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SOAP BOX

UNE CLECs Should Cut the Cord

By David E. Schwencke

THE TELEGRAPH, THE TELEPHONE AND EVEN the television have had us wired so long it's difficult to imagine the world without the wires. Ironically, "wireless" communication has been around just as long as "wireline." Since 1899, when Marconi radio-telegraphed the results of the America's Cup yacht races, we've been sending content through the air. So why, with more than a century of wireless experience, have we remained wired for so long? To understand the answer to this question, a person has to understand the politics behind the legacy communications networks.

My company, Full Service Network (FSN), began as an IXC more than a decade ago when long-distance was the only game in town. As we evolved over the years, we added many new products as they became competitive, including 800 service, calling cards, local dial tone and Internet access. While the divestiture of AT&T in the '80s truly did create a level playing field for entrant long-distance companies such as mine, the Telecommunications Act of 1996 did not have the same effect for local phone and Internet service. Our battle wounds ran deep during these later years. In fact, in 2004, we spent just about as much money on legal battles with the incumbents over access to UNEs as we did on our marketing efforts to attract new customers!

Despite the distractions, we did spend some resources on wireless IP deployment. We felt the technological tide coming and it told us wireless was going to change everything.

For starters, wireless IP service-delivery systems take away our reliance on the incumbents' networks and afford us the opportunity to shift what we would have spent fighting those battles toward our marketing efforts and acquiring new customers. Technological advancements in two specific types of wireless transmission — point-to-point wireless IP and low-frequency wireless IP nodes — together form a new model that will deploy well for us. And, the economic benefits of recent wireless price reductions are going to make it a reality. When deployed properly, wireless delivery systems allow us to reach our customers without using most of the UNEs the ILECs have been fighting so hard to block us from using.

Wireless technology now has advanced to the point that it has created an economic driving force even more powerful than the regional monopolies or the TRO. In 2004, we saw the introduction of reliable, low-cost, point-to-point, carrier-class wireless IP transmission systems. In 2005, we witnessed successful testing of 900MHz lower frequency wireless base stations that will cost-effectively cover more distance than any of their predecessors. When used together, these two wireless technologies open up exciting opportunities for service providers that previously could not afford to develop a wireline or wireless network to reach their customers.

The solution for service providers like FSN will be a hub-and-spoke network topology using point-to-point high-bandwidth wireless transport devices. Lower-frequency base stations (around 900MHz) will be added at the endpoints of the transport. The point-to-point routes will serve as backbones linking the 900MHz base stations to one another and to regional hubs. Additional point-to-point installations will allow us to cherry-pick larger institutional accounts, such as hospitals and medical centers, whose bandwidth needs are growing exponentially beyond those of mass-market customers.

Since lower-frequency deployments have the capability of covering larger service areas, they enable service providers like FSN to use fewer towers. This, in turn, provides a huge cost savings over higher-frequency WiMAX or Wi-Fi where similar coverage might require tens or hundreds of antennas.

Once in place, a service-delivery system of this type is capable of reaching anyone anywhere without reliance on the wireline network. Eventually, this will eliminate the need for all UNEs over time and avoid the politics and costly war of attrition that has left the information highway littered with CLEC and ISP corpses over the past few years.

Historically, the challenge in using lower-frequency endpoint nodes was they were somewhat ineffective in carrying large amounts of data and were infamous for weak signals. In 2005, a few manufactures have solved those problems. 900MHz trials being conducted in both the United States and Europe are demonstrating speeds of 40mbps on distances of more than 18 miles. This means that companies like mine soon can deploy an entire citywide network with only a few base stations at a fraction of the cost that would have been required just a few years ago.

In many cases, wireless implementations are now less expensive for service providers than traditional wireline networks and certainly do not face the same “challenges” from the ILECs. From a cost perspective, backbone devices capable of delivering pipe speeds in excess of 50mbps can be deployed for an investment (capitalized over a three-year term) of about $200 per month. Whereas a 45mbps DS3 leased from Verizon Communications Inc. presently costs my company approximately $4,000 per month.

FSN has been deploying point-to-point backbones in the Pittsburgh market for nearly 18 months. As we install these backbones we also will deploy low-frequency base stations, one at a time, widening our footprint as we go, picking up new customers along the way.

As our wireless footprint expands, so does the landscape. We are able to instantly provision services such as Internet access and VoIP and will have more bandwidth to deliver emerging services such as HDTV, VoD and IPTV. VoIP phones using the lower frequency range likely will replace even the cellular phones we are using today.

Users will need FSN not only for transport, but also for security, content and support. It will be reminiscent of the old frontier where you could take a sluice box to the hills of California and pan for gold. The only thing is ... what will we do with all those wires?

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