

## **C o n t e n t s**

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**E x e c u t i v e      ②**

**S u m m a r y**

**T h e   S t a t e   o f      ④**

**t h e   N e t w o r k**

**B e n e f i t s   t o      ⑪**

**N e w   J e r s e y a n s**

**C o n c l u s i o n      ② ①**

**A p p e n d i x   A      ② ③**

**A p p e n d i x   B      ② ⑤**

**A p p e n d i x   C      ② ⑥**

**A p p e n d i x   D      ② ⑧**

## Executive Summary

This document represents Verizon New Jersey's seventh annual infrastructure deployment report pursuant to its Plan for an Alternative Form of Regulation (PAR)<sup>1</sup>. Because the New Jersey Board of Public Utilities (Board, BPU) revised the reporting requirements, this report emphasizes Verizon NJ's third full year under Opportunity New Jersey<sup>sm</sup> (ONJ), as accelerated by Access New Jersey<sup>sm</sup> (ANJ).

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This narrative chronicles 2000 and addresses network service capabilities, technology levels and pending or planned market, technical and operational trials. In addition, this report identifies critical technology issues relating to infrastructure deployment, describes deployment objectives for the coming year and addresses the impact of infrastructure deployment on New Jersey's citizens and the state's economy.

In 2000, Verizon NJ continued aggressive technology deployment to fulfill its commitments under ONJ and ANJ. Key highlights include:

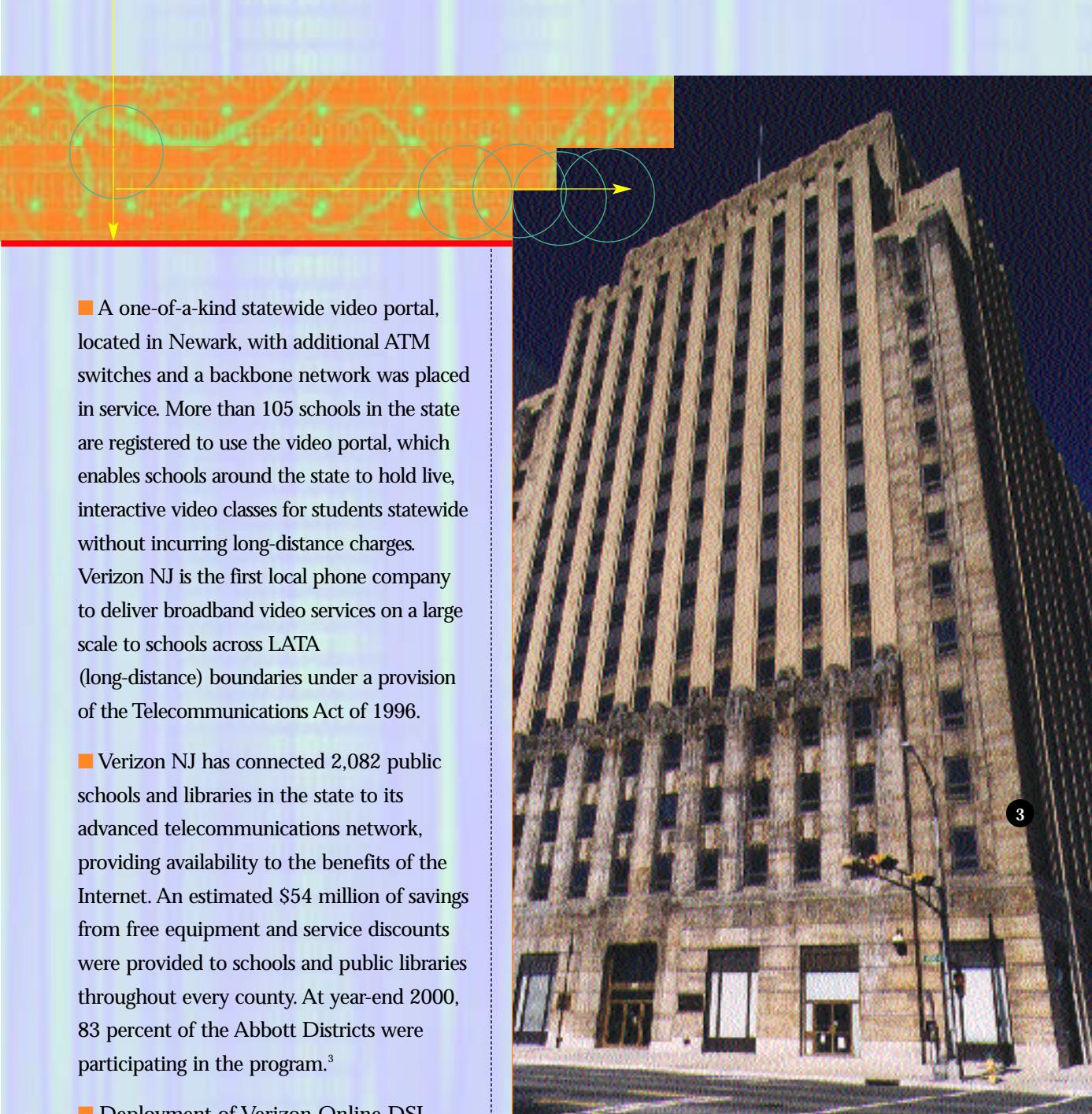
- \$1.26 billion invested, the Company's highest level of capital spending for any one-year in its history and \$625 million more than Verizon NJ invested in 1994,

the first full year of ONJ. Since ONJ was approved, Verizon NJ has invested \$6.5 billion. Through 1999<sup>2</sup>, Verizon NJ exceeded the original business as usual (BAU) estimates by more than one billion dollars.

- 2,388 more employees were hired to bring the cumulative number of new hires since 1993 to 9,699 in New Jersey.
- 118,536 miles of fiber were deployed which accounts for 23 percent of the overall Verizon East regional total. With a total of 1,399,559 miles of fiber, Verizon NJ leads all other Verizon states in fiber deployment. In fact, this achievement distinguishes Verizon NJ as having more fiber per thousand access lines and a higher percentage of fiber sheath miles than BellSouth, SBC (which includes Pacific Telesis and Ameritech), or Qwest.
- Five more Asynchronous Transfer Mode (ATM) switches and two additional fast packet switches were deployed to augment the capacity of the high-speed data network deployed initially in 1998 to accelerate availability of high-speed data services to public and non-public schools, public libraries and urban areas.
- In addition to deploying the latest technology, Verizon NJ continues to work diligently to open New Jersey's local telephone market to competition. In New Jersey, more than 87 carriers are certified to provide local telecommunications services and 63 more have filed for regulatory approval. These companies are experiencing significant growth. Verizon exchanged 13.6 billion minutes of local calls with competitors, more than double the volume of traffic exchanged with competitive local exchange carriers in 1999.

<sup>1</sup> See Appendix A entitled *Evolution of the Plan*.

<sup>2</sup> Original business as usual (BAU) estimates were forecasted through 1999.



■ A one-of-a-kind statewide video portal, located in Newark, with additional ATM switches and a backbone network was placed in service. More than 105 schools in the state are registered to use the video portal, which enables schools around the state to hold live, interactive video classes for students statewide without incurring long-distance charges.

Verizon NJ is the first local phone company to deliver broadband video services on a large scale to schools across LATA (long-distance) boundaries under a provision of the Telecommunications Act of 1996.

■ Verizon NJ has connected 2,082 public schools and libraries in the state to its advanced telecommunications network, providing availability to the benefits of the Internet. An estimated \$54 million of savings from free equipment and service discounts were provided to schools and public libraries throughout every county. At year-end 2000, 83 percent of the Abbott Districts were participating in the program.<sup>3</sup>

■ Deployment of Verizon Online DSL (Digital Subscriber Line) services continued in 2000. Availability was expanded to 39 additional central offices. As of the end of 2000, 167 central offices were equipped to provide Verizon's Online DSL to more than 1.4 million households and more than 3.5 million phone lines statewide.

■ Further progress on service capability deployment created 95 percent of wide-band and 52 percent availability of broadband service capabilities.

■ Verizon NJ has continued to support SeniorNet, a non-profit organization with seven centers in New Jersey and more than 210 SeniorNet learning centers and satellites nationwide. SeniorNet centers are dedicated to providing seniors with basic computer skills and cyber communications training. Centers are open in West Orange, Tenafly, Ewing, Eatontown, Brick, Union and Pleasantville.

<sup>3</sup>See Appendix D for Abbott District Participation by county

■ TEC2000, which reached record attendance this year provided telecommunications training to Verizon's award winning school-to-career program. Since its inception, more than 600 students have enrolled in the program in the 12 public school locations where TEC2000 operates.

■ Verizon NJ provided grants totaling more than \$10 million to New Jersey not-for-profit organizations through the Verizon Foundation during the last five years—\$2.5 million in 2000 alone. The focus was on transforming the nonprofit community through the use of technology and innovative e-solutions. Other grants supported technology initiatives for students, seniors, arts programming, and workforce job training.

