



# Telecomm Hurricane of Change

The telecommunications industry is at the leading edge of the hurricane of technological change. The revolutionary rise of the Internet, advances in technology and growing competition are major driving forces for the rapidly evolving global telecommunications industry. Although it is difficult to project specific future developments, the winds of change will continue into the foreseeable future, reaching around the world and touching home for some 100,000 IBEW members of the Telecommunications Branch.

The telephone, cable TV and Internet industries are converging and consolidating—driven in part by a competitive race to deliver “bundled” telephone, cable TV and Internet access services. That race will continue unabated as companies rush to lock up access to a rapidly expanding customer base worldwide.

In addition, new technologies—such as cell phones that tap the web and Internet telephony—are visible on the horizon and may exert a growing impact on the future direction of the industry. International markets represent another arena of increasing future significance for the telecom industry. Such regions as Latin America, China and the Asian Pacific Rim nations offer immense possibility for growth, but also pose great risk.

International President J. J. Barry has noted that, “In this climate, three key words for IBEW members today and into the future are: *Training, Technology and Organizing.*” IBEW

telecom members can ensure their preparedness to meet future challenges and opportunities by maintaining a focus on acquiring state-of-the-art, portable technological skills, ongoing training to update those skills and a dedicated commitment to organizing.

## *Baby Bell Sets a Precedent*

In the United States, the 1996 Telecommunications Act, touted as a spur to competition, was designed to eliminate barriers among various telecom sectors—barriers that had prevented cable TV, local telephone and long-distance companies from invading each other’s turf. From the time of the 1984 court-supervised breakup of AT&T, until the passage of the 1996 Telecom Act, the Baby Bell companies had been totally barred from the long-distance market.

In December 1999, Bell Atlantic Corporation (now in a pending merger with GTE)

# munications: e Winds ge

became the first regional Bell company allowed to enter the \$80 billion long-distance market when it won FCC approval to sell long-distance service in New York State. Under the 1996 Act, a Bell company may enter long-distance business state by state after convincing the FCC it has opened its local systems to competitors. The FCC had earlier dismissed five previous Bell company applications to enter long-distance.

In Texas, SBC Communications Inc., another regional Bell company, has applied to offer long-distance service in that state. In December 1999, a Texas state commission approved the application. The Texas panel's endorsement could carry weight with the FCC.

Bell Atlantic's entry into the long-distance market could push dropping long-distance rates even lower. And it opens up a new front in the ongoing marketing and technology wars that have roiled the telecom industry since passage of the Telecom Act.

Meanwhile, the long-distance carriers are working to expand their services and customer base. "AT&T, the No. 1 long-distance carrier, has committed more than \$90 billion to enter local communications markets by acquiring two big cable companies, Telecommunications Inc. (TCI) and Mediaone Group Inc., and retooling its network to piggyback local phone ser-

vice and Internet access on TV cables," said *The New York Times*.

Noting that AT&T's revenue from long-distance was flat in 1999 and will continue to shrink in the years ahead, IBEW Telecommunications Department Director Bill Davis said AT&T's "strategy for the future is to become the 'any distance' carrier of choice for voice, video and data. They believe their wireless phone and local cable TV systems give them a tenable foothold in the local exchange market."

## *The Race to Deliver Broadband Access*

The race among telecom companies to deliver eagerly awaited broadband access to voice, data and video will continue at fever pitch. Telecom companies are spending billions to make broadband a reality, whether the connection is through a telephone line or a cable system.

In an article entitled, "Broadband: How Broadly? How Soon? A Technology's Promised Arrival May Finally Be Here," *The New York Times* reported on January 17, 2000, that "broadband information and entertainment pipelines are beginning to reach at least some American homes." Approximately 1.4 million U.S. homes already have broadband on-ramps to the Internet, and that number will increase significantly by the end of this year.



A ride down the streets of Washington, D.C., confirms the race to broadband. There, as in many other cities and residential neighborhoods, telecom companies are digging trenches in public streets to bury conduits for fiber-optic or other cable. The work is increasing telecommunications traffic, even as it disrupts vehicle traffic. In a story on this phenomenon, *The Washington Post* reported that, "The 1996 Telecommunications Act, which deregulated the industry, said communities cannot obstruct competition among the companies vying to sell telephone, cable and Internet service. If one company is allowed to bury its cable beneath the streets, they are all entitled to the same access. Passage of the federal law triggered a digging frenzy from coast to coast."

