

A Telecom Analyst - also a FTTH Expert - Discusses the Future of Fiber Optic Networks

Warning: The FTTH industry has not done enough to convince Wall Street that consumers will pay for high-bandwidth services in the next few years

By Linda A. Schoener

What, if anything, can the fiber-to-the-home industry and telecommunications companies do to convince investors that the money being spent on FTTH is worth it – that it will result in handsome returns? Last month, we presented Corning's case for the need for more bandwidth.

A few days after we went to press Wall Street Journal reporter Peter Grant, in a front-page article on August 17, quoted a confidential report by the industry's research arm, Cable Labs, as saying that bandwidth demand may be too high for its DOCSIS technology to compete efficiently with Verizon. "At some point, optimization of the [cable] network becomes more expensive than simply deploying" fiber directly to homes, the report warned.

In keeping with scenarios presented by Corning in our August issue, Cable Labs predicted that the cable companies could keep up for the next few years with FTTH, but that if Internet traffic continues increasing at a high rate, the cost of providing the same quality service as Verizon may become so great that it may be less expensive for cable companies to install FTTH themselves.

The cable industry immediately moved into damage-control mode.

Mike LaJoie, chief technology officer of Time Warner's cable division, told Grant the report's assumptions "are not reflective of what our reality is." Dave Fellows, chief technology officer at Comcast, said the Cable Labs report does not reflect Comcast's view, either.

Backpedaling, Cable Labs then issued a statement saying the 60-page report "postulates a very speculative scenario" and that "no major investment is needed for cable to effectively compete."

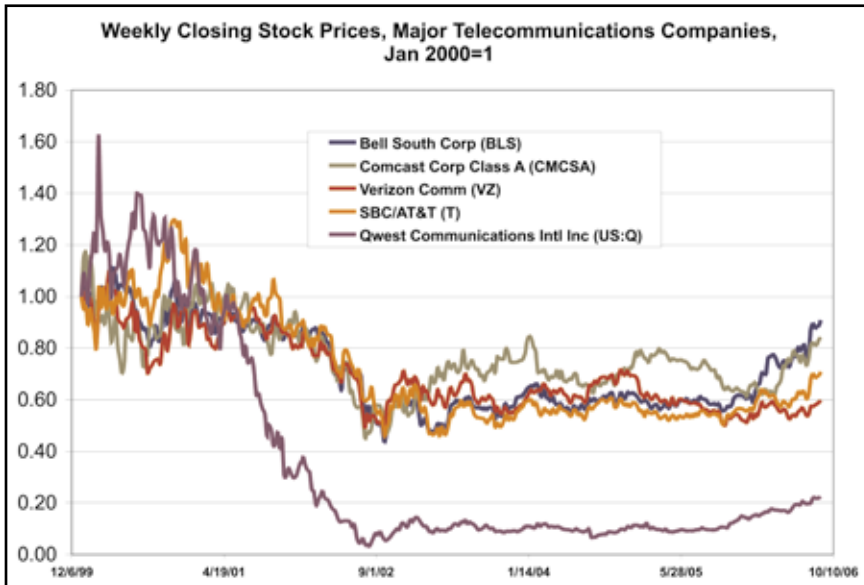
In this article Broadband Properties magazine looks at the fiber industry from the standpoint of a leading financial analyst, Timm P. Bechter, CFA. Our correspondent interviewed Bechter, who formerly was an analyst at Legg Mason and now is an analyst for the Kansas City-based mutual fund company Waddell & Reed, where he covers the equities of cable companies, satellite television concerns, telecom and networking equipment firms, and telecommunications service providers. While at Legg Mason, Bechter published semi-annual reports and reviews, some of which appear on the Web site of the Fiber To The Home Council (www.ftthcouncil.org).

The price of a share of stock in major telecommunications compa-

nies has indeed fallen since the 2001 peak. The accompanying charts prepared by BBP staff de-emphasize the peak by setting the comparison point at January 2000. Even so, a dollar invested in telecom stock at the start of 2000 would be worth about 60 cents today. A dollar invested in the S&P 500 would be worth about 90 cents, and the Dow Jones Industrials were back to almost exactly their level of 6 years ago.