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This past year, Dr. Jeffrey V. Osowski, Assistant Commissioner, NJ Department of Education, testified to the benefits of ANJ<sup>4</sup>:

*"These programs demonstrate some of the numerous benefits for schools and libraries from the provisions of the ANJ program. The ANJ program established a foundation of support that is building into very successful educational experiences in classrooms and libraries throughout the state."*

In the same proceeding, Patricia A. Tumulty, Executive Director of the New Jersey Library Association testified:

*"...the Access New Jersey agreement was a critical turning point in the development of Internet access for our public libraries. Without the discounted rates and equipment provided through this settlement, many libraries would not be providing Internet services to the residents of New Jersey."<sup>5</sup>*

In 1999, the Board initiated a proceeding to review our progress on ONJ, as accelerated by ANJ. After two days of hearings, and a review of the case record, the Board agreed unanimously that Verizon NJ had met its commitments. ONJ, as accelerated by ANJ, has positioned New Jersey as an economic leader ready to compete in the new millennium.

## The State of the Network

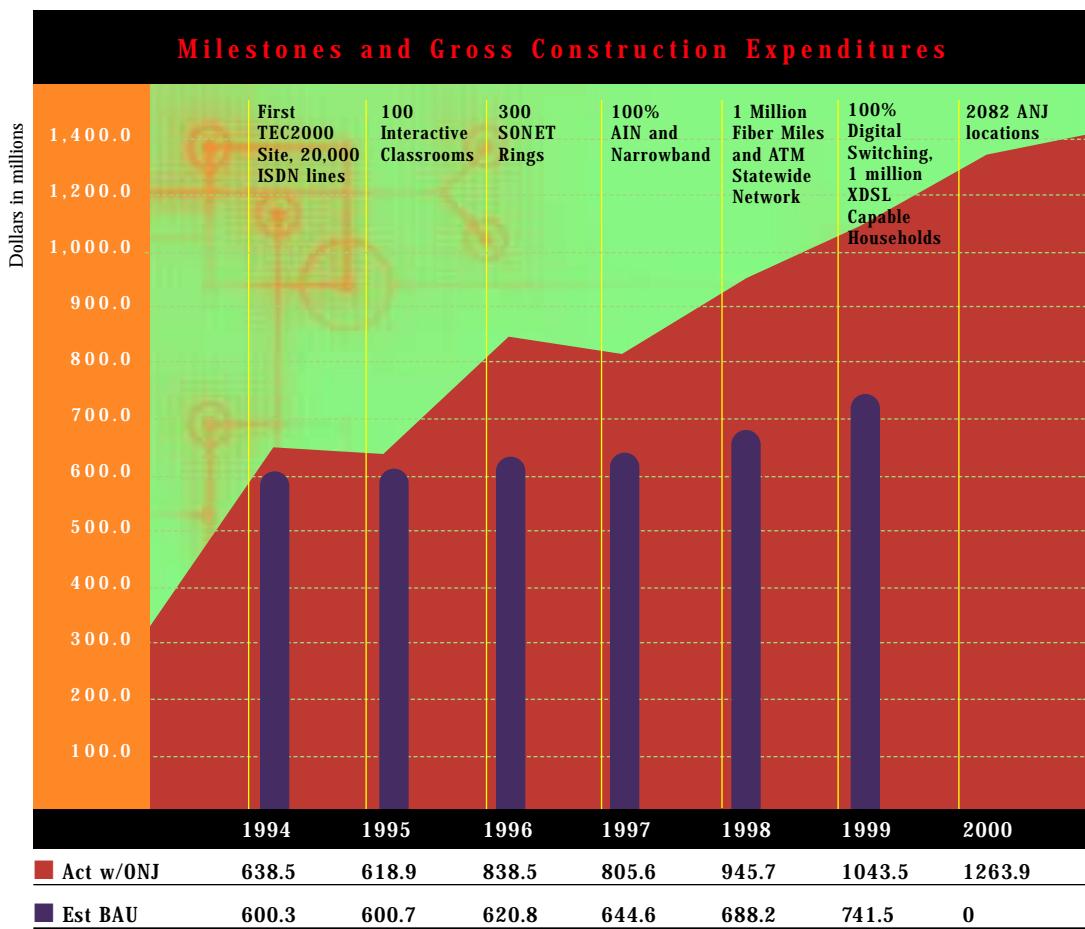


The modernization of Verizon NJ's network infrastructure and the deployment of new technologies have been, and will continue to be, critical to the success of New Jersey and Verizon NJ. The development and deployment of new technologies are evolutionary processes, driven by the need to meet the constantly changing set of customer requirements and expectations. Explosive demand for data connectivity has provided new challenges both in modernizing the network and in serving our customers.

A primary objective of Verizon NJ is to build the infrastructure necessary to support New Jersey's economic development and Verizon NJ's growth. Verizon NJ's network must have the capabilities and capacity to meet both the current and future demands of an ever-changing

<sup>4</sup> Testimony of Dr. Jeffrey V. Osowski Docket No. T099120934

<sup>5</sup> Rebuttal Testimony of Patricia A. Tumulty, BPU Docket No. TO99120934



marketplace to continue providing high-quality communications services. Verizon NJ is committed to service capability deployment and makes capital expenditures to achieve its ONJ and ANJ commitments. Chart 1 entitled *Milestones and Gross Construction Expenditures* compares actual investment to original plan estimates without ONJ and also shows that Verizon NJ has spent significantly more than was projected without ONJ and ANJ acceleration.

By integrating a number of services on a single network, Verizon NJ will optimize our service delivery capabilities. The evolution to the full service ATM switched broadband network will significantly increase the efficiency of serving New Jersey through auto-

mated provisioning and activation processes, increase capacity availability, and result in an even more flexible delivery platform.

Verizon NJ's integrated network of switches, transmission facilities and operating systems provides New Jersey's residential and business communities with an advanced telecommunications infrastructure that is ready, willing and able to act as the on-ramp to the Information Super Highway. Our network investments are being driven by the exploding demand for a broadening array of services. These services range from additional lines, Internet access, and high-speed transport to applications requiring packet-switched networks, combinations of switched and private networks, and

customized network designs. Additionally, the network must be able to handle increased traffic volumes from competitors utilizing Verizon NJ's wholesale service offerings. Verizon NJ has implemented a comprehensive process to make it easier for competitors to gather preordering information on customers, submit orders for service, have service provisioned, bill end-users, and report troubles. For example, Verizon NJ:

- Combines different elements of Verizon NJ's network (unbundled network elements) for basic residential local service and residential ISDN service, making it easier for competitors to provide local service.
- Provides line sharing, enabling competitors to use existing subscriber lines to provide DSL service.
- Provides a comprehensive process to make it easier for competing local telephone companies to do business with Verizon NJ, including: using a database to track escalation of service-related problems and written procedures for reporting such problems, a service center dedicated to processing local service requests of competitors, and a measurement process to gauge the center's performance.
- Provide non-discriminatory access that allows competitors to tie their systems directly to Verizon NJ's operating support systems for pre-ordering, ordering, provisioning, maintenance, repair and billing.

Verizon NJ also has a facility in New Jersey solely dedicated to handling the needs of competitors. In New Jersey, 87 carriers are certified to provide local telecommunications services and 63 more

have filed for regulatory approval. These companies are experiencing explosive growth. In 2000, Verizon NJ exchanged 13.6 billion minutes of traffic with them, more than doubling the volume of traffic over 1999.

Today, Verizon NJ's sophisticated and intelligent communications network provides a world-class vehicle for accessing voice, data, imaging and video. Verizon NJ exceeded its commitments by making the Advanced Intelligent Network (AIN) and narrowband service capabilities 100 percent available in 1997, one year earlier than required. This section will address progress on the remaining two service capabilities of ONJ<sup>6</sup> and ANJ -- wideband and broadband. To accommodate ONJ, as accelerated by ANJ, Verizon NJ developed a deployment strategy so that the benefits of a broadband capable network could be realized even sooner than required. The initial deployment of Asynchronous Transfer Mode (ATM) switches and fast packet switches at key hub locations linked with a high-speed fiber optic backbone provided statewide availability of an ATM-based network to all schools, libraries and urban areas in the Verizon NJ serving area in 1998, one year ahead of schedule. Appendix C lists Verizon NJ's accomplishments and shows the progress made toward fulfilling the commitments under the ANJ program.

Twenty-four ATM switches and 150 fast packet switches at key hub locations provide statewide availability of ATM, frame relay and Switched Multimegabit Data Services (SMDS) to all New Jersey public

<sup>6</sup> Appendix B provides data on service capability and technology deployment under the plan.



