

Telecom Ramblings

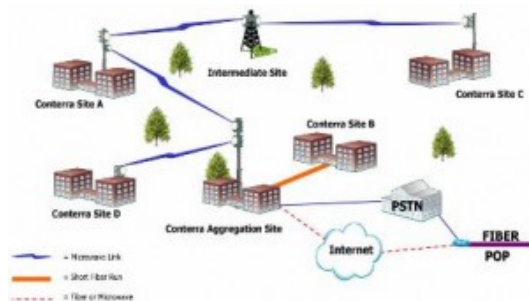
Conterra: A Window Into Wireless Backhaul - Part 1

April 22nd, 2009 by Rob Powell · Telecom Ramblings



In this profile, Telecom Ramblings looks at the wireless backhaul provider Conterra Telecom Services. I have traditionally been partial toward fiber optic networks of course, but fiber does have its imitations and I am rapidly becoming interested in hybrid fiber/wireless networks. When you get outside the main metro loops yet still need more bandwidth than copper can ever offer, that's where providers like Conterra step in to fill the gap. They design, build, and operate the wireless middle mile and last mile links of hybrid fiber-wireless metro networks, with over 6000 path miles and 54,000 T-1 equivalents in service - numbers that have been growing quickly. They are privately held and operating cash-flow positive, with backing from big money such GE Capital and Dukenet - the latest round of funding was for \$41M in 2007. Conterra has two main customer segments, E-rate and Mobile Carrier, both of which they serve from a wholesale perspective.

The first segment, E-rate, consists of supplying bandwidth to schools and local governments beyond the range of fiber rings. This segment has been growing rapidly; Conterra now serves over 1000 K-12 schools across the country. These are government contracts that are



supported by those USF fees we all pay on our phone bills. Each year Conterra bids on the ones that they can serve economically, but they can be anywhere in the country. Unlike a fiber backbone which must always think of extending from one node to the next and thus grows along connected pathways, Conterra's territory spans isolated communities in some 16 states from coast to coast but with little in between. Each E-rate market must therefore stand on its own, establishing a self sufficient foothold for future expansion.

The second segment is wireless backhaul for mobile carriers. We have been hearing for years that wireless carriers have little choice but to upgrade their backhaul systems for the coming wave of data. That will of course mean fiber to many towers, but there will always be many towers which will never have fiber connecting them but for whom copper just won't do. It is that periphery where Conterra intends to make its mark. But they prefer to work with the fiber providers in an area such as a TW Telecom or Level 3, rather than try to do everything. This allows them to raise capital for only the parts they are best at, while the fiber carriers can do the same. That fiber and wireless may compete for some cases does not change the fact that they are both needed to accomplish the overall job in next generation backhaul networks. With the promised 4G download speeds, copper will eventually be insufficient for virtually all cell sites.

The migration of US mobile carriers to the next generation of backhaul systems has, of course, taken much longer than many expected. But unlike some of the competition Conterra has anticipated and planned for these inevitable delays by pushing its E-rate business first, thus allowing them to expand geographically and financially without waiting for the mobile carriers to finally do what seems inevitable. That leaves Conterra very well positioned as we enter this new economic phase where capital isn't so cheap anymore yet traffic growth is unlikely to slacken.

In part 2 of this article (see below), we hear directly from Stephen Leeolou, CEO and Chairman of Conterra about their business, the economy, the stimulus, and more.

Conterra: A Window Into Wireless Backhaul - Part 2

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In part 1 of this profile, I gave my own impressions of Conterra and its approach to the market. Now let's hear from the company directly. I had the opportunity to talk with Stephen Leeolou, CEO and Chairman of Conterra Telecom Services. Prior to Conterra, Mr. Leeolou co-founded and acted as COO then CEO of Vanguard Cellular Systems from 1982-1999 until selling it to AT&T for almost \$2B.

