



The Vision

It all comes down to vision versus technology and cash in hand. We're big fans of fiber, and especially fiber all the way to homes and businesses. But every once in awhile, we see something that gets us thinking. The two features in this section come at the problem from two different points of view. Mark Labbé and James George build networks and advise developers about what networks to build. Both have been bloodied in the coax, copper, and fiber wars. They've literally spent time in the trenches, and can probably tell you about their favorite model Ditch Witch trench-digging machine to prove it.

Both like fiber, but ask if it is really necessary to bring fiber to residents' doorsteps right away. Labbé lays out a road map, in fact, showing how to slowly bring fiber in from the node or "curb" (neighborhood) and then across the lawn, reusing street vaults and other infrastructure to maintain reliability and keep costs down. George describes developer angst and a history of horror stories and bad technical choices over the past few years. The issue arises: Are RBOCs doing fiber as much to gain control over the network as they are for economic reasons? In other words, with full understanding that both reasons are present, is the regulatory framework the prime driver, or is the technology?

George highlights another problem as well: Delivering video is tough, and the deployers of fiber have a lot to learn. We think they are fast learners, but the horror stories abound, and make property owners nervous.

Both ask if that last 100 feet has to be fiber, when the signal from the central office has been massively split anyway (the norm is 1:16 or 1:32 but higher splits are certainly common) and when coax, despite signal losses, can handle distances greater than that and still deliver 1 Gbps and

more. And once the bandwidth gets to the home or premise, how is it distributed inside? These days, mainly with Ethernet cable, of course.

They also got us thinking about the delicate balance of the industry as a whole: Volume purchases by the RBOCs have cut the cost of fiber-to-the-home deployments, from around \$1,800 per house passed a year ago, to (probably) less than \$1,200 today.

And costs, of course, continue to fall. But with the decline comes a risk. Build too much plant, too early, and you are locked into a higher cost of providing service. Competitors coming in later can take advantage of the technology you helped develop and the prices you helped force down.

But we also note that many property owners and managers, and even people in the industry, have obsolete views of the progress that has been made. One panelist at the CITI telecommunications conference at Columbia University in March insisted that fiber's cost per home passed is \$4,000! What's more, fiber all the way to the doorstep is cheap and reliable in greenfield developments. We wonder why all greenfield developers, even at the low-price end of the business, are not taking advantage. They alone (if you exclude infill construction) would add a million fiber homes passed a year.

Finally, we come back to vision. What if you believe that bandwidth needs are poised to explode in the next few years, given HDTV (at around 35 Mbps per set-top), gaming, and other foreseeable entertainment and business needs?

What if you have faith that someone will come up with things we haven't envisioned? Then gradualism can cost more and create more user disruption than just doing it right in the first place.

Steven S. Ross

Providing the Content: Detailed Costs

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Plan ahead now to reuse and adapt infrastructure as fiber evolves to the home.

A Developer's View: Look Before Leaping to FTTP

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In most cases, FTTC will perform the same at a third the price, the author says.