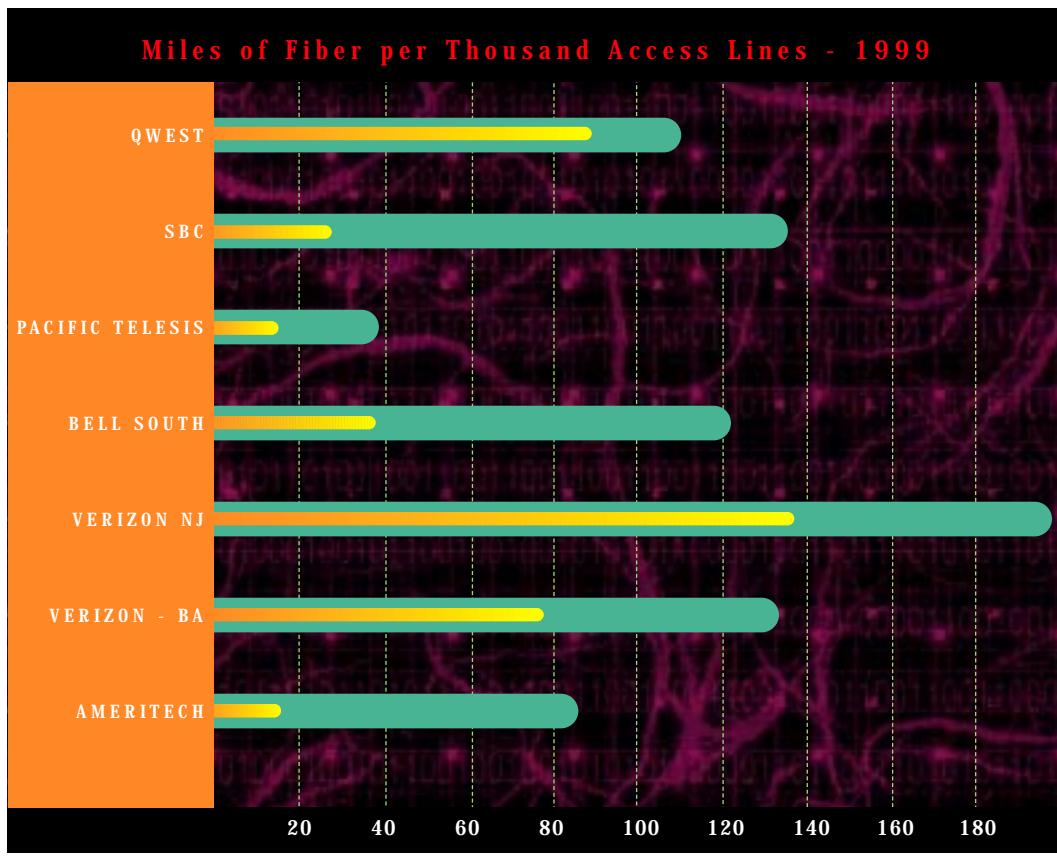
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and non-public schools, public libraries, Abbott Districts and urban areas. In 2000, Verizon NJ placed five additional ATM and two fast packet switches and implemented a statewide video portal.

On September 27, 2000, Governor Christie Whitman joined Education Commissioner David Hespe and Verizon NJ President Dennis Bone in a virtual inauguration of Verizon's Access New Jersey<sup>SM</sup> Video Portal. "Technology is among our highest priorities for schools and we are making great progress because of the technological expertise we have

here in the Garden State," said Gov. Whitman.

The State Department of Education (NJDOE) in Trenton and five schools (Bergen County Technical Schools, the Camden City School District, Vineland Public Schools, Ocean County Technical Schools and the West Deptford Schools in Gloucester County) were linked via the Video Portal in this historic event. Students, teachers and professional development specialists from across the state, interacted with the Governor, NJDOE Commissioner Hespe and other invited

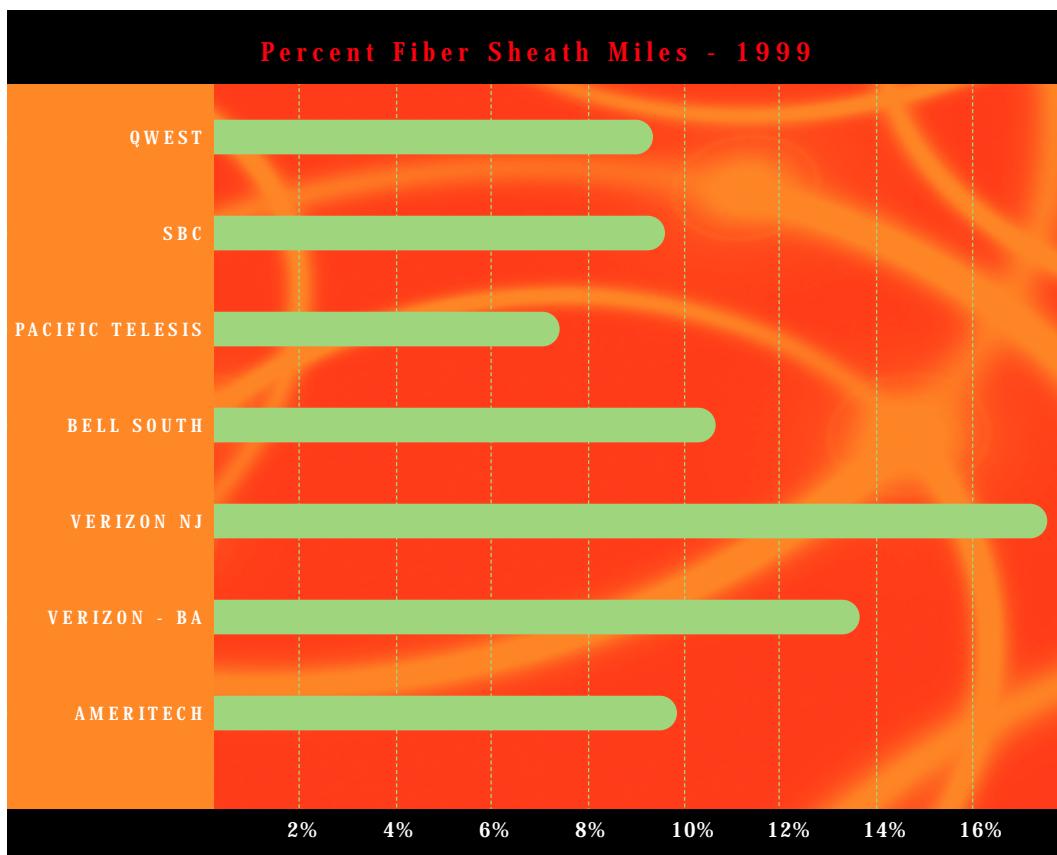


guests for the event in a discussion about the "Origin of Prejudice."

The Video Portal is just one more step toward the future of electronic education. Using existing statewide ATM services, the Video Portal encourages video-based distance learning for grades K-12, bringing the power and creativity of information technology into the classroom and extending valuable resources throughout the state. One of the many goals of the ANJ program is to connect every school in Verizon NJ's territory. Until now, New Jersey schools running different systems could not interact. One highlight of the Video Portal gateway is that it facilitates multi-point conferencing, meaning that many schools can participate in the same

event. The Video Portal's gateway capability is another unique feature, which seamlessly integrates different communications technologies. Previously the three Local Access Transport Areas (LATAs) in New Jersey hindered school communications. A provision in the 1996 Telecommunications Act allows Verizon NJ to remove these barriers to benefit K-12 education. The Video Portal Network now provides long-distance circuits to interconnect these LATAs in New Jersey. Verizon NJ is the first local phone company to deliver broadband video services on a large scale to schools across LATA (long-distance) boundaries.

In his testimony in Docket No. T099120934 Dr. Jeffrey V. Osowski, Assistant Commissioner, NJ Department of Education stated:



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Source: FCC Fiber Deployment Update (table 12)

*"The capabilities of the Video Portal network provide New Jersey's Educational community with a distance learning platform unmatched in the nation. K-12 schools throughout the State, using ISDN and ATM, can communicate with each other and in groups, all over a network managed by Verizon."*

Verizon NJ deployed 118,536 miles of fiber accounting for almost 23 percent of the overall Verizon East regional total. Fiber optics accounts for nearly one-fifth of Verizon NJ's total cable sheath miles. With 1,399,559 miles of fiber deployed, Verizon NJ leads all other Verizon East states. Verizon NJ's single-state fiber deployment record is impressive when compared to total fiber mile statistics for the other Regional Bell Operating Companies (RBOCs). Based on the most

recently available data<sup>7</sup> from 1999, Verizon NJ continues to outpace all other RBOCs in fiber deployment. As illustrated in Chart 2, with almost 200 miles of fiber per thousand access lines, Verizon NJ far exceeds the efforts of any of the RBOCs. In addition, Chart 3 clearly demonstrates that Verizon NJ's percentage of fiber sheath miles to total sheath miles far exceeds all other RBOCs. The numbers show that Verizon NJ continues to be a national leader in fiber optic deployment.