TR: *How has the economic crisis affected Conterra's sales pipeline and the wireless backhaul industry in general?*

SL: We have just concluded our best E-rate (K-12 school districts) sales year in company history and our sales pipelines for both our E-Rate and Backhaul businesses remain quite strong and active. We do, however, believe that Conterra and most other telecom transport companies are seeing a drag in the awarding of major new backhaul contracts. We believe this is largely attributable to the recession and its impact on our wireless carrier customers as well as delays in 4G rollouts. However, we believe new backhaul business opportunities remain compelling for those service providers willing and able to be somewhat patient.

TR: *Where does Conterra see the greatest demand coming from right now?*

SL: In our E-rate business, it is from medium to large size school districts located in remote areas that are underserved or unserved by high-bandwidth, fixed wire transport carriers. In the backhaul business, it is from wireless carriers who need high quality, scalable TDM or Ethernet cellsite connections and

are at or approaching the point where the economic crossover from existing copper circuits to fiber or fixed wireless makes sense. Those wireless carriers who are behind the 3G capability and capacity curve are, of course, moving with more haste.

TR: *Wireless broadband is frequently talked about for reaching rural areas cost effectively using broadband stimulus funding, what sort of projects does Conterra have in mind to help out?*

SL: We are looking into several interesting opportunities but, as you know, the final rules and regulations for doling out the stimulus money are not yet resolved. Also, it is important to keep in mind that the total amount of stimulus money that will actually fund broadband infrastructure projects is relatively small, especially when considering it is to be spread among all 50 states. And, since the stimulus infrastructure money only covers a portion of an approved project's Capex with no ongoing Opex support, it is still to be seen if this program will actually 'move the needle' in creating long-term, viable broadband services in rural America.

TR: *What licensed spectrum ranges do you use? Do you hold those licenses or just lease it when you need it?*

SL: Conterra almost exclusively leases Part 101, FCC Common Carrier spectrum in the 6,11,18 and 23 GHz frequency ranges. Network topology, distance and performance variables determine which frequencies we utilize within each network we design, build and operate.

TR: *How do you see the balance between wireless backhaul and fiber to the tower developing over the next few years?*

SL: There are more than 250,000 cell sites in America and, based on the realities of physics and economics, we believe there are tens of thousands of

those sites that will not be reachable by fiber connections anytime in the foreseeable future, if ever. Like in Europe and Scandinavia, we believe hybrid, carrier grade networks that seamlessly combine fiber and licensed microwave connections to support ever increasing capacity demands at diminishing costs per megabit will be needed to cover a nation as heavily populated and geographically vast as the U.S. Additionally, these hybrid networks need to be designed to accommodate both TDM and Ethernet transport to match-up with wireless carriers' long term technical plans.

TR: *Your main customer bases are wireless carriers and school systems. Do you have any plans to serve the enterprise space?*

SL: That would take us into more of a retail versus wholesale customer business plan. Although that is not our plan, as a common carrier, we have an obligation to provide our current service offerings to as many constituents in our service areas as we can, economically. We do today, and will in the future, serve select enterprise customers within some of our existing service areas and we also hope to help support the broadband requirements of municipalities and their public safety and healthcare needs.

TR: *What factors are most important to Conterra when choosing new markets to enter? Terrain? Population density? Competitive metro fiber rings?*

SL: One simple way to describe our market 'sweet spot' is any community or region where there is a preponderance of satellite TV dishes. This indicates an area that for reasons of terrain, population density and socio-economic factors is likely to be underserved or unserved by last-mile fiber carriers. Generally, the economic advantages of deploying fixed wireless transport are most pronounced in connecting commercial sites that are two miles or farther away from the nearest fiber POP with relatively few homes and businesses along that path.

TR: *What is the biggest challenge Conterra faces in 2009?*

SL: Balancing the opportunity to grow with the availability and cost of capital. Despite what the banks are saying publicly, I think most of us small business owners know the traditional lending avenues remain largely closed and the resulting increase in the cost of equity can make new growth counterproductive for a company's ownership. As the great jazz musician Charlie Parker once lamented: 'Romance without finance, ain't worth a damn!' Fortunately, Conterra is cash flow positive and, if we must, can afford to live without some romance for a good while.

TR: *Thank you Steve, for taking the time to talk with Telecom Ramblings.*