

The Glass Mile: A Quick Glimpse at Happenings Affecting Fiber

Katrina Clobbers BellSouth

BellSouth officials say Hurricane Katrina and its aftereffects caused \$400 million to \$600 million of damage to its network. Some 810,000 lines were out of service in the hardest-hit areas of Louisiana, Mississippi and Alabama as of September 6. It had 19 central offices out of service, mostly in New Orleans.

BellSouth officials say they have set up tent cities for repair employees in the three states. It has 13,000 employees in the area, with about 6,500 in the hardest-hit parts of Louisiana and Mississippi. The company's estimates do not include lost revenue, reportedly \$150 million.

But when New Orleans is rebuilt, won't it make sense to install FTTH to replace ruined copper plant?

Texas Governor Signs Bill on Statewide Video Franchises

Fiber advocates got a big break September 7 as Texas Gov. Rick Perry signed the bill passed last month authorizing statewide franchises for competitive cable franchises. The bill also promotes deployment of broadband over power lines and deregulates some ILEC wire-line services (including SBC and Verizon, both headquartered in Texas). SBC had claimed that its planned video service, being Internet-delivered, is data and needed no franchises. Verizon took a different legal tack, and had obtained five in Texas. It wants a Texas-style law in every state.

Existing local cable franchises stay in place, but are deregulated as the current franchises expire. Time Warner Cable is the largest MSO in Texas. Charter Communications and Cox are also active, along with hundreds of PCOs.

Telco Cavalier Starts Video and VOD Service

Cavalier Telephone, with 180,000 residential customers, has started IPTV delivery of broadcast programs and video on demand. The technology is Paradyne's 8000

BLC for IP Video. The 8000 BLC supports downstream data rates up to 29 Mbps, with full support for IGMP and Quality of Service

"Cavalier is a state-of-the-art carrier with plans to support the full triple-play of voice, data, and video services," said Brad Evans, CEO of Cavalier Telephone. Cavalier is one of the largest Verizon fiber competitors on the East Coast.

Music Makers I – Apple and Motorola Rock

New uses for bandwidth: Apple's tiny Nano music player and Motorola ROKR phone.

The iPod Nano, and an iTunes-enabled ROKR cell phone from Motorola were announced this month. ROKR, a GSM cell phone, will initially be available to Cingular Wireless customers. The phone comes with a 512 MB SD card, stereo speakers, stereo headphones and a camera. It uses USB to connect to iTunes on a PC or a Mac and will work with iTunes' Autofill feature.

There had been a rumor that ROKR users could purchase songs from the iTunes Music Store through a wireless network as well, but the Apple announcement did not mention it. Ron Garriques, president of Motorola's mobile phone division, said his company and Apple were "getting ready to reinvent mobile music" and that 700 million new phones were sold a year. There are 1.2 billion mobile phone users worldwide – about one phone for every five people, including babies.

Music Makers II – Sony Licenses Music Library to ISP

Access to 15 percent of the world's commercial music can be included with your ISP fee. Download any Sony/BMG owned song from anywhere.

Be completely legal and licensed, with a modest fee paid automatically by your ISP.

Unlike the Yahoo/SBC, Real and similar services, you can do anything you want

with the music except upload it to users of other networks.

ISP PlayLouder, an established UK music service, plans to start the music October 1, monitoring traffic using Audible Magic and covering the payment to Sony out of its marketing budget. The fee is supposedly low enough to fit on the marketing budget of a reasonably competitive ISP fee, the firm says.

PlayLouder's line: "Basically, the deal is this – you'd pay [about \$50] per month for top quality broadband ... and with that you'll have filesharing access to the back-catalogues and new material of indies like Beggars, XL, V2, Ninja and more. That's not paying [99 cents] per download...it's the same price every single month."

PlayLouder reportedly also has deals with British song publishing agency MCPS-PRS and leading indie record labels in the Association of Independent Music.

Verizon is among American ISPs that have asked music companies for a similar deal, perhaps with a government-mandated compulsory license.

Lightspeed notes that \$2/month per U.S. broadband user would provide \$1 billion a year to the record companies.

Reliability Needed as Well as Bandwidth

Despite the ongoing talk of commercial IPTV rollout, quality of service and readiness of a network to handle IPTV services remains the No. 1 issue among all service providers be it SBC, Verizon or BellSouth. In a recent interview with USA Today, Randall Stephenson, COO of SBC Communications, said on "top of his to-do list" was getting IPTV to meet five 9's reliability.

Among the equipment vendors benefiting: Spirent Communications, which is making new partnership announcements this month.

