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Bandwidth Market Report

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Market Watch

InvisibleHand courting other IP exchanges

InvisibleHand Networks Inc. is hoping that Telehouse America's imminent launch of an exchange for the trading of IP (Internet protocol) bandwidth will be followed by a string of similar implementations at other carrier-neutral colocation facilities.

"Our hope is that every 60 days we'll be able to have other announcements," said CEO Jim Brown in a recent interview. Several of Telehouse's "industry peers" are testing the software, as are a few service providers, said Brown. "And we have a tier-one carrier, whose name I can't disclose, who is finishing up a lab trial."

Tomorrow, InvisibleHand is releasing the next iteration of its Merkato software, its near-real-time platform for buying, selling and allocating IP capacity. The software package is designed to help service providers manage their capacity inventory and enable flexible pricing for spot purchases, such as off-peak weekend use. It allows what InvisibleHand calls "open-market pricing in 5-minute increments," and supports a reservation system for future bandwidth needs.

Brown took the reins of the Burlington, Mass.-based company in January, having served as general partner for information technology investment at Polaris

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Qwest, Japan Telecom to co-market data services to business in U.S., Japan, Europe

Qwest Communications International Inc., KPNQwest N.V., and Japan Telecom said Friday they would cooperate to market and sell international private line, ATM (asynchronous transfer mode), and frame relay services to multinational corporations moving traffic between the U.S., Japan, and Europe.

Specifics on pricing, SLAs (service level agreements), and other details weren't offered, but the carriers said they "have already jointly won business in Japan."

The companies also said they would work together to build a "one-stop shopping" OSS (operations support system) that would enable "new service subscriptions, invoicing and maintenance support, to all be provided in the customer's own country."

The carriers will provide the joint services via the Japan-U.S. (JUS) undersea cable consortium, in which Qwest and Japan Telecom are partners. Qwest launched a sales office in Tokyo in April 2001.

Currently, the Atlantic market is enjoying considerably more attractive

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Consultant proposes models for utilities to leverage powerline communications

With several companies competing to develop the technology, powerline communications (PLC) is "closer than ever to commercial deployment," said a consultant last week in proposing three different business models for utilities to pursue.

PLC uses power lines to transmit high-speed data, allowing utilities to offer Internet, security, load management, appliance monitoring, and other services. Among the companies developing the technology are Amperion, Ambient, Current Technologies, Main.Net and PowerComm, noted David Shpigler, president of the Shpigler Group, which recently completed a report on PLC for the United Telecom Council (UTC).

Those companies are "taking their trials out of the laboratories and putting them on live wires, and that's encouraging," Shpigler said last week during a conference call to discuss the study. While the number of customers involved in the trials have been low, "things are looking promising" for utilities to embrace PLC based on expected penetration levels.

Shpigler listed three business mod-

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wholesale prices than the Pacific. An STM-1 can be had for roughly the same monthly rate as an E-1, according to TeleGeography analyst Rob Schult. On the Los-Angeles-Tokyo route, for example, an E-1 currently goes for about $7,000 per month, while an STM-1 can run about $60,000 per month.

But that disparity may change as more capacity comes online in the Asia Pacific — JUS will ultimately be upgraded to 640 Gbps — and as European carriers enter the market and out-price the Asian incumbents, said Schult.

Pricing along the LA-Tokyo route wasn't impacted, he added, by the dissolution of Concert — the largest stakeholder in JUS — because it had been generally ineffective in the wholesale market due to the significantly higher rates it offered.

Meanwhile, **AT&T Corp.** is gearing up to expand its international footprint in the wake of the disbanding of Concert, with the carrier unveiling a partnership with **China Telecom** to offer IP (Internet protocol)-based services to corporate clients in Shanghai's Pudong business district. AT&T said the joint venture is part of the global expansion of its managed services portfolio, which will introduce VPN (virtual private network) services in the region.

Pudong boasts more than 100 Fortune 500 companies, but the Shanghai Symphony Telecom enterprise hopes to expand to the rest of Shanghai and other markets across China. China has reportedly agreed to allow foreign carriers to own up to 49% of telecom ventures in 17 cities by year's end.

In other recent news from the Pacific Rim …

➤ China Telecom and **Nortel Networks Inc.** will deploy a voice over IP solution in Shanghai, Beijing, Guangzhou, and Shenzhen over the next few months, enabling the carrier to test new IP-based multimedia services. Nortel also said it has implemented metropolitan network linking sites for the Shanghai Stock Exchange and Statistics Administration of China.

➤ Calgary, Alberta-based **China Broadband Corp.** announced a deal to supply unspecified data and services to **Corning Inc.**'s joint venture in the Sichuan Province, Chengdu CCS Optical Fibre Corp. No word on whether the infrastructure the enterprise has in place rides on Corning fiber.