Verizon says its FiOS buildout is costing it 25 to 30 cents a year in current profits, or about 10 percent of what would otherwise be its earnings per share level. Its most recent quarterly results, with FiOS costing 6 or 7 cents per share, are in line with the annual rates. Verizon stock was selling for around \$40 a share two years ago, just as it was gearing up for the FiOS build. It was selling for around \$36 as we went to press – a 15 percent decline. But other large telcos have seen similar drops. Only BellSouth has recovered recently, but that is because it is due to be merged with AT&T.

The effects of FiOS on Verizon earnings are not entirely transparent, however, as the network itself is amortized over a long term, and in-home hookups and sales costs over a much shorter period. Some of those



The RBOCs and Comcast – the largest cable pure play in broadband – have all shown about the same stock price pattern since 2000, despite their different broadband strategies. Qwest is the exception. With various structural weaknesses and no coherent broadband strategy at all, its stock price has sunk to only about 20 percent of the levels of six years ago.



Broad stock indexes have also mostly fallen since 2000. But the two most widely followed – the S&P 500 and DJIA – were close to their 2000 level as we went to press. Both charts were prepared by BBP staff, not Mr. Bechter.

costs are, in fact, expensed. Even so, executives, technical personnel, and journalists covering FTTH wonder what is going on. Clearly, the FiOS

buildout will lead to higher revenue per customer. Shouldn't that make Verizon appear more like a growth stock to Wall Street, increasing

the price-earnings ratio the stock should command and thus making up for at least part of the drag on current profits?

It's not that simple, says Bechter. While he says he is bullish on long-term prospects for FTTH, the major telcos have yet to demonstrate that their return will be worth the investment. Their take rates for triple-play services have been low so far, for example. He also says that wireless services will be important to FTTH revenue.

As BBP noted in the January 2006 issue, "It is not easy to convince Wall Street that investments in bandwidth will pay off for stockholders. Witness Verizon's flat stock performance despite its enormous free cash flow and forward-thinking fiber buildout." One reason: Competition and other pressures may reduce revenues for providers of bandwidth and content.

Clearly, not every issue in fiber is settled in the investment community, but here are Bechter's candid, shoot-from-the-hip points of view.

BBP: Are there certain performance criteria that leading fiber network builders have to meet in order to gain Wall Street's attention?

Bechter: Stock performance, of course, over a long enough period of time, tends to track earnings performance. So those companies making investments that ultimately produce earnings (that is, a return on the investment) will see their stock prices go up. In the near term, the metrics that investors are looking at on the cost side are the cost to pass a home and the cost to connect a home. For example, for Verizon, these costs have been high, although it does appear that these costs are on a gradually declining trajectory. From a return perspective, investors need

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to not only see that subscribers are being added, but that subscribers are producing high enough revenues to pay for the investment required to reach them with FTTP. So, if the number of subscribers strengthens, and if the average revenue per home from these FTTP connected homes is high enough, investors will pay more for VZ [Verizon] stock.

BBP: From an investment standpoint, who will be the winners and losers?

Bechter: So far, it is difficult to find a “winner” in the FTTP or FTTN game although the component companies such as JDS Uniphase and Bookham, saw a surge early this year before falling back. The “box” vendors, such as Tellabs (which bought AFC) and Alcatel (which is absorbing Lucent), have realized revenues from several projects, most notably from Tellabs working with Verizon and Alcatel working with SBC/AT&T and now working with Verizon. But, profitability hasn't been there in the early “market share winning” stage of the game.

On the service provider side, the jury is still out, since we are still in the early innings of the game. If the DSL market is any guide, the equip-

ment makers who win the majority of the market share will make money before too long as the technology ramps to higher volume.

BBP: What are the prospects for Verizon's FiOS (rapid buildout approach) vs. AT&T's Project Light-speed (gradual upgrade)?

Bechter: Verizon is making a big investment in the “here and now” for the long term, while AT&T is playing to minimize capital expenditures in the present. AT&T hopes to have an “unproven” technology deliver a competitive offering (IPTV) to cable and to satellite pay TV.

So far, Verizon has acquired hundreds of thousands of FiOS customers (375,000 as of last quarter's

report), some of whom have the full “triple play” that includes television. From what I hear anecdotally, those who have the TV service are impressed with it. And the broadband speeds are impressive.

This said, it is still early – the subscriber numbers are still too small – to make an assessment of the longer-term competitive impact. If Verizon does pass 60 percent of its current footprint (they do have some lines up for sale) and we get to millions of FiOS “triple play” subscribers, the analysis will get interesting.

For me, competition against the cable Multiple System Operators (MSOs) heats up more when Verizon can play the Fixed Mobile Convergence (FMC) card successfully.

