Ingredients for a Successful FTTH Overbuild

With the new-housing market in the doldrums and greenfield development slowing, more fiber-to-the-premises deployers are searching out promising opportunities for overbuilds. What ingredients are needed to succeed with a competitive fiber overbuild?

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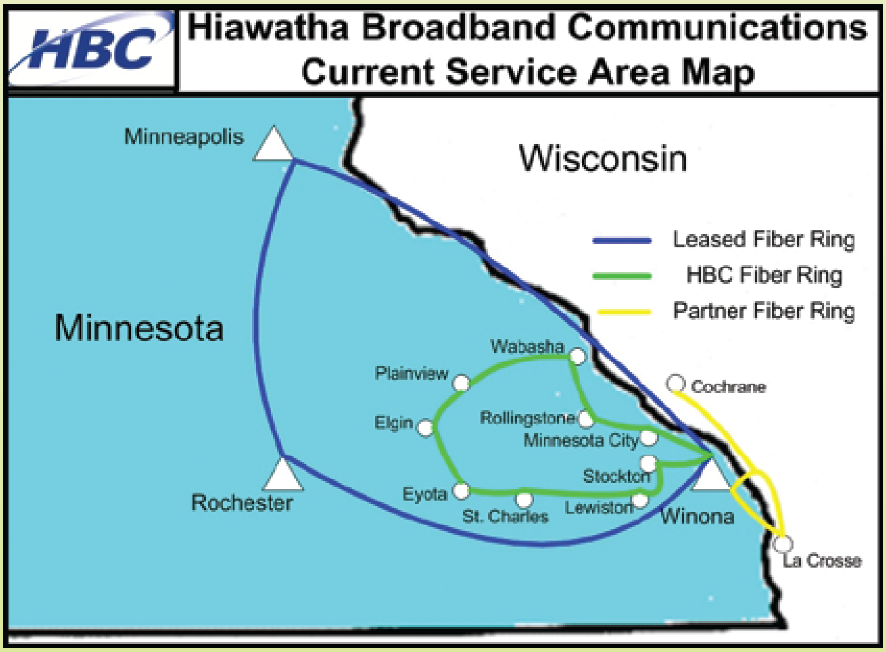
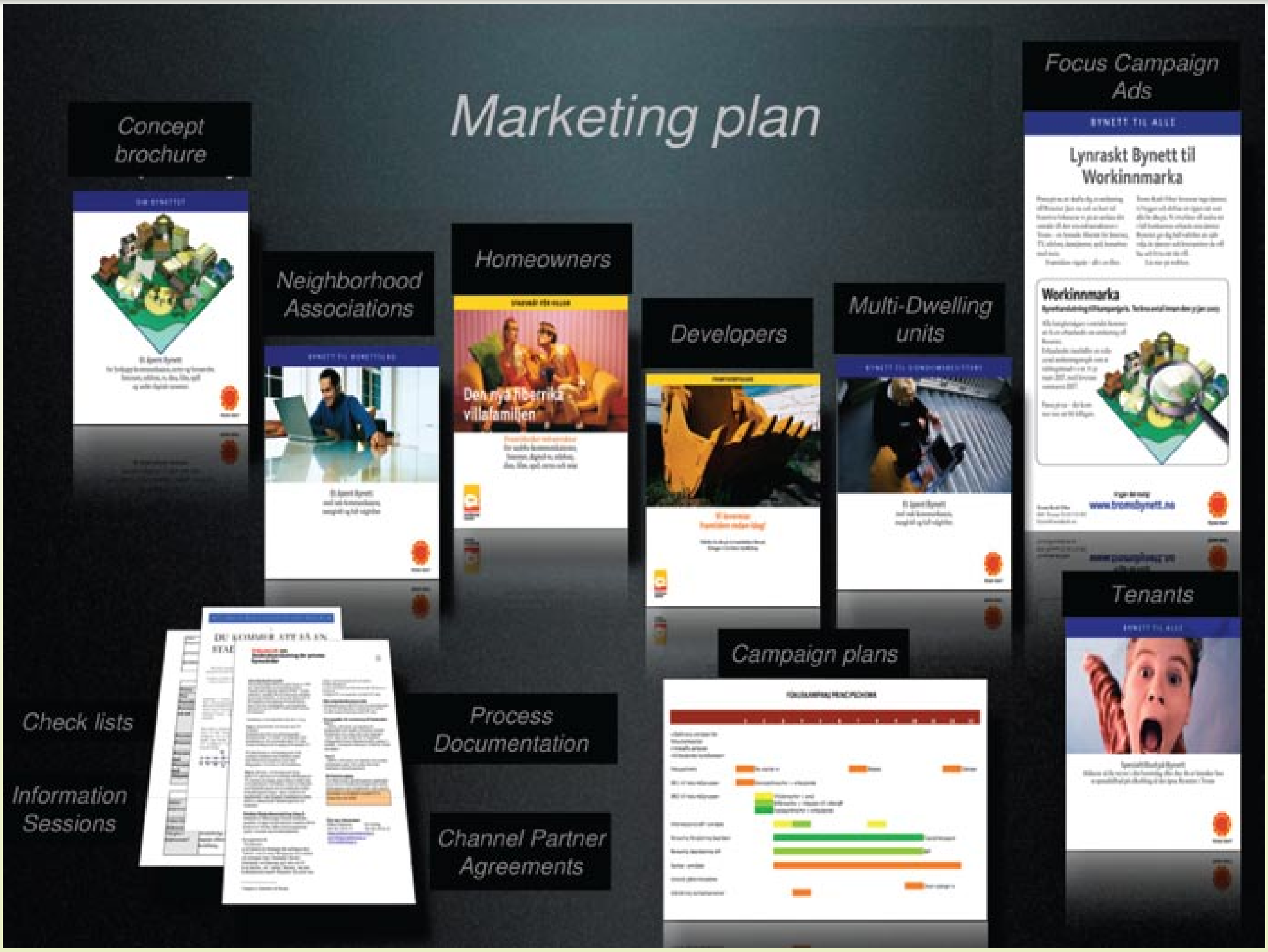
Four overbuilders – one public and three private – compared notes on this subject at the Broadband Summit session entitled "Fiber Overbuilds: Benefits & Challenges." The varying strategies adopted by these four organizations illustrate the many paths to FTTP success.