Verizon NJ continues to deploy dense wavelength division multiplexing (DWDM) systems in its core network. Multiwave systems provide immediate bandwidth relief so that new fiber is not needed. DWDM extends the life of cur-

rent fiber optic plant and has the flexibility to handle all types and speeds of traffic. It also provides the flexibility to respond to the needs of customers for increased bandwidth in a timelier manner than having to place additional fiber.

The Telecommunications Act of 1996 brought sweeping changes in telecommunications regulations. Competition in local markets and the convergence of technologies have significantly altered the landscape of telecommunications. The explosive growth in the Internet has resulted in consumer demand for high-speed data services. Consequently, the technological community has focused its efforts on the development of technology capable of providing data access to residential customers at greater speeds and functionality. Competitors using fiber, DSL, satellites, cable TV and other wireless based services now offer access to the Internet.

To speed broadband service availability to the residential marketplace, Verizon NJ equipped a total of 39 additional central offices in New Jersey with RADSL (Rate Adaptive Digital Subscriber Line). The technology uses existing copper facilities to provide high-speed Internet access. The rollout was targeted initially to key urban areas including Newark, Camden, East Orange, Elizabeth, New Brunswick, Paterson, Trenton and most of Hudson County, including Jersey City. RADSL

enables customers to use Verizon Online DSL service to access the Internet at data rates ranging from 640 kbps (kilobits per second) to 7.1 mbps (megabits per second) or 120 times faster than a 56 kbps modem. For example, downloading the entire Encyclopedia Britannica with a 56 kbps modem would take 13 minutes. An ISDN (Integrated Service Digital Network) line working at 128 kbps would perform the same task in 6 minutes, while the slowest speed RADSL at 640 kbps would download the volumes in 70 seconds.

In 2000, Verizon NJ added 359 SONET (Synchronous Optical Network) rings bringing the total deployed to 1214, including 471 customer rings, 727 interoffice facilities rings, and 16 interexchange carrier rings. SONET technology continues to provide unparalleled security, faster service provisioning and network survivability. This technology continues to make New Jersey highly attractive to business.

Verizon NJ has invested \$6.5 billion in New Jersey since ONJ was approved. In 2000, the Company spent \$1.3 billion. Since the plan was approved, Verizon NJ's spending averaged \$870 million per year, a total of \$1.1 billion more than original BAU estimates (through 1999, which is the last year of the original BAU estimates). With ten years left in the deployment schedule, these investments position Verizon NJ to fulfill its remaining ONJ and ANJ service capability commitments. Verizon NJ's progress has provided the state with early recognition as a leader in advanced telecommunications technology and services as envisioned by public policymakers.

## Benefits to New Jersey and New Jerseyans

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this assessment was confirmed by a follow-up study conducted by the same consulting firm.

The Hezel report, entitled Educational Telecommunications and Distance Learning - the State by State Analysis 1998-1999, further links New Jersey's advanced telecommunications infrastructure and various partnerships between the state and business, such as Verizon's ONJ, as accelerated by ANJ, with stimulating the economy. According to the report, "New Jersey is a technologically rich state that is becoming even richer." Leveraging advanced technology helps create a business environment that encourages employers to locate and expand in New Jersey and helps lead to solid job growth and a lower, more favorable, unemployment rate.

**F**or well over a decade, experts have agreed that there is a causal relationship between advanced telecommunications infrastructure deployment and economic development. In its 1991 Infrastructure Study, the Deloitte & Touche Consulting Group projected that telecommunications services would become increasingly important in the business environment. Five years later,

In a February 7, 2000 news release covering the Council of Economic Advisors forecast of continued strong economic growth for New Jersey in 2000-2001, Governor Whitman was quoted:

*"New Jersey has now entered its eighth consecutive year of economic expansion -- the longest in our history. There can be no doubt that New Jersey is a better place to live, work and raise a family. I'm especially pleased that the Council recognizes high technology as a driving force in the New Jersey economy. It's clear that my \$165 million high-tech package -- New Jersey Jobs for a New Economy -- will point us in the right direction: the direction of more jobs, better jobs and higher-paying jobs." Dr. Joseph J. Seneca, Chairman, NJ Council of Economic Advisors, said that the Governor's emphasis on supporting high technology economic development is exactly on target for the future direction of New Jersey's high value added, information dependent economy.<sup>8</sup>*

In a letter on the State of New Jersey's Information Technology (IT) Strategic Plan for Fiscal Years 2001-2003, Governor Whitman wrote:

*"Today, information technology plays an integral role in our daily lives. People everywhere have come to depend on the Internet to meet daily and special needs—from shopping online to checking the weather forecast to making reservations for a vacation. The Internet has also increased expectations of convenience, as people want services to be*

*speedy, easily accessible, and available on demand. They have come to expect the same level of service from government. New Jersey is working hard to become The Online State—a national leader in e-government. We no longer view technology as a back office support function, but rather, recognize it as a highly effective means of delivering service, convenience, and value to our citizens. State agencies will move from traditional methods of providing services to e-government, delivering services that do not require personal interactions through the Internet and a wide range of technologies. Our goal is to provide better, more responsive government through the innovative use of information technology. Our bottom line in making New Jersey The Online State is this: giving the public the services they want and need, in the ways they want to receive them. Achieving this will help ensure that New Jersey is, indeed, a better place in which to live, work, and raise a family.<sup>9</sup>*

In his Testimony for the Senate Special Study Committee on the Federal Telecommunications Act of 1996 on May 25, 1996, Herbert H. Tate, Jr., then President of the New Jersey Board of Public Utilities, recognized Verizon NJ's role in supporting New Jersey's economic development through its telecommunications infrastructure initiative:

*"To determine the answers to these questions, the Board will be conducting public hearings to discuss Bell Atlantic's commitment to Opportunity New Jersey to make New Jersey the first state in the country to have advanced, broadband statewide*

<sup>8</sup> News Release: February 7, 2000 Council Of Economic Advisors Forecasts Continued Strong Economic Growth For New Jersey in 2000-2001

<sup>9</sup> Letter from the Governor, State of New Jersey's Information Technology (IT) Strategic Plan for Fiscal Years 2001-2003.

*services to all residences and businesses. The capital expenditures to keep New Jersey competitively ahead of other states to become the telecommunications center of the United States are extensive."*

As noted earlier in this report, the Board agreed unanimously that Verizon NJ met its commitments.

Upon stepping down from his post as President of the New Jersey Board of Public Utilities, President Tate reflected on his tenure:

*"What I'm proudest of isn't what most people might think of: It's the renegotiation of the Opportunity New Jersey program with Bell Atlantic to provide broadband access and equipment to every school in the state of New Jersey." <sup>10</sup>*

Verizon NJ has hired 9,699 employees and invested \$6.5 billion in New Jersey since ONJ took effect in 1993. During this time, New Jersey's resident employment has grown by more than 400,000 jobs, and in January 2001, the state's unemployment rate of 3.6 percent<sup>11</sup> was at its lowest since March 1970 when the rate was 3.3 percent.

Verizon NJ provides a full range of customized communications solutions to address the complex requirements of business customers. Verizon NJ products and services are designed to meet the connectivity requirements of a dynamic business environment, reaching beyond traditional boundaries to an increasingly distributed

workforce, suppliers and key customers. Today, companies are looking for customized network communication solutions that enable them to share information quickly and securely among employees, customers and suppliers by combining the broad availability of the Internet with the control, high-speed connectivity and security offered by traditional communications networks. As a result, the network is increasing in its importance to business, as it becomes the central means not only to deliver information, but also to manage, direct and monitor all information flows within a business.

In 2000, several large corporations continued to take advantage of the capabilities of Verizon NJ's advanced network by contracting for services such as SONET. SONET is an important service because the client's local access, up to and including presence in a Carrier Point of Presence (POP), is protected by a self-healing fiber ring in the contracted bandwidths. No local outages should occur. This is the cornerstone for alternate routing and disaster avoidance.

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The availability of advanced telecommunications continues to be attractive to business in New Jersey. Many businesses, including small start-ups, are technology driven and need more than basic local voice access to be competitive in their markets, both domestically and globally. Customers of all sizes require advanced digital services including Frame Relay, Primary Rate ISDN, xDSL, High Capacity Digital Lines, and Digital Hand-offs.

<sup>10</sup> The Star-Ledger, March 20, 2001 (<http://www.nj.com/news/ledger/index.ssf?/jersey/ledger/12afe62.html>)

<sup>11</sup> New Jersey Department of Labor news release dated February 27, 2001

Verizon NJ's advanced network has facilitated meeting these requirements despite the diverse needs and geographic location of many of these customers.

