

**NEW INFORMATION TECHNOLOGY COMING  
YOUR WAY**

**Carmon Heilmann  
Field Marketing Specialist, MCI  
Memphis, TN**

As you know, today's information technology is changing every minute. And it's exactly this kind of forum that's so desperately needed across all industries -- and all organizations -- to begin making sense of these changes and to start planning for this extraordinary new era in communications and technologies.

One way to look at many of these new technologies is to think of them as the passing lanes on the Information Superhighway ...Passing lanes that generate new communications opportunities like linking associations with their members, buyers with sellers, businesses with their vendors, students with educators, patients with physicians.

Imagine this capability spread universally to all businesses in all markets, worldwide, and supported by interactive multimedia with voice, text, full motion video and perhaps even virtual reality.

Companies and associations could instantly seek or promote business opportunities...market their products and services from anywhere to anywhere...find buyers...exchange information "face to face" and close deals -- all online.

This isn't the stuff of science fiction or the inflated babble of some self-promoting technology guru.

It's happening today and it's just a small part of an incredible information revolution that will forever change the way all of us work and live.

And contrary to what some may believe, this revolution didn't just start a few years ago when we first began hearing terms like "information superhighway" and "media convergence."

In reality, the digital revolution has been going on now for more than 20 years -- ever since the first PC rolled out.

The PC...that watershed technology...It's the gatekeeper to this digital world.

And we know from history that all technologies that process information have a tremendous affect on the societies that use them.

Gutenberg's printing press, for instance, led to a religious reformation and a lessening of the Vatican's political power. Books spread knowledge faster and deeper than the Church could ever control.

Later, during the Industrial Revolution, the great business barons depended on new technologies to coordinate manufacturing, management structure and distribution.

They looked to information processing to market their mass-produced goods. And because of this, we eventually ended up with -- among other things -- the telegraph, the telephone, the punched-card tabulator and the tabloid newspaper.

The world, however, has never seen anything so pervasive or powerful as the Personal Computer. Today, software can turn a computer into a television, record player, or a paintbox and canvas. It can transmit telephone conversations, edit and replay video images and music, synthesize human speech and coordinate complex business activities across time and space.

As an information provider, the PC is without equal. And to say we have an insatiable demand for information is to say that Congress has a little yen for debating.

Just look at the PC explosion. Twenty years ago only 50,000 PCs existed in the entire world. Now, more than that are sold worldwide every 10 hours.

More of us have computers in our homes, and just this past year we spent nearly as much on home computers, \$8 billion, as we did on TV sets.

That's an amazing development, especially when you consider that IBM's first sales forecast for the PC was about 200,000 units -- and not for the first year but for the product's entire lifetime!

Mirroring the growth in PCs is the extraordinary rise of on-line networks.

15 years ago, there were only 59 on-line services in the U.S. At last count there are now more than 800 providers and about 5 million users.

Today, two of every five computers in the world is connected to a network.

This explosive growth in computing, telephony, networking and multimedia technology is shaping this somewhat overworked term that we call the information superhighway.

Of course, the prototype of I-Way already exists -- and it's the Internet.

At last count, this granddaddy of all networks was linked to more than 140 countries, had more than 3 million host computers and about 30 million users.

MCI and Internet have a long history together.

About eight years ago, the National Science Foundation, the original developers of the Net, asked us to help upgrade one of its backbone networks -- the NSFnet.

At the time, the NSFnet was powerful enough to transmit two pages of data a second -- a speed insufficient to handle the Internet's growth.

After our upgrade, usage on the net exploded, and in 1991 we were asked to upgrade again. Since then growth has gone way off the charts -- 150,000 new users join the Internet every month, with a new network linked up every half hour.

To keep pace, the National Science Board selected MCI to build a new NSFnet architecture...a supernetwork known as the very high speed backbone network service or VBNS...a technology that enables massive amounts of voice, data and video to be combined and transmitted at speeds nearly four times faster than any current technology.

Instead of two pages of data every four seconds it can transmit two small public libraries of information every four seconds. That's how powerful this is.

VBNS is merely the tip of the iceberg of what's to come in this digital revolution.

In the past year, we've heard countless stories of 500 channel TV, of home PCs that will be our card into the Library of Congress, of families not only ordering pizzas and plane tickets through their TV sets, but also buying new cars, securing home mortgages and videoconferencing with friends and family.

Despite all the glamorous consumer applications coming down the pike, businesses will be the initial drivers of the information age. In fact, they already are. And they have to be. In today's competitive environment, making sense of all this information is critical to survival.

Again, just look at the Internet as an example. About two-thirds of its 35,000 worldwide computer networks are already registered to businesses. Another 10 percent are registered to university research labs that work closely with business.

Companies are tapping this information-rich network and the online services it accesses to boost productivity, drive down overhead, increase intelligence and strengthen strategic alliances (often on the other side of the world.)

To give you an idea of just how critical of a resource digital information is, consider this: U.S. companies now spend more on computing and information technologies than on any other capital category.

And by as early as the year 2000, it's likely that digital technology will directly impact 75 percent of all American business activity.

Digital technologies are not only altering business philosophies and product lines, but they're having a dramatic effect on corporate structures, physical plants and even geography.

Digital features like e-mail, for instance, are already empowering employees with open lines of communication, dramatically improving creativity, expediting product development cycles and personalizing customer service.

More companies also are learning to leverage the tools of the information revolution to create "virtual" offices and factories supported by "7 x 24" research facilities that never close.

Equally exciting, these immense digital opportunities aren't solely the domain of large, cash-rich corporations and industries.

One of the most radical and exhilarating aspects of the information revolution is that it is truly egalitarian. Any company or organization -- from a five-man shop to a Fortune 500 corporation -- can create new and more productive paradigms for generating future wealth by driving the I-Way.

Global networks are already providing small firms with volumes of previously inaccessible market data and business intelligence. Through these networks, little firms can form virtual teams or outright partnerships to do business on a global scale that rivals the big guys -- all without the expense of outpost offices.

The sky is also the limit in the world of retailing. By opening storefronts on electronic networks via the Internet and the World Wide Web, entrepreneurs and small retail operations can tap new and promising markets otherwise impossible to reach.

A Colorado travel agent can billboard last minute vacation discounts to anyone around the world. Artisans in rural Pennsylvania can sell their wares to far more buyers than a roadside gallery could ever attract.

Of course, the potential of electronic commerce is immense not only for small business, but as a universal channel of trade.

At MCI, we're extremely bullish on the retail and marketing potential of the Internet and on-line networks.

Until recently -- before security advances -- companies that exchanged orders, invoices and product information with

vendors and customers were hesitant to conduct their business on the Internet.

That's changing, though. While on-line shopping is a fledgling, \$200 million enterprise, it is growing. Already, more than 700 electronic malls offer service on the Internet. Retail analysts predict that number will mushroom to \$18 billion by 1998.

So far this morning, I've just scratched the surface of what's going on out there already with businesses and the information superhighway. It shouldn't come as surprise that many of today's most successful, fastest growing companies are already well-positioned for the information revolution.

Past experience in the telecommunications and computer industries shows that business has always played the role of the early adapter, the proving ground, for new technology.

And, if history repeats itself (as it likely will), the products and services perfected in the business arena will soon follow the commuter route to the home. We've seen it with home PCs, with cellular phones, 800 numbers and other advanced phone features, to name a few.

It is, to say the least, a fascinating time -- and a little scary for the uninitiated.

In business, a lot of new faces will soon emerge and some old familiar ones will disappear. Companies you thought you knew will look much different -- including MCI. But the winners will all have one thing in common: Their #1 competitive tool will be information technologies.