



## **Broadband Expansion Aids New Business Development**

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By Brenda Porter

New opportunities for broadband abound not just in the state's residential market, but in its small- and medium-sized business (SMB) space. Tapping into the latest broadband services, SMBs can now operate as efficiently and affordably as their larger-sized competitors. In fact, doing business in New Jersey has become increasingly more diverse as the demarcation lines between how and where customers receive video, voice and data services begin to blur.

"This isn't just about tools, wires and tubes, but [about] how we use technology to fundamentally change the course of lives of 300- plus million Americans and six billion people on the planet. Broadband is changing," said Larry Irving, co-chairman, Internet Innovation Alliance (IIA), during a Broadband Summit, held recently at New Jersey Network studios in Trenton.

To date, New Jersey's broadband network, a criss-crossing of fiber optic and traditional copper cable lines, covers nearly 90 percent of the state. Service providers are investing billions to wire the state, hoping New Jersey's broadband efforts will make it the preferred state in which to do business.

"Even though we cover roughly 96 percent of the state, we are only seeing adoption rates of about 50 percent," said Elizabeth Murray, chair of the NJ Cable Telecommunications Association and senior director of regulatory affairs, Comcast Cable Communications. "We are interested in seeing the adoption rates rise. This keeps the state competitive and the economy moving."

Verizon is on track to spend its \$1.5-billion investment, announced two years ago, in rolling out its FiOS fiber optic network over 3 years, while Cablevision's Optimum Lightpath anted up \$1 billion for its tri-state network, part of the cable industry's combined \$3-billion investment. AT&T has "a lot of fiber assets in the ground," says AT&T's vice president product management, Sandford Brown. Each of these broadband networks will offer digital television and fast upload /download speeds.

In short, "Customers want to be doing more, and doing it more efficiently," he says.

The future of broadband can be summed up in what he sees as three "Super Macro Trends" - mobility, globalization and virtualization. Looking at the phenomenon of mobility, Brown says people still want to be able to function using all of the tools of their main computer when away from the office.

Current wireless capabilities also play into these three trends. David Samberg, public relations manager for Verizon Wireless says, "Wireless speeds are now comparable to traditional broadband connections. You want to be able to upload and download files extremely fast. Basically, your imagination is the limit as to what developments will come about.

"Data is a huge driver behind handsets. The most popular data is text messages," says Samberg. The new focus in handhelds is on the keyboards to enable easy text messaging and e-mail, an application growing with businesses. For instance, this spring Verizon Wireless will launch the World Edition Blackberry Curve which has a full keyboard.

### Broadband by the Numbers

According to Kathleen Franco, executive director, regulatory planning and policy at AT&T, broadband expansion reached a 50 percent threshold in the U.S. with significant access over 10 years due to a deregulatory approach. New Jersey is a leader in broadband penetration with 3.4 million high-speed access lines, broken down as 2.1 million residential subscribers and 1.3 million on the business side, Franco noted. By March of this year, there was a 28 percent increase in subscribers from the previous six months.

In particular, 87 percent of residential broadband is through some type of DSL and 100 percent have access through their cable service. In terms of the diversity of providers, 44 percent of New Jersey's zip codes had 10 or more high-speed service providers; the smallest number of providers in any zip code was 4. In total, New Jersey has 41 providers of broadband service.

### Killer Applications - Today and Tomorrow

The advent of broadband struck consumers like a lightning rod, catching on within six years, Irving said.

"How times have changed," Irving commented. "Of the 110 million households in New Jersey, roughly 50 percent have broadband and that number is increasing every day. "And with these high speeds comes the new wave of applications to make doing business in New Jersey easier and more productive.

### The Moving Picture

"Whenever you talk about broadband, you are also talking about video. E-mail was the killer application in the 1990s. Video is the [next] killer application. It's profoundly changing the way we use the Internet," explained Irving.

4Connections is a neutral dark fiber provider with a network ring from Elizabeth to Newark's top carrier hotel located at 165 Halsey Street. President Gil Santaliz says: "It's new applications. like video requiring more bandwidth, coming down the line. So when

one looks at providers like 4Connections, which offers a lower cost solution, video applications become very attractive."

