



Will The Capabilities Of FTTP Ever Justify The Cost?

By Jason Marcheck ■ *Confluence Consulting*

Last month, I stated that, for a number of reasons, no copper-based solution could possibly be as good as a pure fiber remedy. This month, I'll defend that point, and talk about the most debated point of contention regarding last mile fiber: The Costs.

As with most decisions, the utility of a purchase must also be weighed against the costs that will be incurred. In a world where compromise almost always wins out over absolutism, there are many who believe that even though pure fiber would be great, the reality is that it is too expensive, and that copper will always be a fact of life in telecom networks. Because of this pragmatic point of view, the past year has seen a deluge of speculation, some legitimate, some not-so-much-so, regarding carriers' willingness, ability, and even need to pay for FTTP.

I firmly believe that eventually, carriers will need FTTP. Accepting this, the uncertainty surrounding last mile fiber becomes a matter of timing. When will the carriers—RBOC, rural telcos, municipalities, etc.—decide that the time is right to pull the trigger? If costs were not an issue the answer to that question



ed with FTTP are a huge issue. Many choose to focus on the cost of deployment, and indeed, those costs can be daunting. However, to accurately assess the attractiveness of a last mile fiber rollout, all the costs associated with such a project must be considered. Therefore, I will not only examine the nature of

Capital Expenditures (CapEx) that FTTP requires, but also discuss what is often overlooked in an FTTP cost analysis, that being the Operational Expenditures (OpEx) side of the coin.

The Focus on Capital Expenditures

A search of almost any magazine article, market research report, press release, conference call, or anything else dealing with the outlay associated with FTTP deployment will center around the per home passed cost of two elements: The Optical Line Termination (OLT) and the Optical Network Termination (ONT), with minor attention being paid to the cost of optical splitters. The OLT resides at the CO or Head-end, and similar to a switch or DSLAM is the engine that drives an FTTP system. The ONT is the box that resides at the customer premise. Much is often said about the need to bring these costs below a certain number in order to make FTTP financially viable. This is becoming increasingly less accurate.

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would almost assuredly be, 'Immediately'. But, since money is back to being seen as a commodity, the costs associat-

ed with FTTP are a huge issue. Many choose to focus on the cost of deployment, and indeed, those costs can be daunting. However, to accurately assess the attractiveness of a last mile fiber rollout, all the costs associated with such a project must be considered. Therefore, I will not only examine the nature of

If this article were being written in 2001, then those costs would certainly be a chief concern. Because PON-based FTTP is still in a nascent stage of its evolution, equipment costs have fallen dramatically over the past three years. Add to this the fact that vendors are slashing prices for RBOCs in hopes of gaining their business, and the actual equipment costs represent a much less meaningful portion of the FTTP equation. For example, in 2001, equipment costs (meaning OLT, ONT and splitters) accounted for over half of the per home cost of deploying FTTP. Today, depending on the situation, those costs have fallen to as little as a quarter of the per home deployment cost.

The other half (now three quarters, in some cases) comes in the form of labor and plant costs. Those too have fallen on an absolute basis, but at the end of the day, the cost to dig up a street is always going to be significant. Today, when companies are evaluating the capital outlay required to deploy FTTP, the labor and fiber costs are the primary concern. These costs, more so that equipment costs, scare the bejesus out of the likes of Verizon and SBC that remember all too well the costs of digging up streets in Manhattan, Washington, D.C. and San Francisco, when they deployed metro rings. And this trepidation is not unique to the RBOCs. Any carrier, municipality or utility considering FTTP must be very aware that the decisions they make regarding aerial versus buried fiber; Greenfield versus plant refurbishment; and residential versus business customer focus will play an enormous role in determining the viability of going the FTTP route.

The Focus on Operational Expenditures

What happens if you buy a shiny new Hummer H2, then discover that you can't afford the gas?

While the CapEx requirements have garnered much of the attention with respect to FTTP deployment, an often-overlooked cost aspect is the OpEx implications that come along with a last-mile fiber rollout. It might be true that last-mile fiber holds the key to al-

lowing carriers to provide a range of new services. However, until recently, so much attention has been paid to the cost to plant, or string, the fiber, that not a whole lot of thought was given to the costs that telcos will have to incur to make the back-office accommodations required to manage and bill for these new offerings. Recently a Verizon spokesman stated that, regarding FTTP,

the company would have to "reinvent the wheel in terms of OSS."

It is assumed that in order to make FTTP a smart decision for telephone companies (municipalities and utility companies) on a wide scale, that the infrastructure must be utilized to deliver 'next-generation' services. The services most commonly cited are dynamically provisionable bandwidth and digital

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video. Very few of the entities mentioned at the top of this paragraph have

playing FTTP over the next decade. While I believe that eventually, most

er with the expense of FTTP, their business, and the infrastructure they use, will be rendered impotent over the next 5-7 years.

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any idea how to manage such services. For 'Telco TV' to take off – through any medium – significant OSS changes must be instituted. This could turn out to be more difficult than funding an FTTP deployment for many companies. That being said, it is clear that cable companies are forcing some, like Verizon, SBC, and a host of smaller telcos in this direction. As such, I am confident that the OSS challenges will be overcome. But, as with DSL, progress will not come without significant costs and growing pains.

Is FTTP Too Expensive to Work

To answer this, we must make some assumptions as to exactly who will be de-

MSOs will migrate to FTTP, for the time being the RBOCs, small independent telephone companies, and a surprising number of municipalities will carry the flag. Thus, to gauge the scale to which FTTP will become a reality, it is most critical to attempt to determine the commitment level of the RBOCs.

Among many legitimate opinions I've heard over the past year concerning the likelihood of RBOCs and FTTP, comes a bit of comic relief. The latest point of view to surface argues that the Voice over IP (VoIP), now being offered by many large cable companies, will inevitably join mobile wireless in stealing all of the telephone companies customers. Thus, why would phone companies even both-

Maybe I'm not enough of a futurist, but I simply cannot see a world without local phone company of some form. Much of today's data communication is too important and/or sensitive to be trusted to the service irregularities of wireless transmission. If wireless is truly the ultimate end game, then the cable companies should also start preparing their concession speeches. No, I think that business communications, which includes VPN, SAN and video conferencing services, will remain the domain of the local telephone company. I'm not completely sold on the idea of Telco TV just yet, but those doubts are more due to market forces, than technological impediments.

In terms of cost obstacles, I believe they will be overcome for many reasons. First, it really has become cheaper, and is now close enough to copper replacement to make copper unattractive. Second, most carriers already have a sizable portion of the capital requirement in the budget. For example, Verizon has stated that it will not need to increase its CapEx materially to accommodate its FTTP initiative. Instead, it is planning on shifting the money dedicated to copper refurbishment toward fiber. (*Aside: Will this totally cover the cost of the project? I say, not entirely, but it does provide some insight into just how much telcos spend on repairing copper plant each year.*) Finally, and possibly the most important reason why FTTP is financially doable: Do RBOCs really have another choice? ■

About the Author

Jason Marcheck is the Principal Analyst of The Confluence Research Group, whose primary focus over the past several years has been the study of the market issues related to FTTP. The firm has just published its annual report on the FTTP market, FTTx 2004: The Cost, Demand and Market Development for PONs, FTTP & Telco TV. The author may be reached by phone at 301-498-2661 or e-mail at jmarcheck@confluenceresearch.net.

