

## Demand for Video Capacity Trumps Voice Call

*Experts are seeing terrestrial fiber has an advantage over wireless forms of video transmission*

By João-Pierre Ruth

10/6/2008



Eric Gutshall, of Hibernia Atlantic, says he sees a rise in demand for land-based connection for video streaming. Standing by the Atlantic Ocean in Lavallette, Gutshall holds a piece of Hibernia's transatlantic communication cable. [Steven J. Dundas]

THE BOOM of videos viewed through YouTube and other online multimedia is driving more traffic through terrestrial — or land-based communication — networks.

People may watch videos on computer screens, televisions and even wireless phones, but communications carriers must first transmit the media over high-capacity data connections. Land-based communications have more capacity for this type of media than satellites.

For **Hibernia Atlantic** in Summit, an operator of transatlantic telecom cables, that means an increasing amount of its capacity is being devoted to streams of data-intensive media. And **Arbinet-thexchange Inc.** in New Brunswick says it is seeing bandwidth increasing for media content. Arbinet is an arbitrage, where voice and Internet capacity is sold and routed among communications carriers.

The need for capacity to carry rich media, such as video, is expected to increase in the future. **Forrester Research Inc.** in Cambridge, Mass., a market-research firm, released a report in June that projects video sent as data via Internet protocols will grow from 10 percent of all video in 2008, to 35 percent in 2013. With more video being transmitted as data, terrestrial communication lines are becoming more vital to delivering content.

**Ray LaChance**, president of fiber-optic connectivity provider **Lexent Metro Connect** in New York, says he has received more requests for service in the past two years from wireless providers hungry for bandwidth. Wireless

providers need high-capacity cables running between transmission towers to accommodate the rising demand for multimedia content, he says.

"With wireless delivery to the end user, you are always going to have lower capacity compared with a fiber-optic cable," he says. LaChance explains that content is carried over fiber lines as close as possible to the end user before it is transmitted wirelessly from an antenna. He says as more wireless users turn to their devices for video content, terrestrial networks will be crucial to creating capacity. "TV on your mobile phone is not far away," he says. "And it's not going to come from a satellite."

While satellite communications and wireless devices provide people with the freedom to receive content virtually anywhere, these mediums require the support of high-capacity land connections, says **Eric Gutshall**, executive vice president of sales and marketing with Hibernia Atlantic. The company sells capacity on its transatlantic cables to telecom carriers that transmit voice calls and data from the United States to Europe.

"We are seeing an explosion among groups like **Vodafone** and **Orange** coming to us for wavelength," Gutshall says. "The wireless companies will be ringing us as well as the carriers." Vodafone is a British wireless-service provider, which has a minority stake in **Verizon Wireless**. Orange is France Telecom's brand for mobile and Internet services.

Transmitting video as data gobbles up bandwidth, a precious commodity in the radio spectrum that's relied upon by satellite and wireless communications. Pushing such content over long distances through fiber-optic lines, which in theory have unlimited capacity, can ease that burden. "A lot of people think everything runs through satellite because they have DirecTV," Gutshall says. "It gets beamed to you by satellite, but there is a terrestrial network that hooks up to a local base station."

As technology improves the clarity of video transmitted as data, the need for capacity will grow, according to Gutshall. "People are driving toward perfection [in video], and that is going to drive more bandwidth usage," he says. "We're a transport mechanism for that."

Hibernia Chairman **Ken Peterson** says video is rapidly driving usage on the company's cables compared with voice calls. "[Voice calls] are not bulky enough," he says. "The things that are bulky are full-motion video. As you saw the explosion in YouTube, you started to transfer large data between countries, and that spurs a lot of usage. One minute of full-motion video is a lot more than a phone call, in terms of capacity."

The growth of videos such as television shows, movies and news broadcasts from media providers is further driving demand beyond the homemade clips on YouTube. **Sue Su**, vice president of IP services for Arbinet-theexchange, says that while data traffic currently accounts for less than 10 percent of the transactions negotiated through its arbitrage, business is expected to grow quickly.

"When I see my 5-year-old daughter watching the Disney Channel over the Internet, you know where the growth is heading," she says. Arbinet's clients buy and sell bandwidth to each other through the arbitrage.

Arbinet reported a net loss of \$651,000 on net revenue of \$13.5 million for the quarter ended June 30. That compares with a net loss of \$2.5 million on net revenue of \$12.4 million for the year-ago period. Arbinet's increased net revenue for the latest quarter was attributed in part to increased fee revenue, according to the company. Arbinet also decreased its loss from operations compared with the prior-year period.

While interest in digital media is rising, tapping into this niche comes with its caveats. Arbinet says that in 2006 it created a subsidiary, **Arbinet Digital Media Corp.**, to develop services for the exchange of digital-media content to tap growing demand. The company acquired the assets of **Flowphonics Limited**, a platform for digital-content distribution, for \$2.1 million. Flowphonics became part of **Arbinet Subsidiary Broad Street Digital Inc.**

Operating as a direct exchange for digital media was not Arbinet's forte, and on Aug. 20, the company sold **Broad Street Digital** to **RoyalShare Inc.** in San Diego. The digital-media segment compounded Arbinet's losses from operations by \$810,000 for the quarter ended June 30, 2007. Arbinet says it made the sale to focus on its core business as an arbitrage. Terms were not disclosed. Arbinet also chose to cease all operations in the digital-media distribution market.

Arbinet's challenges distributing digital media are not industry-wide, however, as the need for high-capacity lines continues to grow.

**Robert Rosenberg**, a telecommunications market research expert, says carriers such as **AT&T Inc.** and **Verizon Communications Inc.** are aggressively laying fiber-optic lines. Rosenberg, chief executive officer of **The Insight Research Corp.** in Boonton, says carriers want to bring high-capacity connections directly to the location, a change from the prior decade when it was thought to be impossible to connect a home or business with fiber.

"That's where Verizon is investing billions of dollars to get that fiber right to the location," Rosenberg says.

"While there is considerable interest in WiMax and other broadband wireless communications technologies, radio spectrum is always at a premium. There is always a limitation to wireless communications. It's not infinite."

Rosenberg says terrestrial fiber will always have the advantage over wireless forms of transmission for video, music and other media that is downloaded. "We don't know what the endpoint of carrying capacity is [for fiber]," he says. "Whatever

is on the Internet is going to be brought to you by fiber. Whatever used to be on broadcast television networks will come across on fiber."

E-mail to [jpruth@njbiz.com](mailto:jpruth@njbiz.com)