Health systems also use New Jersey's advanced network to create innovative services. For example, Healthnj.org is a creation of the University Libraries within the University of Medicine and Dentistry of NJ (UMDNJ), which will help alleviate the critical shortage of valid web-based health consumer information. It serves as a comprehensive, authoritative information resource for New Jersey residents with an interest in health and well-being – the first of its kind to ride over the Verizon NJ's telecommunications infrastructure. The site will be divided into four main areas: Health and Wellness, Disease, Health in New Jersey and the Reference Desk. The first three will establish a community of support through health recommendations and patient education information like fact sheets or print literature. The reference section will feature online resources, including medical databases and dictionaries, online textbooks and tutorials. Information will always be current and delivered in real time. Judy Cohn, director of the George F. Smith Library at the UMDNJ, said, "Health in New Jersey is a very high priority. With the massive amounts of information on the Internet, we want to make sense of the resources available to the consumers." As it expands, Cohn said the group intends to conduct focus groups with librarians and consumers

to get feedback and ascertain their needs. The UMDNJ Library is also eager to cultivate collaborative relationships with public and school libraries throughout the state. Through contributions to the NJ Library Association, Verizon NJ provided the resources to move the site from an idea to a reality.

Economic development depends greatly on the availability of a skilled workforce. Verizon NJ and the State of New Jersey have been extremely successful in marrying technology to education. Included in that effort is the continued activity of Workforce Investment Boards (WIBs). The WIB's mission is to ensure that New Jersey businesses take the lead in the state's Workforce Readiness Initiatives and that Prosperity New Jersey will link the employment, training, and education system to the competitive demands of the global economy. This partnership of the private and public sectors exists in each county or multi-county area to develop, maintain, and implement a new system that is consumer and labor based. Verizon NJ managers sit on 12 of the 15 WIBs. One of the objectives of the WIBs is to develop school-to-career opportunities.

With a skilled labor shortage at an 11-year high, businesses and schools are paying closer attention to the training their students receive. The New Jersey Business and Industry Association (NJBIA) and the State Chamber of Commerce are working with private businesses to develop a policy framework for the demands of the workplace and how to prepare today's students

better. NJBIA's Year 2000 Business Outlook survey revealed that 78 percent of businesses polled were experiencing a shortage of skilled labor; 38 percent reported that the shortage had hampered their business' ability to expand in 1999. In response, both organizations are working with the NJ Department of Education to consult business groups and establish goals. Elizabeth Vinson, director of NJBIA's Education Committee said Verizon serves as a role model for businesses and school administrators alike. "They've taken the lead on a lot of initiatives," she said, "donating their time and experience and promoting local internship programs." Through programs like these, Verizon aims to provide long-term benefits to New Jersey students – improving the quality of education for tomorrow's workforce.

TEC2000 is an example of a school-to-career program that began in 1993. TEC2000 is designed to provide students the basic knowledge and understanding of communications network design, telephone equipment and computer networks, and satellite and wireless communications services. It is a nationally recognized<sup>12</sup> program that prepares students, as well as people re-entering the job market, for technology-related jobs in New Jersey's telecommunications industry. TEC2000 started with 12 students at the Ocean County Vocational Technical School in Toms River and since its inception, has enrolled 600 students. There are

now 12 TEC2000 centers throughout the state in Warren, Salem, Burlington, Ocean, Morris, Somerset, Mercer, Hudson, Essex, Cumberland, Passaic and Union counties. Verizon NJ, Sprint, AT&T, and several New Jersey cable television companies as well as smaller networking companies have hired TEC2000 graduates.

Last September, Newark's TEC2000 added the Cisco Academy to its certification training. The two-year course qualifies students to work with advanced digital systems. The continued support from Verizon NJ has helped make the program successful. "Besides actually setting up the [classroom] lab itself, they sent in guest speakers, gave us the tools the kids need, and funded class trips to the corporate buildings," said TEC2000 teacher, Scott Pennington. "They were the catalyst for the Cisco program, too." As a result, TEC2000 has sparked interest within the community and other organizations. He added that Verizon's leadership role illustrates their commitment. "It has a real positive effect on the students. The atmosphere is more professional, more pleasant, and more adult. They feel more responsible." Pennington estimates that six graduates are working for Verizon NJ as technicians, with an equal amount entering directly into college with scholarships.

<sup>12</sup> In 1996, the U.S. Department of Education selected the program as one of the 10 best school-to-work programs in the nation. TEC2000 was honored in 1997 with the New Jersey Business and Industry Association's Enterprise Award for job creation.

Verizon NJ has expanded the idea of an employee training center to a community wide interactive multimedia resource center. As part of Verizon NJ's commitment to the use of interactive technology in education, Verizon NJ has built a multimedia classroom within its headquarters building in Newark. The facility has opened this spring, and features the type of advanced network technologies that Access New Jersey<sup>SM</sup> is bringing to more than 2000 schools and libraries throughout the Garden State. It will advance Verizon NJ's proud heritage of bringing advanced information technology to Newark. It will be available to public schools in the area, moreover, local museums may use the classroom to conduct training for teachers throughout the state via interactive video and community-based organizations may use the classroom for computer training or to participate in relevant video conference events. It brings value to local organizations that may not be able to finance or support the technology in-house.

Verizon NJ continues to advocate the use of technology to benefit New Jersey children. The ONJ Technology grant program, begun jointly with the New Jersey Association of School Administrators, encourages the development of technology applications in New Jersey's K-12 schools. Since 1996, the ONJ grant

program provided approximately \$900,000 to fund opportunities for schools and libraries (in 1998, under ANJ, the ONJ Grant program was extended to libraries) to bridge geographic, cultural, and socio-economic differences. To date, 20 libraries have benefited from more than \$425,000 in grants awarded under this program.

#### **Access New Jersey (ANJ)**

ANJ is a comprehensive solution for acquiring or upgrading telecommunications technology for virtually every facet of the learning environment in schools and libraries throughout the Verizon NJ service area.

ANJ has proved to be an overwhelming success.<sup>13</sup> As of December 31, 2000, Verizon NJ spent \$33.8 million building the ATM-based network. In 2000, Verizon NJ installed five additional ATM and two fast packet switches at key hub locations, supplementing the statewide availability of ATM services previously provided in 1998, a full year ahead of schedule. Every public and non-public school and public library in every urban, suburban and rural area of the state served by Verizon NJ has been given the opportunity to take advantage of the program. By the end of 2000, 2082 K-12 schools and public libraries, representing every county in the state, have taken advantage of ANJ. In fact, contracts have been signed in 100 percent of the towns with Urban Enterprise Zones (UEZ). In addition, 83 percent of the Abbott Districts and 67 percent of the Economically Disadvantaged Districts participate in the program.

<sup>13</sup> Verizon-NJ's progress is detailed in Appendix C.

Schools and libraries within the Verizon NJ serving area participating in the program are expected to save \$54 million on customer premise equipment (CPE) and service discounts. Verizon NJ distributed \$26.5 million of free CPE through 2000, representing more than 100 percent of the original CPE fund. Of that total, \$761,000 was used to fund free interactive television (ITV) classrooms for 25 Abbott Districts. Appendix D lists the number of contracts, locations and savings by county.

Dr. Jeffrey V. Osowski, Assistant Commissioner, NJ Department of Education, testified to the benefits of ANJ:<sup>14</sup>

"Providing ubiquitous technology in our schools and libraries means many things. For example, integrating computers into the educational process with telecommunications access accelerates teaming. When technology access is provided, attendance improves, grades go up and discipline problems down. This has been demonstrated in many New Jersey schools - especially in the State's most economically-disadvantaged areas such as the Whitney Young School in Jersey City, Camden Middle School in Newark and the nationally-acclaimed Christopher Columbus School and Emerson High School projects in Union City. As schools and libraries in New Jersey take advantage of the affordable rates provided by ANJ, the inequalities stop at the schoolhouse door and at the front steps of the library."

"As for library services, participation in ANJ has enabled 309 public libraries in our State (233 municipal libraries, 14 county libraries, and 62 public association libraries) to provide advanced services as outlined in the New Jersey State Library's Technology Plan, Libraries 2000. ANJ provides more than \$3.5 million for public libraries' telecommunications equipment, installation of lines and discounted rates. The availability of high speed services through the ANJ program enabled the State Library to establish advanced technology programs such as the Cyberdesk ([www.njstatelib.org/cyberdesk/](http://www.njstatelib.org/cyberdesk/)) and to offer EBSCO Information Services - an integrated information system that includes over 1,200 full-text periodicals online.

"These programs demonstrate some of the numerous benefits for schools and libraries from the provisions of the ANJ program."

