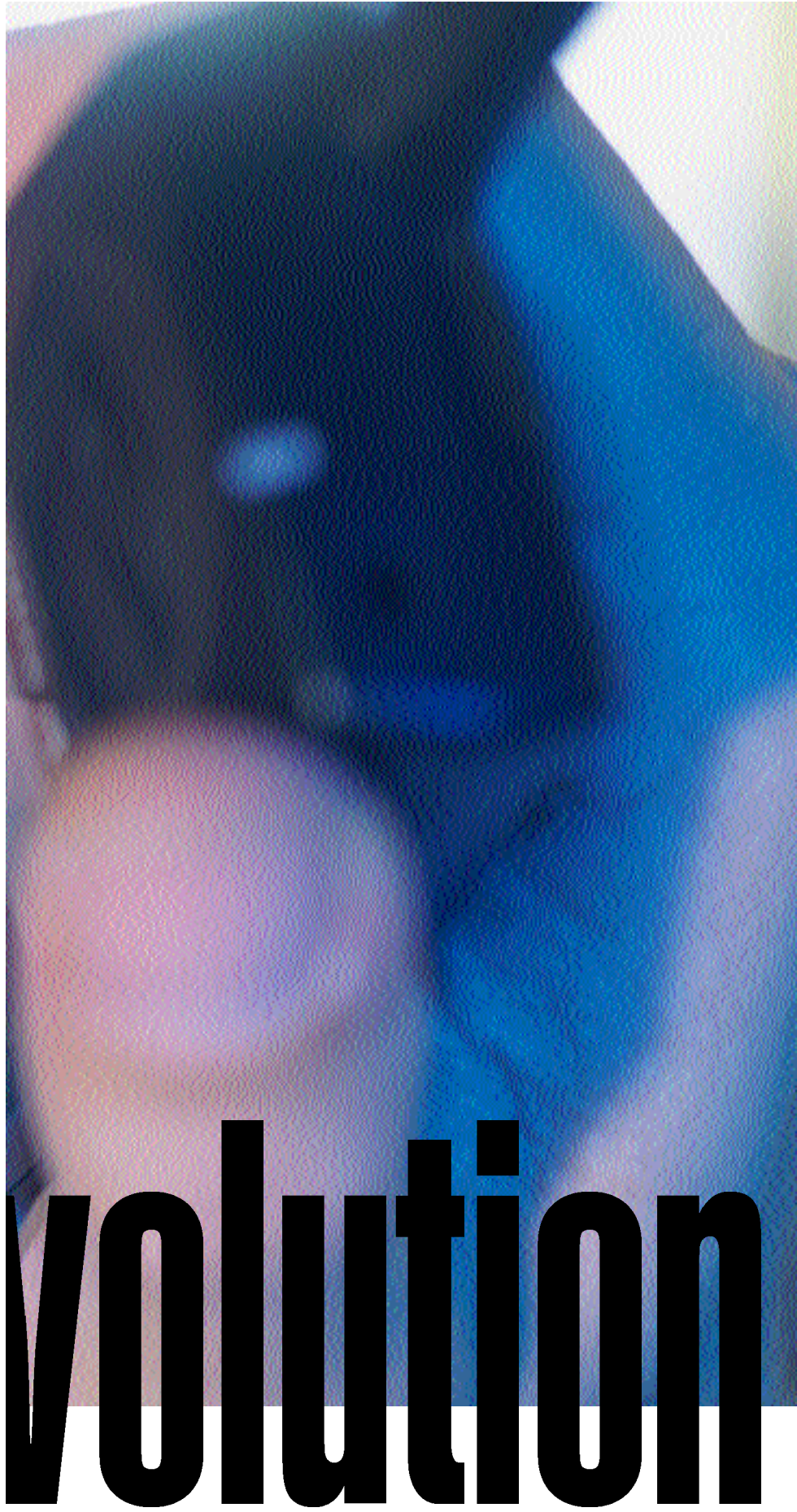




GTE Leads as
the industry
undergoes a

Wireless re



volution

By Rick Gall

When I consider the rapid revolutionary changes that have taken place in

telecommunications in just the past decade, I have to wonder what Alexander Graham Bell would think.

The telephone, Bell's landmark invention and one of the most remarkable advances of the last 125 years, isn't what it used to be. Today, instead of calling for "Watson," Mr. Bell would have the option to use a wireless phone to send his assistant an electronic mail message or perhaps a facsimile.

The telecommunications world we knew 20 years ago is gone. The wireless industry in particular, at 15 years still just a relative infant, has undergone absolutely monumental change.

Think about it. In a little more than a decade, the explosion of wireless telephone service has dramatically transformed the telecommunications landscape. Wireless communication has changed the way we do business and communicate with our friends and families.

Where once we were grounded by wires, we're now unencumbered to communicate from anywhere, anytime. In fact,

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minutes of use on the traditional landline network are migrating to the wireless network. According to a recent analyst's report in *Wireless Week*, wireless communication will make up about 20 percent of all voice traffic carried in the United States by 2004.

