes, the S/390 Parallel Enterprise Server. With twice the performance of our previous high-end server, it can be linked to other S/390 systems to deliver more than 10,000 MIPS (millions of instructions per second).

- In June, we announced the AS/400 Advanced Series that supports Lotus Notes and provides easy Internet access.

- In October, we introduced new RS/6000 servers, including Internet-ready systems equipped with Notes and electronic-commerce software.

- Garnering several awards, including *PC World's* "Best Enterprise Server" award, our PC server family grew aggressively in 1996.

Enterprise software. Our strategy here has been to open up our offerings, so they run not only on IBM hardware, but also on other industry-leading hardware and software platforms, including Windows NT.

- In 1996, we introduced a beta version of an entirely new kind of database, our DB2 Universal Database, that

In December, IBM set a new world record in magnetic data-storage density – 5 billion bits of data per square inch – the equivalent of 312,500 double-spaced typewritten pages (a stack 104 feet high) in one square inch of disk surface. Drives of this density should appear within three to five years.

stop.)

I imagine. I compose. I remedy. I understand. I stop. I deliver. I educate. I guide. I believe. I revolutionize. I transmit. I compete. I contribute. I assemble. I unite. I

will help customers conduct business through the Internet, intranets and local networks.

– We have ported our CICS transaction processing software to run on all leading platforms.

– With our acquisition of Tivoli last year, we've extended our strength in host-based systems management to multiplatform distributed systems.

– In September, we introduced OS/2 Warp 4, which incorporates Netscape Navigator, Sun's Java technology and IBM's speech-recognition software.

Storage. More than 40 years ago, IBM invented magnetic disk storage. Today, our lead extends from the smallest storage devices (which reside in tiny portable computers) to massive storage systems (which safely house the world's largest digital libraries). Through an alliance with Storage Technology Corp. last year, we've greatly strengthened our position in large-scale storage systems.

Security. Before people and enterprises embrace networks as carriers of their communications and records, they must have confidence that their information is

secure. In September, we began a pilot program with MasterCard using Secure Electronic Transaction (SET) technology. The software secures credit card transactions over the Internet.

Primary invention. IBM is investing in industry standard technologies that will make the wired world thrive. Standards like Java. Its elegant promise – “write once, run everywhere” – means developers can create network applications easily, without having to splinter programming resources across development platforms. We will invest more than \$200 million in the next few years to make Java ready for enterprises. We have work under way in 19 development laboratories with more than 1,000 programmers all over the world. We are building Java into all our operating systems, working with Sun to speed Java's performance, building development tools and creating a library of Java programs.

27.

In July, the U.S. Department of Energy contracted IBM to build a really big computer – in fact, the world's fastest supercomputer. Capable of performing more than 3 trillion calculations per second (3 teraflops), the RS/6000 SP will simulate nuclear explosions, reducing the need for live nuclear tests.





view. I document. I train. I mobilize. I experiment. I bank. I trade. I safeguard. I inspire. I illustrate. I pioneer. I report. I improvise. I inform. I serve. I administer. I b

“We work 24

Advanced Systems Development Corporation (ASDC)
Beijing, China

ast. I save. I persuade. I market. I help. I deliver. I educate. I guide. I believe. I revolutionize. I transmit. I compete. I contribute. I assemble. I unite. I interview. I sig

hours a day.”

IBM emerging markets software development team
Seattle, Washington

Consider it an intercontinental tag-team. The race is on to establish Java as a worldwide standard for developing network applications. Which is why we have 1,000 developers in 19 labs working on key Java architectures and

components. A particularly notable pair: our development team in Seattle and the one in Beijing. The Seattle team works during the day on Java-based software. When its day ends, programmers at ASDC (an IBM-Tsinghua

University joint venture) pick up where their Seattle colleagues left off, continuing the development effort — without missing a beat — halfway around the globe.





“We make cars intelligent.”

Matthias Köhn

team leader, IBM, and architect to Mercedes-Benz AG

Stefan Gleißner

team leader, Mercedes-Benz AG
Stuttgart, Germany

When people think network, they think of offices. They think of universities. But few think of cars. Mercedes did. And asked IBM to start a joint development project in cooperation with Daimler-Benz Research. Together,

we're developing a new network computing architecture for Mercedes-Benz' next-generation cars. All the major systems — engine, lights, climate control, security, navigation and communication — will talk to each other via an

in-car network. In the near future, these systems will draw information from the Internet and other communication networks. Drivers will get real-time traffic reports and weather conditions, and send and receive messages.





I register. I broadcast. I save. I persuade. I market. I help. I train. I mobilize. I experiment. I bank. I trade. I safeguard. I inspire. I illustrate. I pioneer. I report. I believe.

“I dream.”