Also, regarding libraries, in BPU Docket No. TO99120934, Patricia A. Tumulty testified to the following:

"A Survey of Public and Academic Library Electronic Access to Information compiled by the New Jersey State Library in 1996 revealed that only 14% of all public libraries in the state had public access to the Internet for its patrons. In just four short years, that picture is drastically different. Now over 90% of all public

libraries have public Internet access. Two factors are responsible for this dramatic growth - a \$5 million bond for public library technology through the Higher Education Technology Infrastructure Bond Act and the implementation of the Access New Jersey agreement which provided discounted telecommunication rates for libraries and supplied sophisticated equipment including high speed routers which permit access to the Internet. Without these initiatives, our public libraries would still be languishing behind on the information superhighway. From NJLA's view the Access New Jersey agreement was a critical turning point in the development of Internet access for our public libraries. Without the discounted rates and equipment provided through this settlement, many libraries would not be providing Internet services to the residents of New Jersey. The commitment of the staff of Verizon to the implementation of the Access New Jersey proposal has been commendable. From the beginning, Verizon assigned technical and administrative staff to the project. The New Jersey Library Association can only speak highly of the organizational and personal commitment of the staff to this project. It was through a plan designed by Verizon staff that the New Jersey State Library designed its "hub" project which links most public libraries in New Jersey to the Internet in a cost effective manner. There

are currently 16 hub libraries throughout New Jersey. Verizon has indicated that this design actually saves New Jersey public libraries approximately \$1 million in telecommunications and Internet costs each year. Equipment provided to the hubs such as high speed routers came through the Access New Jersey program. The library community views the "hub" program as a great success. In addition, the New Jersey Library Association has worked directly with Verizon on a grant program which assists our public libraries in developing model projects for the use of new technology to serve community partners.<sup>15</sup>

Dr. Osowski also cited examples of ANJ school-based participants using advanced technology resources to enhance instruction:

#### **Cumberland County Collaboration Between Abbott Districts (Vineland and Bridgeton)**

John Cassadia's 9th grade class in the Vineland School District was able to send video out from their science room through the school's network via ATM connectivity to the Bridgeton School District where they shared their classroom activity with the science class there. Chicks raced across desktops on the video feed while students worked together presenting and learning about the developmental life stages of the chicken.

<sup>15</sup> Rebuttal Testimony of Patricia A. Tumulty, BPU Docket No. TO99120934

## **Bergen County Empowering Students To Think Beyond Local Resources**

On February 15, 2000 at 3:30 p.m., students of the "Who Shot J.F.K." project interviewed Dr. Paul C. Peters as the second witness in their continued search for the truth in the assassination of President John F. Kennedy. Dr. Peters was part of a team of surgeons at Parkland Memorial Hospital who tried desperately to save the president's life minutes after he was shot in the back and head. One can still hear real time responses from Dr. Peters on the website outlining this project.

## **Gloucester County Expanding Teachers' Horizons**

Having received a grant that related to world languages, West Deptford High School pulled in Specialists in this area. The presenter came to the high school and the school then connected by ITV to groups at Delsea High School, the Gloucester County Educational Technology Training Center and the Camden County Educational Technology Training Center on a monthly basis. Teachers united in learning from each of the monthly presentations and took an electronic field trip to the Philadelphia Art Museum where the history of various French paintings were related to them in French. Sessions were videotaped to be shared again with other teachers."

In letters to Verizon NJ, school districts across the state acknowledge how pleased they are with what ANJ has done for their

schools. According to these educators, two direct outcomes, one budgetary and one instructional, are "forcing districts to move into the Information Age."<sup>16</sup> The discounts and free equipment allow school districts to devote more of their limited fiscal resources to provide direct instructional services to children while at the same time upgrading their networking technologies and systems.

Participation in ANJ continued to grow in 2000, as advanced technology through ONJ and ANJ helped to prepare New Jersey's 1.2 million K-12 students for the future. Some examples follow:

### **Millville Public Schools**

Two stories underscore the progress that has been made at Millville Public Schools since they signed on with Verizon's Access New Jersey<sup>sm</sup> Program. The first is about delivering a wider range of services at reduced costs. Today, Millville has wired a total of 13 facilities – including nine school buildings, its Early Childhood center, its central administration and the district's warehouse. This has allowed better central control and coordination of inventories and supplies to each school building. It also helps the district keep better track of its Free and Reduced Lunch Program recipients – vital to a variety of state and federal funding formulas. The second story takes Access New Jersey<sup>sm</sup> out of the classroom – and into the woods. On a field trip, students came across a type of mushroom that wasn't listed in any of

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<sup>16</sup> Memo from Monroe Township Superintendent of Schools, dated April 19, 2000.

their textbooks and even had their teacher stumped (see picture on page 11). A trip on the Internet found a college professor in the Midwest, who was a mushroom expert and able to give the class information on their find. Verizon NJ used this example in a newspaper ad demonstrating how Access New Jersey<sup>sm</sup> is affecting students and teachers.

### **Hillsborough Somerset County**

Through a \$5,000 grant to the Hillsborough Education Foundation, Verizon has helped Auten Road School principal Harold Blackstone realize his dream of a habitat area behind the school. eighty-six third-graders will be able to make use of the nature center behind the school through a series of research activities that will focus on New Jersey's endangered species. Using the Internet and video conferencing, the students intend to establish a network with environmental groups, educational experts, and their peers throughout the state.

### **Lumberton Burlington County**

Third-graders at the Bobby's Run Elementary School in Lumberton don't just watch butterfly migration. They help it happen. Each September, students return to school and nurture Monarch caterpillars to pupation. They then release the new butterflies for migration to Mexico. Classrooms at Bobby's Run use the Internet to link students with a school in Pacific Grove, California, the butterfly

capital of the world, in order to research and celebrate the Monarch. When the school applied for the Verizon NJ grant in 1996, the goal was to improve classroom technology. The \$15,000 grant was enough money to provide multimedia equipment as well as the necessary instructor training. The State of New Jersey recently recognized its value with the Best Practices Award. "We're touching almost everyone in the curriculum. And [the program] grows every year," said Janet Horan, principal of the Bobby's Run School. "If we hadn't had Verizon's initial support, we wouldn't be where we are today."

### **New Brunswick Health, Science & Technology High School**

The New Brunswick Health, Science and Technology School is a recently formed high school that offers a focused curriculum within the New Brunswick public school system. When Ron Larkin, New Brunswick's Superintendent of Schools, came to inquire about the Access New Jersey<sup>sm</sup> program, he knew that students at the school were already making use of the Internet for research in a variety of areas. But, because of the school's emphasis on technology, a greater level of connectivity was needed. Today, the school building is wired with fiber optic cabling, and the computer to student ratio is nearly one-to-one. On the drawing board is an interactive television (ITV) laboratory that will allow real-time, point-to-point interaction for students with resources like the Robert Wood Johnson Hospital and Stevens Institute, other students around the state – and people around the world.



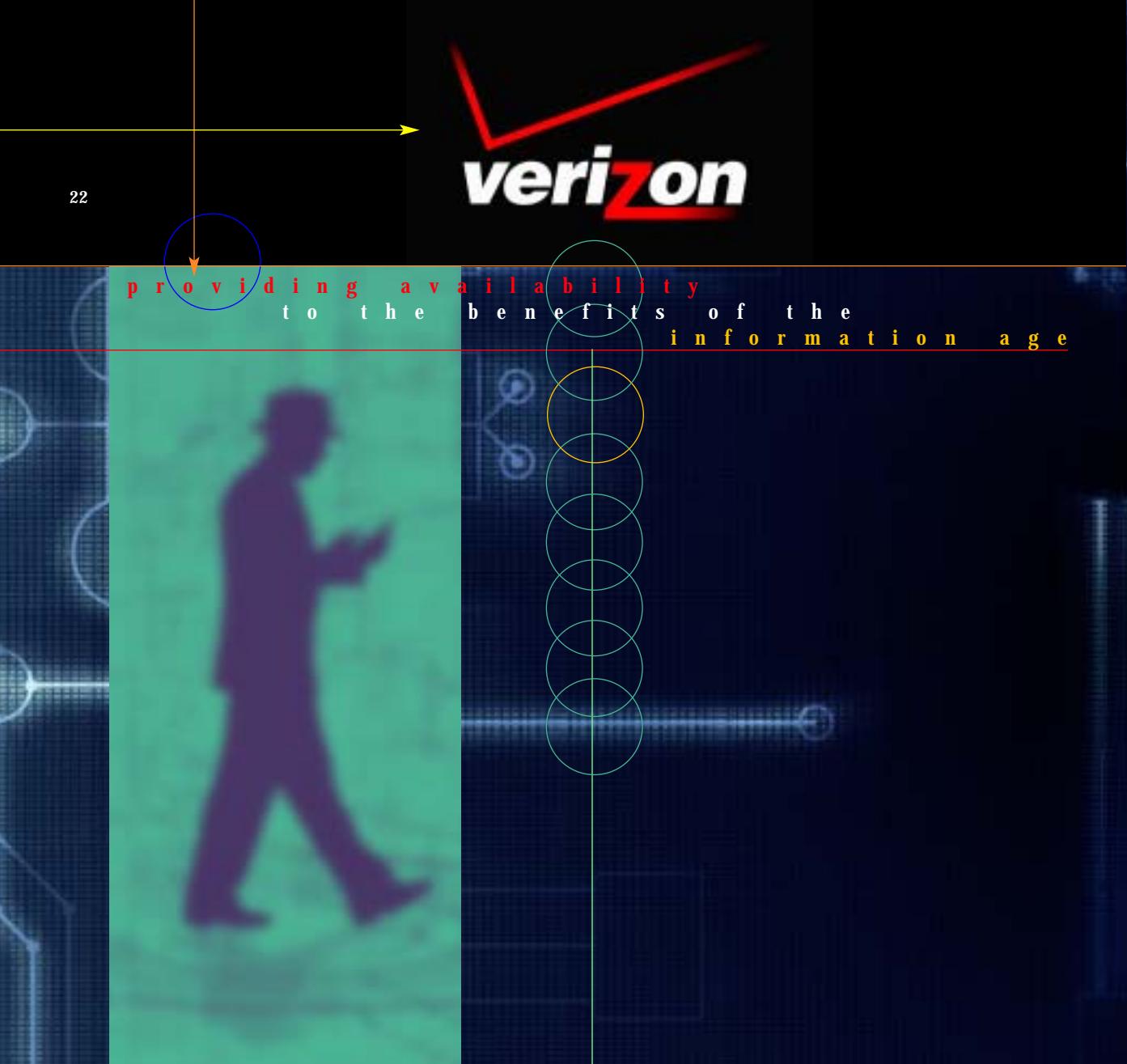
## Conclusion

When Alexander Graham

Bell made the first telephone call in 1876, he started a revolution in the way people communicate. The telephone became the prime method for families and friends to bridge the geographic distance that separated them. It became a tool critical to commerce. Businesses came to rely on it. Today, businesses continue to rely on it.