In the past few years, the wireless transformation has quickly sped past generic "car phones." Advancing technologies—digital, for example—have had a tremendous impact on voice and data communications. In the future, consumers may rely on wireless networks for data applications as much as they do for conversation.

In the early days of mobile phones, there were plenty of reasons to believe wireless would be a fleeting technological fancy, one that could never become practical enough to take hold. The wireless networks in those days provided limited coverage. Placing a call was difficult and frustrating. For business and consumer users conditioned to solid, reliable networks, this newfound "mobility" would come at the cost of lesser quality service.

More than 200 million people worldwide will use wireless technology by the year 2000.

Frankly, it seemed too expensive a business proposition for any telecommunications company to tackle, and I considered wireless would have minimal market penetration, at best.

I wasn't alone in underestimating the industry's potential. Forecasters in 1993 said the industry would hit 25 million subscribers by 1997, less than half of the actual growth. The estimates of 13 percent to 19 percent market penetration by 2004 have already been eclipsed.

The wireless industry is truly in a boom, growing at a rate that can modestly be termed phenomenal. In 1994, about 3.5 in 10 persons in the United States owned a wireless phone. Today, about 60 million Americans have wireless phones, and it's projected that more than 200 million people worldwide will use wireless technology by the year 2000. In the United States, 33,200 people sign up for service every day.

Competition, pricing, and technology are the forces pushing, changing and defining our industry. Here's a look at what's happening.

Competition

Competition has changed the economics of our game. Just a few years ago, only two carriers were licensed in a given market. In Nashville, for example, it was Cellular One/GTE and BellSouth Mobility. The Federal Communications Commission several years ago opened the marketplace to personal communications services (PCS) carriers, and there are now as many as six and seven carriers in some markets. Today, Middle Tennessee consumers can choose between five companies.

Our companies are competing for an ever growing pie of new subscribers. Nashville has been a leading wireless market for more than a decade, in terms of market penetration and new technologies. A flourishing industry means jobs, payroll, and taxes. Our industry is a sizable employer for our region, providing thousands of jobs, just among the top few carriers.

Nationally, the impact of wireless is growing stronger by the day.

- The industry, including carriers, manufacturers, infrastructure, and sales, employs more than one million people.
- Capital investment in our industry over the past 14 years is more than \$50 billion.
- Wireless phone revenues for 1997 were \$28.7 billion, up almost 25 percent from 1996.

In July 1998, GTE and Bell Atlantic announced a merger plan that would create one of the nation's largest combined telecommunications companies. This will create significant changes and benefits for our customers.

This transaction will mean more choice for consumers. Customers will have access to a complete range of competitively priced services, and have it far faster than would otherwise be possible. It will also

mean more competition. The combined enterprise will have the financial, operational, and technological resources to compete effectively against any other player.

The GTE and Bell Atlantic merger provides a perfect snapshot for what's happening in the telecommunications industry. In the new telecommunications environment, companies with scope, scale, and a clear vision of how best to meet customer demands will be the industry leaders. There will be continuing competition among the major players in an effort to remain a leader. Bundling of services—local exchange, long distance, wireless, data—will be a key strategy.

Pricing

While our industry has grown, our phones have become smaller, and the cost of service has steadily declined.

Beginning in the 1980s, wireless phones—those big, bulky models that are called "brick phones" in our business—were tools of business executives. Those early phones cost thousands of dollars. Monthly service bills in 1987 were in excess of \$100 a month. To put price in perspective, the average national monthly wireless bill dropped to less than \$40 early this year, according to the Cellular Telecommunications Industry Association. Increased competition has been the key factor in the price compression of wireless service.

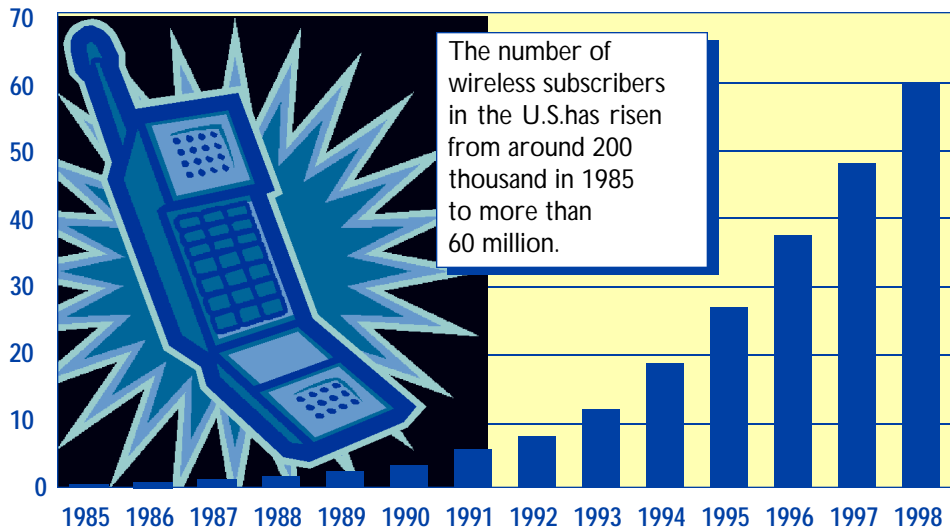
As wireless becomes a more mainstream commodity service, competition will remain a strong influence on pricing.