- US SONET in southern Illinois is primarily a residential provider; John Andrews, president and CEO, said the company serves 26,000 customers, or 51 percent of the eligible households in its service area, with most customers subscribing to the triple play of voice, video and data. US SONET, which competes with AT&T and Charter, was profitable after four years in business, with $51 million in revenues and a 12 percent net profit.
- FiberNet, founded in 1999 in West Virginia, sells business communications services. Competing with Verizon, it was cash flow positive after two and a half years and debt free after four years. The company now owns 3,000 fiber route miles in four states and offers 42 different business services ranging from POTS to 10 Gbps connections. David Armentrout, president and COO, said that last year FiberNet positioned itself to provide large Internet backhaul.
- ECFiber, a consortium of Vermont towns, plans to contract with community organization ValleyNet to build and operate an open access fiber-to-the-home network. The consortium's territory is sparsely populated, with about 35 premises per mile in two large towns – Montpelier and White River Junction – and only 8 premises per mile in the remainder of the 1,200-square-mile area. Nevertheless, ECFiber intends to provide universal access throughout the area. "We think the numbers work," said Dr. Timothy Nulty, who leads the effort. "We expect it to be a revolution in the community."
- Hiawatha Broadband Communications, originally founded to enhance education and economic development in Winona, Minnesota, now offers triple-play services (some over hybrid fiber-cable and some over FTTH) in six communities and has also become a consultant to other providers. Dan Pecarina, VP for technical operations, said HBC targets communities with populations under 30,000. It owns its own networks, headend and hosting facility. Although HBC is a for-profit (and profitable) enterprise, it is strongly community oriented, hiring locally and emphasizing customer service. "We have the ability to service the customer better than anyone," Pecarina said by way of explaining the company's success.



TAKE RATES AND NATURAL MONOPOLIES

Both Nulty and Pecarina recommended preregistering customers before building out a competitive network, in order to help assure profitability. HBC's busi-



In his presentation, Tim Scott of PacketFront displayed FTTH promotional and educational literature.

ness case requires a 50 percent penetration rate; Pecarina said the company typically gets 50 percent of potential subscribers enrolled before it builds a network, and about 70 percent once the network is deployed. Nulty also said that in rural areas it was often possible to get 50 percent of households preregistered. These high rates, Nulty said, were possible because the communities had previously been underserved, and fiber represents an "extraordinary leap over what came before."

While small-town and rural fiber builds require high take rates for profitability, more densely populated areas can be profitable even with lower take rates. "For a big build, I have a 19 percent break-even rate," Andrews said, noting that in a major city like Chicago or Atlanta it could even make sense to overbuild another FTTP provider if there were a way to offer better value.

In most places, however, fiber to the home is likely to be what Nulty, a former economics professor, called a "natural monopoly" – impervious to competition. When a member of the audience asked whether the existence of a natural monopoly might inspire calls for regulation, Nulty said he thought providers would ultimately be forced to open their networks to retail service providers (as ECFiber is doing voluntarily from the outset).

However, both Nulty and Armentrout said an FTTP network operator could be financially successful even if other companies were providing services over the network. Armentrout noted, "It's like providing a superhighway. If you own the highway, it's a solid business."

FiberNet positioned itself to provide Internet backhaul.

FINANCING THE BUILD

If there are good business models for fiber overbuilds, why is getting funding so difficult? Nulty noted that while rates of return for FTTP networks are respectable when compared with other utilities, venture capitalists typically look for much higher rates. Municipalities, with their tax-free financing, may have an easier time getting funding than private companies do: "For ECFiber, with a 50 percent take rate, the investment

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is $6,000 per customer. Ongoing costs are $500 to service the debt, and $400 to $500 for operating expenses – a total of $1,000 per customer. If services cost $100 per month, that's $1,200 per year per customer. That's a good business for a town, but not for a venture capitalist."

Armentrout added that debt financing can be as difficult to find as equity financing, because many fiber projects aren't large enough to interest lenders. "Even six or seven counties isn't enough," he said.

Andrews said that in less rural areas, the investment could be as low as $3,000 or $3,500 per customer or even less. The funding is there, he said; network builders must be creative in patching loans together "like a quilt" from many different sources – federal and state agencies, local investors and others. Once the network starts generating cash flow, it's easier to get funding for subsequent phases. However, lenders tend not to consider the potential for revenues from newer services like security, advertising, and consumer portals. "The finance community understands the triple play," he said.

HBC puts together financing from federal loans, bank loans, and its own resources, Pecarina said. In the small towns it serves, the company is spending $800 to pass a customer and $750 to connect (a little higher than the costs reported by Verizon). "If you can share resources, so that you don't have to buy a headend right away, that can make a difference in the first few years," he said.

Pecarina added that it was important to resolve major design and engineering issues at an early stage – for example, would the build be aerial or underground? Was there room for fiber on the telephone poles? A good handle on the costs would help determine whether the build was going to be profitable. Adding to this list, Armentrout stressed the importance of good systems for fiber distribution management and back-office functions, which are necessary in keeping operational expenses low. **BBP**