Optimum Lightpath Video Transport is the latest addition to Cablevision's Optimum Lightpath portfolio. According to Optimum Lightpath's vice president of marketing, David Strauss, Video Transport is a dedicated bandwidth solution, designed to address the needs of media sectors, including production facilities, broadcasters, television stations, video relay bureaus, content distributors and enterprises having high-resolution broadcast quality image requirements.

Brown sees the concept of live video sharing on handhelds coming to life with AT&T's Field Force Automation program. "It could improve employee productivity and performance in the field where a video of how to fix something can be sent to another employee. Also, a field technician could send live streaming video to a specialist back in the corporate office for consultation," Brown explains.

The next evolution of video is television on handheld devices. Two years ago Verizon Wireless introduced Vcast, allowing for video clips to be delivered right to the customer's phone. Watching live TV on a handheld, however, is the latest service from Verizon Wireless. With this technology, phones have a specific antenna and receiver to get the TV signal. (Currently, there are about seven channels available, including MTV, MTV Espanol and Nickelodeon). This service is only available in certain parts of New Jersey because of the need for TV antennas.

### Safety First

According to Brown, secure and reliable broadband networks will become increasingly important as both the public and private sectors look to add more business network security information, data backup / disaster recovery, business-to-business relations, business-to-consumer relations, and more.

Of course, with broadband, New Jersey businesses can also expect reliable, affordable voice services. Optimum Lightpath Managed Voice and Lightpath Video Transport products are the latest solutions to be added to Optimum Lightpath's Metro Ethernet Intelligent Services portfolio. The company has partnered with Cisco and NEC to deliver the area's only Managed Voice solution. Managed Voice delivers voice and data communications over a single protocol on a 100 percent fully fiber optic network and provides end users with superior quality of service, a greatly simplified cost structure and a consistent customer experience.

### Challenges & Opportunities

From reaching some of the more rural areas of New Jersey to fighting additional consumer tax levies, New Jersey's broadband suppliers face a few challenges in rolling out of these advanced technologies.

On April 15 of this year, CTIA-The Wireless Association (registered) and its member companies urged the U.S. Congress to pass legislation requiring a five-year hiatus on new discriminatory state and local wireless taxes. Reps. Zoe Lofgren (D-CA) and Chris Cannon (R-UT) introduced the "Cell Tax Fairness Act" in the U.S. House of Representatives.

Lowell McAdam, CTIA-The Wireless Association (registered) chairman and Verizon Wireless president and CEO, says, "With about 15 percent of each customer's monthly bill already going to taxes and fees, increasing discriminatory and unfair taxes on wireless customers presents a clear and present danger to future growth. Policymakers should roll back taxes on wireless customers."

According to analysis from a new study that examines trends of taxation on wireless service in the U.S., consumers continue to face a substantial, unfair tax burden, paying over twice the 7.1 percent rate imposed on other competitive goods and services subject to sales tax. Between 2003 and 2007, taxes and fees on wireless service increased four times faster than taxes on other goods and services, CTIA reports.

Offers Verizon New Jersey President Dennis Bone, "The demand for our service is a challenge - especially when we offer special promotions like free TVs, our phones ring off the hook." Additionally, he points to accessing multi-dwelling units. "If you are in an apartment complex, we have to negotiate with the landlord. The challenge is completing those negotiations and getting the network up.

#### Future Investments

Some call it convergence, others call it interoperability or unified networks - wireless and wireline applications working together to offer seamless transition from office to field to home and everywhere in between. To achieve this goal, broadband suppliers will continue to make investments in New Jersey's fiber backbone.

Says Strauss, "In the healthcare market, Optimum Lightpath's Metro Ethernet service is enabling area healthcare providers to deliver mission critical and data intensive applications including telemedicine, diagnostic imaging, electronic medical records and picture archiving and communications systems, as well as supporting the business continuity and disaster recovery platforms."

Verizon Wireless plans to roll out its fourth generation (4G) network soon, recently spending \$9 billion acquiring prime "Beachfront Spectrum" when the FCC auctioned off spectrum in the wireless space. This spectrum is the frequency that TV stations are turning over as they transition from analog to digital.

Wireless network providers will also be looking at enhancing wireless speeds.

"Going forward we will see more convergence or 'interoperability' where information moves effortlessly between networks," Samberg explains.

According to Brown, "unified communications" will become key. "How do you improve the productivity that makes employees more efficient in how they do business? In the next two years, I believe consumers will have their own version of 'unified communications.' They will be tailored to and tied to individual [business] needs."