With a solid wireless subscriber base to tie into the triple play, making it a “quadruple play” for those subscribers who tie up all four services into a single bundle, the value added should be substantial.

Of course, cable has a robust plant with loads of bandwidth, if they choose to exploit DOCSIS 3.0 and free up the gigabits of bandwidth being “hogged” by analog TV signal delivery. And, the largest cable MSOs are collectively partnered with Sprint-Nextel, which will enable them to add wireless to their triple play bundle to make it a quadruple play bundle at some point down the road. They say that this will happen soon.

It is generally the case that the cost of the equipment declines over time; however, the cost of labor doesn't work that way. New development (for example, greenfield builds) will increasingly be all fiber, and over time, the overbuilt part of the plant will be all fiber.

Past a certain point, the “build it and they will come” strategy is not acceptable without subscribers paying a monthly fee that supports further investment in the outside plant.

AT&T has not created a lot of confidence in its FTTN efforts as of yet. For example, the relatively small test market in San Antonio does not yet have any high definition (HD) television offering. I hear reports that there are some issues with picture quality. But, on the positive side, I am hearing that channel changing times are almost instantaneous. So, I would say that there is still some work to do on AT&T’s part to “prove out” the FTTN approach, even at a small scale. And then, the issue of “scaling it up” looms as the next obstacle in the road.

BBP: To what extent have actual or projected outlays for fiber optic networks affected or determined stock ratings and prices?

Bechter: I think that just about any VZ investor would concede that Verizon’s outlays have negatively impacted the stock price. Briefly, let me just say that the reason that VZ stock has been hurt by the outlays of fiber (FiOS) are two-fold: First, that the payback on the investment will be several years away, if at all, and, second, that the expenditures have been greater than originally advertised or messaged to Wall Street. That is, capital expenditure projections were revised upwards.

It is important to discuss how the spending on FiOS hits the income statement, and therefore, impacts profits. Much of the spending is considered capital spending and is

therefore capitalized/amortized over the perceived life of the plant. The portion of the spending that is not capitalized does impact the income statement in the quarter of the year that it is spent.

BBP: Is there a specific trigger point or goal on the take rate or number of customers that would make Wall Street happy?

Bechter: The question regarding the take rate goes directly to the return on investment, that is, “upping” the revenues, and thus cash flows, to provide a return on the capital spending. Profitability will clearly be helped if take rates go up. As to what is more important, without hard numbers to work with it is hard to say. Both costs and revenues matter.

BBP: Do you have any comment on Cable Labs’ claim that cable companies may have to invest in fiber to the home in order to compete (mainly with Verizon and many independent telcos) in the decade ahead?

Bechter: I would simply direct you to the comments in that article from both the CTOs of Comcast and Time Warner Cable. Basically they said they can easily handle the bandwidth needs for now and for many years into the future. I strongly agree with them. As I mentioned previously, cable has ample bandwidth for just about any scenario I can imagine over the next several years.

BBP: On the regulatory side, what do you think about the proposed Telecommunications Act rewrite and particularly, the issues of net neutrality and national franchising?

Bechter: To begin with, I don’t see a Telecom Act rewrite happening before the November elections. So, timing-wise, I think that this is an issue for next year. National franchising appears to have strong support, mainly as a pro-competitive, pro-consumer piece of legislation (or regulatory action out of the FCC). I would expect something to happen on that front before too long. Either the FCC figures out some way to effectively make it the law or Congress addresses it separately soon after the elections.

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BBP: How do you see fiber optic networks evolving from a financial standpoint? What are the benchmarks to look for?

Bechter: It is generally the case that the cost of the equipment declines over time; however, the cost of labor doesn’t work that way. New development (for example, greenfield builds) will increasingly be all fiber, and over time, the overbuilt part of the plant will be all fiber.

Let’s assume that Verizon is at least modestly successful, and that AT&T eventually goes to a more FTTH strategy rather than a FTTN strategy (which is not a given by

Verizon, AT&T/SBC and BellSouth, have not agreed on the best approach to deploy fiber – witness Verizon with FTTP, AT&T/SBC with FTTN and BellSouth with FTTC. So, it stands to reason that Wall Street would see uncertainty and lack of consensus from this group, since that is what it is!

any means). In twenty years, with those assumptions, maybe half of the homes in the country will have a FTTH connection. This may appear to be a slow process in most peoples' minds. But you have to remember that the current telephone plant has been built over one hundred years. It has gone through several transitions in those one hundred years, for example, from no long distance at all to a robust long distance market, and, from party lines to individual lines. We have seen several improvements that are still ongoing that include: Advancement in switching technology, the implementation of Internet Protocol in the network, and the adoption of fiber optics in the core of the network.