Competition between the cable TV industry and local telephone companies is speeding the momentum of the broadband project. The telephone industry delivers broadband connections through a phone-wire technique known as DSL, for digital subscriber lines. Service by either DSL or cable is expected to be available to roughly half of U.S. households within the next couple of years.

*(Continued on next page)*



# & Beyond

**“SIZING UP THE WORLD’S  
FASTEST CHANGING  
INDUSTRIES, IT WOULD  
BE HARD TO TOP  
TELECOMMUNICATIONS.  
DEREGULATION,  
TECHNOLOGY AND  
MULTI-BILLION DOLLAR  
MERGERS ARE  
REVOLUTIONIZING  
THE INDUSTRY AND  
REDRAWING IT ON  
A GLOBAL SCALE.”**

*—The Wall Street Journal,  
November 22, 1999*

# Communicating the

With the cable approach, special modems are connected to television cable, but the more subscribers in a neighborhood who log on, the slower the speed of the connection. With DSL, broadband capacity is accessed over ordinary telephone lines and the speed of the connection is guaranteed, but customers currently must live relatively close to a telephone network switching station.

Consultants have estimated that by the end of 1999 some 1.1 million U.S. households received broadband data connections through cable lines, and 300,000 had broadband service through phone wires. Satellite providers and electric power companies may offer their own alternatives for residential broadband in the years ahead, but haven't yet made much headway.

Bill Davis said more and more cable will be installed, and there will likely be four or five major cable-TV companies in direct competition with the local telephone companies when it all shakes out. Davis said that despite cable's current lead, "phone companies ought to have a leg up in the long run because they already have the wires in the house."

## Growth of Wireless

The wireless market is booming, growing by 30 percent to 50 percent a year. Industry analysts report that worldwide sales of mobile telephones in 1999 reached 283 million units, a 65 percent increase over 1998, and they predict that sales in 2000 will surpass 410 million units.

In this sector as well, technological advances, corporate mergers and competition are constants. Here, also, the Internet is a driving force, as wireless evolves from a simple bearer of voice calls into a conduit to deliver wireless data and Internet connections via cellular telephones and hand-held organizers.

The merger trend is fueled as telecom companies seek to expand their national wireless presence so they can secure their own national networks and market national service without paying "roaming charges" to carriers that handle calls beyond their home territories. Companies are trying to secure a nationwide "footprint" or network presence.

In 1999 Bell Atlantic (in a merger with GTE) forged an alliance with Vodafone Air-touch PLC, Britain's largest wireless company, to combine their U.S. wireless operations and create the nation's largest coast-to-coast network. Upping the stakes further, in early 1999 Vodafone acquired Mannesmann, the largest cellular provider in Germany. The quest for scale now extends across the Atlantic. "The combined GTE/Bell Atlantic IBEW membership will total nearly 45,000," Davis reported. (On April 3 Bell Atlantic and GTE announced they would name their combined company Verizon, which rhymes with "horizon," after the merger is completed. The new name is intended to project "a global, high-tech image." The Bell Atlantic-Vodafone venture is to be called Verizon Wireless.)

Also in early April, the media reported that SBC Communications Inc. (the largest U.S. local telephone company) and BellSouth Corporation (a dominant regional player) announced an agreement to combine their wireless holdings. That joint venture would create the second largest U.S. mobile phone network, with a presence in 40 of the nation's 50 largest cities.

## Hand-Held Devices and Cell Phones That Tap the Web

Popular themes at the wireless industry's biggest trade show earlier this year in New



Orleans included: "The World Wide Web Without Wires" and "Putting the Internet in the Palm of Your Hand."

"Wireless Firms, Dot-Coms Plot the Next Big Thing," announced a *Wall Street Journal* headline for a story on the Cellular Telecommunications Industry Association's trade show. The article reported that "...buttoned-down descendants of the nation's Bell operating system will convene with khaki-wearing, dot-com types, and they all will be talking about the same thing: putting the Internet in the palm of your hand."