The infusion of advanced technologies into New Jersey's telecommunications infrastructure continues to tear down the barriers of distance and time. The Verizon NJ network equips our state with an affordable full service network that will keep New Jersey prosperous, educated, safe and strong. As validated by the 1998-1999 Hezel report, Verizon NJ's advanced network capabilities, offered under ONJ and ANJ, position New Jersey among the leaders in telecommunications for the Information Age.

Each of us at Verizon NJ realize that while recognition is nice, our work is not yet done. This year, the equipment fund will be available to allow schools and libraries to take advantage of the wide-band and broadband services that this new network provides. We will continue to work with the DOE and educators to help schools and libraries within the Verizon NJ serving area take advantage of special discounts. And above all, we will continue our larger commitment to bring the benefits of the Information Age to every citizen in New Jersey. Verizon NJ's commitment to technology and learning, under ONJ as accelerated by ANJ, works hand in hand with New Jersey's goal to leap forward into the 21<sup>st</sup> century.



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providing to the availability benefits of the information age

## Evolution of “The Plan”

The 1992 New Jersey Telecommunications Act allowed the New Jersey Board of Public Utilities (Board, BPU) to deal more effectively with changes in markets and technology that were occurring within the telecommunications industry. This law permitted the BPU to adopt alternative forms of regulation and provided a road map for New Jersey’s entry into the information age.

In 1993, the BPU approved a Plan for an Alternative Form of Regulation (PAR)<sup>1</sup> that provided an initial framework enabling Verizon New Jersey (Verizon NJ, Company) to accelerate the deployment of an advanced infrastructure over a 17-year period. The infrastructure plan, called Opportunity New Jersey<sup>sm</sup> (Plan, ONJ), provided a blueprint for upgrading New Jersey’s telecommunications network to position the state to deliver a wide variety of new information age services and enhance New Jersey’s economic competitiveness. The deployment plan was forward looking, in that it contained the flexibility to address the evolution of technology during the 17-year life of the plan.

The plan evolved from a comprehensive Infrastructure Study that was commissioned by the BPU. The objectives of the study were, among other things, to identify what would be required for the state’s policymakers to chart a new course for telecommunications regulatory policy. The study, published in 1991 by Deloitte and Touche, found that a “significant strategic opportunity exists to advance the public agenda in New Jersey through the accelerated deployment of a reasonably priced, advanced telecommunications network in the state.” Five years later, this assessment was sustained by a follow-up study conducted by the same consulting firm.

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The 1996 Deloitte and Touche study surveyed New Jersey businesses, as well as Economic Development Managers. Study findings showed a significant increase, from 20 percent in 1991 to 97 percent in 1996, in the belief held by businesses that advanced telecommunications services were “critical” to their ability to compete in a global marketplace. This belief was reinforced by the Economic Development Managers’ view that the availability of an advanced telecommunications infrastructure is a “key” element in attracting and maintaining businesses in New Jersey.

Between October 1996 and June 1997, the Board reviewed Verizon NJ’s progress under ONJ and found that Verizon NJ was meeting, and in many cases, exceeding its commitments. Although the record clearly established that Verizon NJ was meeting the commitments of the Plan, the Company agreed to accelerate ONJ further via the deployment of wideband and broadband service capabilities to K-12 schools, public libraries, and urban areas. In April 1997, in cooperation with the BPU and the Ratepayer Advocate, Verizon NJ developed the Access New Jersey<sup>sm</sup> (ANJ) program. ANJ evolved as a comprehensive solu-

<sup>1</sup> On April 28, 1999 the Board approved a one-year extension of PAR until December 31, 2000.

tion for acquiring or upgrading telecommunications technology for virtually every facet of the learning environment in New Jersey's schools and libraries throughout the Verizon NJ service area.

Under ONJ as accelerated by ANJ, Verizon NJ agreed to:

- Deploy a \$55 million ATM/fast packet high-speed network over four years. This network would provide voice, video and data capability to all 28 Abbott Districts by the end of 1999, and all remaining school districts and libraries in the Verizon NJ service area by the year 2001;
- Establish a \$25 million equipment fund for schools and libraries who subscribe to ANJ to acquire the equipment they need to connect computers and video equipment to the high-speed network; and
- Provide schools and libraries with educational discounts on tariff rates, on a flat rate basis, ranging from 31 to 72 percent for ATM (Asynchronous Transfer Mode), SMDS (Switched Multimegabit Data Service), Frame Relay, and ISDN (Integrated Services Digital Network) services.

In 1999, the Board reviewed the Company's progress under ONJ as accelerated and found, once again, that Verizon NJ has either satisfied or is on track to satisfy all of its commitments. In testimony before the Board, the Assistant Commissioner of the New Jersey Department of Education stated, "Overall, the number of contracts, the service to the Abbott Districts, the allocation of customer premise equipment, and the development of the ATM-based network met or exceeded the expectations of DOE."

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On December 30, 1999 Verizon NJ filed a modified plan responding to the profound changes in the New Jersey telecommunications marketplace brought about by the Board's pro-competitive policies, the sweeping changes resulting from the federal Telecommunications Act of 1996 and continuing transition of New Jersey's telecommunications marketplace from regulated to competitive. Citing delays in other related proceedings, the Company withdrew its petition and requested that the current PAR be extended until these parallel proceedings are completed. On December 22, 2000, the Board approved the extension of PAR and directed Verizon NJ to file its new plan on February 15, 2001.

In a separate initiative, Verizon NJ and the parties to the ANJ stipulation requested that the Board combine the remaining CPE and network funds into a single fund. This would assure that the full amount of \$80 million will be expended and provide maximum access to the high speed ATM based network. The Board directed the Company to set aside a minimum of \$1.8 million of equipment funding for the Abbott Districts. The Board approved this joint motion on December 19, 2000.

## Service Capability & Enabling Technology Deployment

I Opportunity New Jersey's Service Capabilities	1996	1997	1998	1999	2000	Commitments
<b>Advanced Intelligent Network</b>						
w/o acceleration (est)	75%	80%	88%	94%	n/a	none
with acceleration (act)	83%	100%	achieved			100% 1998
<b>Narrowband (up to 144 kbps)</b>						
w/o acceleration (est)	69%	74%	82%	87%	n/a	none
with acceleration (act)	80%	100%	achieved			100% 1998
<b>Wideband (144 kbps to 1.5 mbps)</b>						
w/o acceleration (est)	41%	50%	62%	71%	n/a	none
with acceleration (act)	50%	66%	78%	84%	95%	95% 2000
<b>Broadband (up to 45 mbps &amp; higher)</b>						
w/o acceleration (est)	1%	1%	3%	9%	n/a	none
with acceleration (act)	19%	34%	35%	42%	52%	100% 2010
II Enabling Technology Deployment & Resources	1996	1997	1998	1999	2000	Commitments
Analog Switches	24	17	9	—	—	
Digital Switches	186	191	197	205	215	215
% Digital Switches	87%	89%	92%	96%	100%	achieved 100% 1999
RADSL Equipped Offices			12	128	167	
Infospeed DSL Qualified Households			243,387	1,048,371	1,486,202	
ATM/Fast Packet Switch Locations	10	10	10	10	10	
ATM Switches	3	3	16	19	24	
Fast Packet Switches	n/a	79	125	148	150	
Annual Optical Fiber Miles Installed	69,779	140,728	203,182	121,679	118,536	
Cumulative Optical Fiber Miles	815,434	956,162	1,159,344	1,281,023	1,399,559	
% fiber sheath miles	14%	15%	16%	18%	23%	
Estimated Investment (m) w/o acceleration	\$621	\$645	\$688	\$742	n/a	
Cuml Investment (m) w/o acceleration	\$2,121	\$2,766	\$3,454	\$4,196	n/a	
Actual Investment (m) w/o acceleration	\$838	\$806	\$945	\$1,044	\$1,264	
Cuml Investment (m) w/o acceleration	\$2,458	\$3,263	\$4,209	\$5,253	\$6,517	
Access NJ Network Expenditures (m)			\$14	\$28	\$34	\$55m 1998-2001
Equipment Fund (m)			\$9	\$20	\$27	\$25m 1998-2002
Total NJ Workforce	16,980	17,651	18,008	18,297	19,051	
Net Gain	840	671	357	289	754	
New Hires	1,894	1,371	1,129	1,827	2,388	
Cumulative Hires	2,984	4,355	5,484	7,311	9,699	
III Miscellaneous	1996	1997	1998	1999	2000	
SONET Fiber Rings Deployed	279	475	661	855	1,214	
TEC2000 Sites	6	9	11	12	12	
Interactive Classrooms	159	178	199	201	186	
Abbott District ITV classrooms		12	15	22	25	
Access NJ Contracts			500	826	1,027	
Access NJ Locations			1,300	1,876	2,082	
ISDN Lines in service (000)	47	65	80	89	90	
Infospeed DSL Lines in service (000)			<1	4	53	