Robert Lowden
digital background painter on *Prince of Egypt*, DreamWorks SKG, Universal City, California

The team at DreamWorks isn't bound by traditional Hollywood ways of thinking. The animators there, as one example, work in both traditional film media and digital media – but everything ends up as a digital asset on a

DreamWorks system they call Nile. Thousands of those assets are interwoven and processed to create a final motion picture. DreamWorks and IBM are working together to integrate Nile with IBM's Digital Library to store, archive and

find every asset DreamWorks creates. The system is the backbone of DreamWorks' Digital Studio – by far, the most advanced of its kind in Hollywood.



Tools should conform to the way people work, not the other way around. As we approach the day when information technology touches the lives of hundreds of millions of people, using the technology must be as natural as picking up a phone or popping a bank card into an ATM.

Digital appliances. We're creating a whole new range of easy-to-use and affordable end-user devices:

- In 1996, the ThinkPad 560 hit the market. At 4.1 pounds (1.86 kilograms), it's one of the lightest notebook computers around, yet it sports one of the largest, sharpest screens.

- We extended our Aptiva line of computers. The sculptural Aptiva S Series is the first home computer that lets people place the monitor and the media drives on their desk, and tuck the tower someplace out of the way.

- Last September, we launched the world's first network computer – the IBM Network Station – a device streamlined and optimized for the Net. For about \$700, it's the most affordable way for businesses to offer network access on a large scale.

- We're building embedded microelectronics for a whole range of digital devices, multimedia kiosks, television set-top boxes and mobile systems. We continue to advance our MPEG technologies that bring clear, vibrant video to the desktop.

Putting the user in control. As the network becomes more pervasive, it will become even less visible. People won't think about being "online" or "offline" – they'll just go about life, and the Net will play an active role.

understand. I share. I deliver. I educate. I guide. I believe. I revolutionize. I transmit. I compete. I inform. I serve. I administer. I broadcast. I save. I persuade. I mark

(Make

What's the best way to make technology useful?

IBM researchers have demonstrated technologies that allow an "electronic wallet" to receive pages, act as a universal credit card, scan in a receipt, transmit messages or be used as a phone. Future applications: it would allow someone to enter and start a car, pay a toll and transmit information to another person without removing the wallet from a pocket.

A sizable portion of our \$4.7 billion R&D budget is dedicated to create this kind of world, including usability testing and interface design research.

We're developing online agent technologies to take ease-of-use to the next level. Lotus Notes agents already handle mundane tasks such as filing documents, sending e-mail and researching topics. Our web browser agent helps people steer clear of traffic-jammed sites. Other IBM agents alleviate e-mail overload. They sort the incoming items and take action.

Other R&D teams work on human-centered interfaces. In October, we introduced VoiceType Simply Speaking, software that allows users to open an application, dictate a memo or edit a document without touching a keyboard. Also, in 1996, we shipped more advanced versions of our speech recognition product for specific indus-

tries. Our MedSpeak/Radiology technology, for instance, saves radiologists time and boosts their productivity.

With the largest R&D budget in our industry, we can – and do – invest in exploration. Most of this research is directly applicable to our business. Some, at least at the outset, appears unrelated to what we do. We've learned that this work often ends up being quite relevant. Surprisingly so. You'll see the fruits of these explorations this year – and for many years to come.

elp. I train. I mobilize. I experiment. I bank. I trade. I safeguard. I inspire. I illustrate. I pioneer. I report. I believe. I revolutionize. I assemble. I believe. I unite, I inte

it easy.)

33.

Think of yourself as a human modem. IBM Personal Area Network technology uses the electrical conductivity of the human body to transmit data. Using a small transmitter and a receiving device, two people can exchange information, such as an electronic business card, with a handshake.





“We share.”

Kim Johnson Gross
author of *Chic Simple* books, and family, Westchester County, New York

Kim Johnson Gross writes books. Books about how to simplify life. One secret: Fill your day with objects that are beautiful, yet extraordinarily useful. Kim, her husband and their two kids live that thinking every day, down to the

computer they use. Their Aptiva S Series has been used for homework, researching topics on the Internet for a term paper, writing client proposals, balancing several budgets, and writing more than a chapter or two of Kim's books.

It even enabled her to go on an online book tour — without ever having to leave the house. Not bad for a little black box on its first month on the job.



A young girl with long brown hair, wearing a striped shirt, is looking intently at a computer screen. A man with glasses, wearing a blue shirt, is leaning over her, pointing at the screen. They are sitting at a desk with various papers and a computer keyboard. The scene is lit with warm, indoor lighting.

“We build software.”

help. I train. I mobilize. I experiment. I bank. I trade. I safeguard. I transition. I improvise. I inform. I serve. I administer. I broadcast. I save. I persuade. I market. I ho

Lily Sol Harris
8 year old, software tester

Adam Steinberg
product manager, Edmark Corporation
Redmond, Washington

Edmark makes kids' software — brain-building programs that teach kids the critical art of thinking. And even though the company is staffed with educators, engineers and experts of all types, they always put things out to a vote

by the people who count most. Kids. Every year, Edmark spends countless hours in user tests with kids, from kindergartners to teenagers, soliciting their feedback, ideas and criticism — all in the pursuit of building top edu-

cational software. This year, Edmark became an IBM company. We're proud to have them as part of the family.