Not only have prices dropped, but pricing structures are getting simpler.

Recently GTE Wireless removed two dreaded words from the vocabulary of wireless users, roaming and long distance. We introduced standard pricing—called AmericaChoice—that eliminates roaming and long distance for our customers. Our customers can make a local call anytime, anywhere in the United States; we have, in effect, "erased" state lines.

Developing one of the most competitive programs in the industry, we offered consumers a range of packaged minute plans that can result in hundreds of dollars worth of savings each month for business, heavy travel, and wireless data users. Many of our customers will save 50 percent or more on their bill. This isn't just a pricing plan, it's the future of our industry. Other carriers will follow us.

Wireless Subscribership: June 1985-June 1998 (in millions)



Wireless phones and service are now quite affordable. For example, the retail price of a digital phone has dropped by half in the last year and, at \$99 today, is about the same price as that monthly wireless bill a decade ago.

Add the convenience of wireless to the declining price, and we are seeing the acceleration of landline displacement. It already makes economical sense to use a wireless phone rather than a landline in some circumstances. Consider this: when traveling, even if you're across the country, it may be cheaper to make a call from your wireless phone than to use your hotel room phone.

Technology

Wireless communications companies are changing to meet customers' needs in the future. Technological improvements are critical to meeting those needs. Customers are demanding higher quality service and more robust wireless solutions.

The recent change of our company's brand is a good example of the changing environment. For more than a decade, our company was known across Tennessee as Cellular One. Although we had been fully owned by GTE for nearly two years, we continued as Cellular One, taking advantage of the brand's strong name recognition. But as the decade of the '90s extended and technology advanced, the term "cellular" less and less described what our company did and the direction we are going. While we still offer basic analog service, our focus is on a broader bundle of wireless/wireline solutions, including digi-

tal service.

Today, digital is the buzz word. As the computer technology boom gave us 286, 386, and 486 in rapid, advancing succession, the communications technological leaders are similarly refining and improving digital technology.

There are multiple digital standards available, and GTE chose to deploy CDMA (code division multiple access), the latest and most advanced form of digital service. With our digital service, our customers use dual-mode phones, giving them access to digital and analog networks—and the ability to use their phone anytime, anywhere. With digital service, call quality is greatly enhanced; battery life is extended; new features, like caller identification, are available; and you get call privacy.

Wireless networks—our cell sites—carry more than voice conversations. A couple of years ago, we began marketing wireless data technology, service that enables users to transmit data over the existing wireless network. Its deployment in Nashville and Middle Tennessee is both fascinating and a high-growth segment of the business. Here are a few examples of how it's being used:

- The Metro Nashville Police Department uses laptop computers in patrol cars to communicate over our network, increasing productivity, increasing officers' safety and reducing crime. Officers in the field can use our network to access state, national, and international crime data banks and receive suspect mug shots. Officers get information about dangerous suspects and stolen vehicles in seconds. With the standard

dispatch system, it could take 40 minutes or more on a busy night to get the same information.

- Nashville Electric Service (NES) is using our network to restore power outages more quickly by remotely monitoring power stations. An outage can be confirmed immediately and personnel dispatched to fix outages, saving hours over the previous process. Wireless data can similarly reduce the process of meter reading, by enabling technicians to remotely monitor meters and gauges.
- With our global positioning service, transportation companies can manage vehicle fleets more efficiently. Transportation departments can reduce dispatch expenditures, lower fuel costs, re-route vehicles on demand, and monitor vehicle maintenance while vehicles are still on the road.

- Our mobile retailer, a wireless point-of-sale application, allows businesses to cost-effectively process credit card transactions without the need for a dedicated phone line.

- In our mobile office application, business travelers can use wireless data to access the Internet, send electronic messages, and perform other tasks in places such as airports.

Vertical markets across many industries—health care, finance, and field services, to name a few—have a ready need for specialized wireless data applications. We're answering the call and providing solutions.

High growth for data use is also forecast for the mass consumer. Just as answering machines were an enhancement to traditional telephones as a method of communications, so too will wireless data enhance and complement the wireless phone as a communications device.

Think about using your Palm Pilot or personal organizer to access remote data bases, the Internet, news, sports, and the latest stock prices, or to send e-mails or memos—all at the touch of a button, untethered, anytime you want.

With the way technology is rushing at us, the wireless industry has unlimited possibilities. ■

Rick Gall is area president of GTE Wireless in Nashville, headquarters for a region with operations in Tennessee, Alabama, Kentucky, North Carolina, South Carolina, and part of Virginia. Gall has been with GTE since 1977.