➤ The **Southern Cross Cable Network** expects to bring online 50 Gbps of its third fiber pair by the first of next month, spokesman Andrew Riddle told *BMR* Thursday. The carrier has collected about $1-billion of the the $1.6-billion in sales it has done since its inception.

➤ *PLC study* *...from 1*

els for utilities, the least aggressive of which is a landlord that leases the right for a PLC network operator to build on its grid. The second model is to develop the PLC network but hand off customers to another company, similar to what FPL FiberNet is doing. The third model has a utility developing the network and providing services to customers.

While some utilities may be content to wait for PLC technology to develop further, cable companies or other providers could capture customers and leave utilities to ponder a lost opportunity, Shpigler noted.

PLC will likely be a stimulus for longhaul capacity in the sense that it enables more homes to receive broadband connections and access more sophisticated applications, Shpigler told *BMR* last week.

➤ *Market Watch* *...from 1*

Venture Partners. A one-time investment banker with JP Morgan & Co., Brown doesn't mind the risk involved with being at the forefront of another attempt to create a market for bandwidth.

"Bandwidth in and of itself is a unique commodity in that it's perishable and shareable," he said. "If I have a pipe, what flows through that pipe is infinitely divisible. At the same time, once it flows through the pipe it's gone. You either use it or you lose it.

"And what folks *haven't* gotten right on the bandwidth side is that they were trying to trade the pipe rather than what flows through it. Pipes are not infinitely divisible. If I allocate a circuit to you—by definition I can't allocate that same circuit to someone else."

Telehouse's plans for an IP capacity exchange, to be located at its 25 Broadway facility, date from last year, when the neutral colocation provider first announced it would adopt Merkato, which means "marketplace" in experimental language Esperanto. A formal announcement of the IP

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exchange could be made as early as this week.

Brown thinks Telehouse's deployment of Merkato might help it attract new carriers and service providers, "the buyers and sellers of bandwidth," to colocate at their facility. Current tenants include AT&T Corp., Verizon Communications Inc. and WorldCom Inc.

"It's beneficial for the buyers obviously because they get to buy what they need when they need it," Brown said. "And it's beneficial to the sellers because they're able to offer their excess capacity on a market and get revenue for that with no additional significant capex cost. And they don't have to have a bunch of sales people running around knocking on doors to fill that excess capacity."

The Merkato software allows a seller to set a floor price and the amount of bandwidth they are willing to sell. "Then the software will walk you through some detailed strategies based on algorithms that basically allow you to optimize the amount you are willing to sell and get the maximum price for it on the sellers' side," Brown said.

"Similarly, on the buyer's side, they would go in and set up their buyer agent, determine how much they are willing to buy, and what they are willing to pay for it.

"Then they turn those agents loose into the Merkato server, and the server acts as a marketplace where buyers and sellers are able to bid and ask in real-time for bandwidth.

"Those auctions are continuos. They close every five minutes, and as soon as those auctions close, the allocations are made to the winners instantly. Then it's provisioned through the router and the folks get that bandwidth."

Brown isn't too concerned about the institutional resistance of the incumbent carriers to market-based pricing and an exchange for bandwidth. Even some of the RBOCs (regional Bell operating companies) have circuits on which they operate "at 15-20% utilization," Brown said. If a carrier executive "can get that capacity utilization up to 50-60% and they bring in a ton more revenue — which falls directly to the bottom line — they look like a hero," he added.

And Brown doesn't expect that the availability of an exchange will result in current customers trying to get out of their fixed contracts to participate in the marketplace.

"It's actually *not* a great idea to have all of your bandwidth dependent on this exchange," he said. "One could imagine a Verizon customer saying 'I want 40% of my bandwidth needs to be set because this is the minimum amount I need. I want to make sure that it's there, and I'm willing to pay more in a fixed term contract to get it.'

"But for the other 60% — all of that bursty stuff which sort of defines what IP bandwidth is — they want to be able to buy it either on a spot basis or in a reservation marketplace."

Invisible Hand offers "some standard pricing for exchanges and service providers, but more often than not it really depends on the application they're using it for," Brown said. "So it's more of a negotiation based on implementation by the customers."

Still, the cost of entry is relatively low, described as "$100,000-plus," by Brown.

In addition to the upfront payment to Merkato, InvisibleHand gets a royalty of sorts. "Telehouse takes a piece of the transaction and them we take a piece of their piece, Brown said. "The reason we do that is to lower the capital cost, a lower barrier to adoption. So we don't make money unless the buyers and sellers make money."

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