What's a corporation's responsibility to the world?

(Give ba

coordinate. I experience. I discover. I imagine. I compose. I remedy. I understand. I share. I deliver. I educate. I guide. I illustrate. I pioneer. I report. I improvise. I in

36.

In the beginning, IBM had a fairly basic goal: to run a business that helped our customers run theirs. In those early years, we also cemented a few basic credos that symbolized our corporate culture: Respect. Reverence for thoughtful works. And giving back. Giving back our time. Giving back financial and technical help to the communities where we work and raise our families. And giving back to the people who need our help the most.

We've never wavered. In a world blessed with many generous companies and benevolent enterprises, IBM is the largest corporate contributor. Over the last decade, IBM has contributed more than \$1.3 billion to nonprofit organizations, schools and universities – close to 4 million hours of volunteer time in the United States alone, and millions more hours around the world.

This basic commitment to being a responsible corporate citizen touches every IBM office, plant and laboratory all over the globe – in 163 countries, to be exact.

In ravaged Tuzla, Bosnia-Herzegovina, IBM established a computer training center to help women who lost families to the war. Ninety women per quarter use IBM personal computers and ThinkPads to build computer literacy and something more: the skills to give back, to pass that new-found knowledge on to others. Similar job-training programs help people build more productive lives in Australia, Spain and South Africa.

Through the IBM Environmental Research Program, the company has provided \$16 million in technology grants to 14 universities and research institutions that are studying global environmental problems. At the Australian Institute of Marine Science, researchers use IBM visualization software to enhance conservation of coral reefs. At the University of Chile, researchers use IBM technology in the struggle to protect valuable agricultural land in the country's arid subtropics. In Belgium, at the University of Liège, teams use IBM systems to study water contamination in coastal/river basins and to help formulate strategies to protect water quality.

ck.)

I serve. I administer. I broadcast. I save. I persuade. I market. I help. I deliver. I educate. I guide. I believe. I revolutionize. I transmit. I compete. I contribute. I assemble.

But perhaps our most enduring efforts are in education. In March, in the United States, IBM hosted the National Education Summit. Attended by the nation's governors, business leaders and President Clinton, the summit addressed ways to raise national education standards and achievement. Our Reinventing Education initiative puts states and large school systems on the leading edge of technology so they can help students meet tougher academic standards. We have committed \$35 million to help school systems remove the barriers to student achievement. Our involvement goes far beyond "checkbook philanthropy" – we are actively involved with each of these school systems, helping address its core challenges.

Here are a few of the major projects underway with some of the most innovative schools in the nation:

– In Broward County, Florida, the school district makes better use of data about test scores, scheduling and staffing – at both school and district levels. The system integrates data and presents it in an easy-to-analyze format, enabling, for the first time, quick decision making.

– In Chicago and the state of West Virginia, IBM teams help educators use the World Wide Web as an online resource for implementing science and math reforms.

– In Cincinnati, IBM is creating an entirely new online learning system to help students work at their own pace.

– In Dallas, we're working with educators to build the nation's first integrated math and science software curricula to foster critical thinking and problem solving through hands-on science.

In February 1997, IBM embarked on the second phase of the program – Reinventing Education 2 – building on all our experience in helping raise achievement in the U.S. public school system.

Of course, funding is only part of the solution. You need people. And you also need time. Last year, IBM employees were once again generous, lending their support and their thinking to some particularly vexing problems. A comfortable sign that even though many things about our company are transforming, our values endure.



ve. I persuade. I market. I help. I train. I mobilize. I experiment. I bank. I trade. I safeguard. I inspire. I give. I perform. I read. I view. I strategize. I monitor. I drive.

“We teach our computers to read.”

Judy Zalkin's fourth-grade class
Barton Elementary School, Philadelphia, Pennsylvania



It is inspiring to see young minds learn to take abstract letters and turn them into words, words into sentences, and sentences into thoughts. But for some, learning to read, for whatever reason, turns sour. Words remain

jumbled. Context, lost. At Barton Elementary School — in a school district that's part of IBM's Reinventing Education effort — kids who need help are getting it from an IBM software program. "Watch Me Read" takes advantage of

advanced voice-recognition technology pioneered in IBM's research labs. Students read aloud to their online tutor. Along the way, the tutor coaches them, gently corrects them and rewards them.



ner. I venture. I model. I troubleshoot. I interact. I sign. I trans... I improvise. I inform. I serve. I administer. I broadcast. I save. I be... I market. I help. I cont...

rk. I dream. I create. I write. I sculpt. I harvest. I manage. I paint. I explore. I learn. I study. I pretend. I research. I protect. **We think.** I sell. I buy. I shop. I listen. I a

40.

At IBM, we strive to lead in the creation, development and manufacture of the industry's most advanced information technologies, including computer systems, software, networking systems, storage devices and microelectronics.

We translate these advanced technologies into value for our customers through our professional solutions and services businesses worldwide.