Companies such as AOL and Microsoft are investing millions in the race to bring the Internet to cell phones and popular hand-held computers. Big Internet service providers such as Amazon, AOL and Yahoo! Inc. have set up business units geared toward making their Web content available on hand-held wireless devices, such as Palm Inc.'s popular hand-held organizers and next-generation cell phones that tap the Internet.

Earlier this year, according to *The Wall Street Journal*, companies such as AT&T and IBM "announced alliances aimed at providing corporate employees with wireless access to their companies' intranets and other data. Many analysts expect corporations to be the first customers to adopt wireless Internet services, which remain expensive. But as prices fall, consumers are expected to follow suit."

Given the success of the popular hand-held organizers, cell phones that tap the Web could take off too. The vast and growing wireless market is an arena in which the IBEW must organize.

## More New Technology: Web Phone Calls

Internet phone calls are among the new technologies appearing on the horizon that could become more commonplace in the future. Internet telephony is

the business of dozens of upstart companies—including Net2Phone Inc., Phone-Free.com and Dialpad.com Inc.—competing for turf in this market.

After years of experimentation, some Web talk businesses now offer free PC-to-PC calls, and others have begun to offer free calls from PCs to telephones. Based on the Internet model, the free services are supported by advertising. These companies predict that voice on the Internet will go far beyond free phone calls and that voice soon will become integrated into everything people do on the Internet.

Several of the upstarts aim to challenge traditional telephone companies by building their own global networks to transmit voice over the Internet. The Net lowers costs by transmitting information

in compressed packets, as opposed to the expensive copper-wire voice networks of the big carriers. Spokespersons for established phone companies have said that Internet telephony "is a niche business based on unrealizable expectations." A few traditional companies are, however, experimenting in limited markets with routing phone calls over private routes along the Internet.

## Demand for Skilled Workers

Skilled workers are in great demand throughout the industry. "There are all kinds of jobs in every facet of the industry," said Davis. "Employment opportunities are exploding."

To prepare for the future, IBEW members must utilize opportunities for ongo-



# Telecommunications

ing training to maintain and update high-tech skills that will prepare them for industry-wide employment. "The challenge for the IBEW is to partner with industry and help provide trained employees for this technological revolution," President Barry noted.

The NACTEL online telecommunications degree program is an excellent example of training opportunities now available to IBEW members. (See "Telecom Degree Program Opens its Virtual Doors," *IBEW Journal*, October 1999, page 14.) NACTEL—a partnership among the IBEW, the Communications Workers of America, Bell Atlantic, SBC, US West and GTE—offers a cutting-edge online Associate's Degree program in telecommunications technology, open to all. NACTEL is now in the process of incorporating and is setting its sights on developing a degree program for the Customer Service/Sales/Call Center employ-

ment track. Visit [www.nactel.org](http://www.nactel.org) for complete information.

## Organizing

In 1999 the IBEW Telecommunications Branch increased its membership from 99,842 to 100,735. IBEW member certifications cover local and long distance service, cable television, wireless and communications systems. Of these, some 80,000 are in the telephone sector and approximately 4,500 are in cable.

A situation in Canada illustrates the significance of the trend toward telecom mergers and the importance of organizing. The merger of Alberta-based TELUS Corp. and British Columbia-based BC TELECOM Inc. (BCTEL) gave rise to the IBEW BC/TELUS Organizing Committee, which has coordinated a major organizing drive to represent the workers. IBEW Local 348 in Calgary represents 6,175 workers at TELUS, but 10,5000 workers

at BCTEL are represented mostly by an unaffiliated union. A representation election will be held to determine one single union to represent the combined employees of both companies. The ballots will be counted later in May.

## Conclusion

The convergence and consolidation of the cable TV, Internet and telephone industries will continue to shake out as once-traditional companies morph into new high-tech breeds geared to the demands of the technological revolution. "Market capitalization driven by technology will continue to change the face of the industry," said President Barry. This evolving, technology-driven telecom market presents the IBEW and its members with new challenges and immense opportunities for organizing and helping provide industry with a skilled, union work force much in demand. 