**Progress Report on Verizon-New Jersey's  
Opportunity New Jersey Program  
as accelerated with Access New Jersey**

Commitments	Accomplishments
<b>ACCESS NEW JERSEY</b>	
<b>During 1998-2001, deploy an ATM based network that provides fast packet services for narrow-band, wideband and broadband transmission rates. An estimated 15-18 ATM switches to be added.</b>	<b>On schedule.</b> Initial deployment of 13 ATM and 28 fast packet switches at key hub locations provided statewide availability of an ATM based network in 1998. 3 ATM and 23 fast packet switches added in 1999.  5 ATM and 2 fast packet switches added in 2000. To date, 21 ATM switches have been added.
<b>ATM availability to all Abbott Districts by year end 1999.</b>	<b>Achieved.</b> Statewide ATM availability to K-12 schools and public libraries in 1998, one year ahead of schedule. Already, 83% of Abbott Districts have taken advantage of the program.
<b>Estimated \$55 million of capital and expense for an ATM-based network 1998-2001.</b>	<b>Ongoing.</b> Expended \$33.8 million as of December 2000 representing 61% of the commitment.
<b>Discounted services packaged on a flat rate basis retroactive to 9/97, minimum 3-year contract.</b>	<b>Achieved.</b> ISDN, frame relay, SMDS, and ATM service discounts for K-12 schools and public libraries: 1,027 contracts signed; 2,082 locations taking advantage of the program.
<b>\$25 million CPE fund 1998-2002, \$1 million set-aside for free ITV classrooms for the Abbott Districts that don't have one.</b>	<b>Ongoing.</b> Together, Verizon NJ and the NJ DOE developed an allocation formula to ensure the availability of funds to eligible schools and libraries.  <b>Ongoing.</b> \$26.5 million of CPE distributed through 2000, 106% expended, including \$760,853 of funding for ITV classrooms in 13 Abbott Districts. 83% of the Abbott Districts have ITV classrooms. On December 19, 2000 the Board approved combining the network and CPE funds. With a minimum of \$1.8 million of CPE set aside for Abbott Districts.
<b>Key sponsor of NetDay 1997; provide up to 500 free NetDay kits.</b>	<b>Achieved.</b> Funded a statewide coordinator and provided 539 free NetDay kits wiring 3,234 classrooms.
<b>Opportunity New Jersey Grants extended to libraries in 1998.</b>	<b>Achieved.</b> 6 more grants were awarded to public libraries in 1999, including Asbury Park, Bradley Beach, Dunellen, Elizabeth, Piscataway and South Brunswick in conjunction with Libraries of Middlesex Automation Consortium and Mount Laurel. Under Access New Jersey, Verizon NJ funded 13 public library grants totaling \$260,000.  <b>Ongoing.</b> To date, 20 libraries have benefited from more than \$425,000 in grants.
<b>Overseeing performance, assign a manager to work on ANJ and report progress in a separate section of annual infrastructure report.</b>	<b>Achieved.</b> Full time manager assigned. Kathleen Tully leads an interdepartmental team and meets monthly with the NJ DOE on progress and any issues regarding implementation.  <b>Achieved.</b> Appendix C of annual Infrastructure Deployment Reports.

Commitments	Accomplishments
<b>ACCESS NEW JERSEY</b> <p>Reasonable efforts will be made to provision IDLS service within 6-months of a request subject to tariffed rates, terms and conditions.</p>	<p><b>Ongoing.</b> Verizon NJ's standard IDLS service provisioning interval is 90-days. The functionality of the service relies on the readiness of the customer and the completion of the ITV classroom.</p>
<p>ATM network deployed in a way to accelerate access to urban areas. Any business offering will be provisioned to Urban Enterprise Zones (UEZs) within 90-days of a request.</p>	<p><b>Achieved.</b> Statewide ATM availability to K-12 schools and public libraries in urban areas in 1998, one year ahead of schedule, 83% of Abbott Districts have taken advantage of the program. 100% of municipalities with UEZs have schools and libraries participating in the program.</p> <p><b>Ongoing.</b> ATM network services are generally complex business services. For complex business services, over 98% of the due dates were met within 30-days.</p>
<p>Rate Stability: withdraw 1996 filed formula based rate increase, forego additional formula based adjustments.</p>	<p><b>Achieved.</b> 1997 formula based increase withdrawn, no additional formula based adjustments filed.</p>
<p>Support an interim Lifeline program until a universal service program is established.</p>	<p><b>Achieved.</b> In cooperation with state agencies, 400,000 residents were identified as eligible for the interim Lifeline program established in 1998. The program was offered to these residents initially via direct mail from these agencies. The offer included a letter and application form in English and Spanish, followed by a public notice in the 15 major dailies and minority media. In addition, Verizon furnished posters and brochures to the agencies for "walk in" applicants. Roughly 38,000 subscribers are taking advantage of the program.</p>
<p>100% Digital Switching year-end 1999, no effect on presubscription.</p>	<p><b>Achieved.</b> IntrALATA Toll presubscription implementation completed in May 1997.</p> <p><b>Achieved.</b> 100% digital switching achieved Nov. 1999, one-month ahead of schedule.</p>
<p>Hire additional employees such that the expected net gain will be 800 full time employees in New Jersey in 1997.</p>	<p><b>Achieved.</b> Hired 1,371 employees in 1997. However, with over 500 voluntary separations, the completion of 90 term assignments and other attrition resulted in a net gain of 671. An increase of 168 employees in January resulted in a net gain of 839 from Jan. 1997 through Jan. 1998.</p> <p><b>Ongoing.</b> 2,388 more employees were hired in 2000 and since 1993, the cumulative number of new hires is 9,699.</p>
<p>Modify plans to provide full service network technology to 40,000 homes in Newark and Elizabeth.</p>	<p><b>Achieved/Ongoing.</b> Central Offices in Newark and Elizabeth equipped with RADSL technology for more than 100,000 qualified households.</p>

**Access New Jersey  
Participation by County  
as of December 2000**

County	Total Number of Contracts	Public Schools Districts Participating	Abbott Districts Participating	Free Customer Premises Equipment Provided	Estimated Total Savings (CPE+Discounts)
Atlantic	95	92%	100%	\$1,588,312	\$2,921,194
Bergen	153	56%	0%	\$3,246,515	\$7,648,110
Burlington	31	36%	100%	\$757,152	\$1,483,560
Camden	44	23%	50%	\$1,826,246	\$2,776,594
Cape May	14	32%	NA	\$181,248	\$354,349
Cumberland	29	81%	100%	\$998,653	\$1,436,416
Essex	59	61%	100%	\$3,195,705	\$6,565,982
Gloucester	56	76%	NA	\$1,185,9442	\$2,060,327
Hudson	42	85%	80%	\$1,269,553	\$3,543,937
Hunterdon	8	50%	NA	\$34,129	\$82,126
Mercer	28	91%	100%	\$1,083,691	\$2,309,899
Middlesex	70	81%	100%	\$2,401,311	\$4,347,365
Monmouth	77	50%	75%	\$2,262,621	\$4,015,806
Morris	96	73%	NA	\$1,916,892	\$4,209,344
Ocean	27	47%	NA	\$632,323	\$1,499,467
Passaic	45	90%	50%	\$1,237,910	\$2,430,916
Salem	29	100%	NA	\$224,813	\$509,191
Somerset	32	65%	NA	\$643,578	\$1,434,111
Sussex	3	60%	NA	\$13,513	\$32,793
Union	63	74%	100%	\$1,520,693	\$3,403,243
Warren	26	80%	100%	\$321,235	\$984,386
<b>Total VNJ</b>	<b>1,027</b>	<b>62%</b>	<b>83%</b>	<b>\$26,542,035</b>	<b>\$54,049,116</b>

NA = No Abbott Districts