More Bandwidth – Conferencing

Radvision demonstrated new intera-

tions of its Click to Meet products in September, extending the omni-presence of its multi-party conferencing and real time collaboration technology – on the desk, phone, carrier, and 3G networks:

Click to Meet for Microsoft Office Live Communications Server and Click to Meet for Microsoft Office Live Meeting; products designed to enable multi-party capabilities provided by Microsoft's Real Time Collaboration offerings.

Click to Meet™ for Intel's AdvancedTCA™ Video Media Server for Carrier Networks, running on Linux. Click to Meet, integrated into ATCA, is a carrier-grade solution, enabling high scalability, high availability, virtually zero down time, with a small footprint. It allows carriers to provide hosted video telephony services to their broadband residential, 3G mobile, and enterprise customers.

It also accelerates the carrier's time to market in deploying new bundled value-added services.

Need 10 Gbps?

Another of those little advances that bring huge bandwidth to us at ever-lower costs. Apogee Photonics and Vitesse Semiconductor Corp. have announced a joint reference design that extends 10 Gbps fiber transceiver performance to an industrial temperature range. The new design allows customers to deploy high-speed optical links in the most demanding environmental conditions, including the outside plant associated with PON backhaul applications.

Since initial deployment of 10 Gbps optical modules, industry demand for higher module performance over industrial temperature ranges is rapidly growing. At elevated temperatures, directly modulated laser (DML) technology has degraded performance. Module manufacturers now look to Electroabsorption-Modulated-Laser (EML) technology to provide stable and symmetric performance based on the relative temperature insensitivity of EML bandwidth.

The joint reference design solution includes Vitesse's XFPIPRO PCB layout with its VSC7982 Driver IC and the Apogee Photonics' 10T3081 EML TOSA. The VSC7982 supports case temperatures up to 100 ° C and the 10T3081 up to 95 ° C.

US Broadband Households up to 37 Million

Is fiber use cutting into DSL and cable broadband growth? Investment firm UBS, which tracks most major broadband providers, says the pace of DSL and cable modem growth slowed a bit in the second quarter, despite heavy price promotion. Growth was down a third compared to the first quarter, a deficit of 600,000 customers. Fiber made up about a third of that, minimum, and maybe much more. The details:

April-June 2005	Start	End	Gain
SBC	5,608,000	5,968,000	360,000
Verizon	3,864,000	4,142,000	278,000
BellSouth	2,349,000	2,473,000	124,000
Qwest	1,122,000	1,190,000	68,000
Covad	547,000	554,000	7,000
Sprint	551,000	590,000	39,000
ALLTEL	283,000	303,000	20,000
Citizens	243,000	267,000	24,000
Cincinnati Bell	141,000	145,000	4,000
CenturyTel	174,000	195,000	21,000
Commonwealth	22,000	24,000	2,000
Total DSL	14,903,000	15,851,000	948,000
Comcast	7,408,000	7,705,000	297,000
Time Warner	4,122,000	4,323,000	201,000
Cox	2,748,000	2,846,000	98,000
Charter	1,978,000	2,022,000	44,000
Cablevision	1,441,000	1,520,000	79,000
Adelphia	1,491,000	1,562,000	71,000
Mediacom	407,000	426,000	19,000
Insight	367,000	391,000	24,000
Total Cable Modem	19,963,000	20,796,000	833,000

At least 20 million out of 110 million American homes and as many as 40 million still can't get any broadband except satellite, and half of those are not likely to have service even two years from now. In contrast: England and France should be at 95 percent broadband availability by the end of this year.

Inviting Contributions from Readers

This section is for both laymen and technologists, who can derive intellectual stimulation, information, and insight. Some of the news we will be covering in The Glass Mile includes:

* Deployments -- around the country and the world, with an emphasis on households served.

* Innovations – especially in the access network and customer premises that may augur more widespread change.

* Telling observations and comments by industry leaders, gurus, and others. These might range from nuggets of information in a white paper to remarks like the one in The Salina (Kansas) Journal from General Manager Mike Foster of Twin Valley Telephone in Miltonvale who remarked: "The 'wow' factor of fiber to the home is going to be huge from an economic development standpoint."

What inspires The Glass Mile? In part it is the sentiment described in a piece on August 15 in Telephony by Jason Meyers entitled "The New Cynics." Referring to FTTP and other leading-edge technologies, Meyers wrote: "Every bit of progress made in those and other technology areas is balanced and eventually snuffed out by the pervading cynicism that makes the one-time visionaries of telecom unwilling to invest in and experiment with new things."

Meyers poses this thought: "Who knows what it might take for telecom to shed the pervasive negativity that now characterizes it." We suspect the time is right for that shedding to take place, and we believe that The Glass Mile will be very much in tune with such a change. Send your thoughts to steve@broadbandproperties.com.