Financially, economics rule. Past a certain point, the "build it and they will come" strategy is not acceptable without subscribers paying a monthly fee that supports further investment in the outside plant. So again, I think that the near-term benchmarks to look for are subscriber counts and revenues per household for those subscribers. Further down the road, I think fixed-mobile convergence (FMC) will get a lot more attention, as will churn metrics.

BBP: Do you think there is a disparity in terms of how Wall Street, the industry, and the press view the future of FTTH?

Bechter: I believe that the FTTH industry, including FTTH equipment vendors, large and small, publicly traded and private, and RBOCs and RLECs (Reseller Local Exchange Competitive carriers), understand that the upgrade to an all fiber network across the United States will take many years, perhaps upwards of twenty. Even after twenty years, there will still be millions of homes remaining that are connected by copper twisted pair that will be left out, either because of the installation cost, or a lack of economic rationale, either real or perceived.

I believe that the investment community doesn't care to look that far out, even if they understand this, and is more concerned, as they should be, with return on investment over an "investable" period of time, which, unfortunately for Verizon stockholders, has not been very long.

I think that the press, generally speaking (because there are definitely exceptions), gets more focused on what the technology can do for consumers and tends to deemphasize the costs involved that will take a long period of time, if ever, to recoup, in a very competitive environment. This is what the investment community focuses on.

So yes, I do think that there is a disparity in how the various interested parties you mention look at the future

of FTTH. Part of the disparity comes from time horizon focus differences, and part of it comes from stakeholder focus differences (consumer benefit vs. company profitability).

BBP: The press often feels that Wall Street just "doesn't get it" about fiber. Is there any truth to this perception?

Bechter: Your question serves to bolster the view I just expressed. First, in order to answer this one, I think it is important to break down who are members of the FTTH community. Private companies have no reason to excite Wall Street except to offer an IPO. The market is definitely not yet ready for that yet. Some demonstrated success is required before that can and should happen. So that covers all the private FTTH vendors (including: Wave7 Optics, World Wide Packets, Alloptic, Calix/Optical Solutions, and so forth) along with the private and smaller telcos, utilities, and municipalities. The larger publicly traded service providers, such as the RBOCs: Verizon, AT&T/SBC and BellSouth, have not agreed on the best approach to deploy fiber – witness Verizon with FTTP, AT&T/SBC with FTTN and BellSouth with FTTC. So, it stands to reason that Wall Street would see uncertainty and lack of consensus from this group, since that is what it is!

The publicly traded companies (such as Tellabs, Alcatel, Motorola, and so forth) of the FTTH vendor community are so busy trying to outbid each other to win the early stage business from the RBOCs that their investors have not yet seen a profitable business. Obviously, Wall Street likes profits, not losses, so its negative view toward this portion of these vendors' businesses is understandable.

So that leaves me asking this question back to you – what is it

that the FTTH community should be getting Wall Street excited about? Wall Street will not pay up for consumers getting the good end of the deal; rather, it wants return on investment for the companies in which it can invest (buy stock in).

BBP: Aside from the reservations you've expressed, do you consider yourself "bullish" about fiber?

Bechter: Long term I am. As service providers improve upon the services that they can sell, and give the consumer value for which they are collectively willing to pay more, you will see the investment community recognize those service providers that can turn a profitable business. For example, Comcast is now being rewarded for winning the triple-play customer.

In the short term, I don't see any profitability for FTTH vendors until there is scale along with a winnowing of the supplier field to capitalize on that scale. Some vendors will win out over time, but others will lose. Also in the short term, I don't see triple play subscriber numbers on the telco side being able to engender much positive sentiment. Verizon is really just getting started, and AT&T/SBC is still in trial mode in San Antonio.

Until Verizon has 7-digit TV subscriber numbers and good growth in those numbers, I don't think FTTP/triple play helps the investment case for the stock. However, the fact that the company started reporting its FiOS subscriber numbers last quarter is a good sign. When Verizon finally reports how many FiOS customers actually have triple play, we will be at the beginning, maybe, of something investors will make note of. **BBP**

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