



A Fiber Report Card

By Steven S. Ross ■ *Editor-in-Chief*

Events of the past year have served to clarify many of the technical and regulatory issues facing builders of fiber-to-the-home networks in North America. But there's a lot more that can be done. As we detail in this issue:

- The business case for fiber got better, as subscriber demands for HD video, fast access to interactive online games and flexible converged data solutions improved take rates and made other technologies such as DSL and cable somewhat less attractive.
- The cost of building fiber networks continued to fall as technical solutions for customer premises equipment, metro fiber rings and fiber itself cut equipment and installation capital needs.
- New kinds of network builders continued to evolve – organizations that build networks, especially in new housing and business centers, and lease bandwidth to third-party providers. Not quite telcos, not quite CLECs, these companies are becoming known as “amenity providers.” An apt description indeed.
- The promise of future-proof fiber is being fulfilled, as network owners rush to upgrade gigabit Ethernet with new 10 gigE in metro rings and intercity loops, and wave division multiplexing in metro rings and out to the customers themselves – all without having to add more physical fiber. On some intercity links, a single fiber now carries more than 200 times the traffic it did a few years ago.

Fiber Sells Homes

Fiber is also proving to be one of the few antidotes for a weak housing market. It is proving to be a differentiator – an

amenity that potential homebuyers look for. As we report this month, the percent of master-planned developments installing FTTH continues to climb; the majority of homes in such developments is now passed by fiber.

The municipal overbuild network market has also picked up, in part because municipal fascination with “free” wireless has faded – bandwidth is limited and getting universal coverage seems to be technically impossible given the limited resources available in a “free” access model.

Verizon had led the way in overall homes passed, and smaller independent telcos have deployed even more advanced technology than Verizon. AT&T, while publicly not giving up on its fiber-to-the-node plans, has, as we first reported more than a year ago, continued to move its nodes closer and closer to end users, reducing the length of copper loops to subscribers. Technical personnel at equipment vendors and at various AT&T operating companies – most notably BellSouth – say that AT&T could announce a big increase in FTTH deployments in the months ahead.

Look Ahead

Three areas are cause for concern:

- The overall weakness in the housing market means more renters and fewer homebuyers – and that means more churn and a longer ramp-up to full buildout in new greenfield developments. It could ultimately mean fewer purchases of HDTVs and other broadband equipment, although retailers haven't seen a slowdown yet.
- While municipal electric utilities see fiber as a good business extension, water and sewer authorities have yet

to be educated. Selling rights-of-way for fiber along utility corridors could be a major source of new revenue to pay for water and sewer upgrades, if only these organizations would pay attention to the fiber revolution occurring all around them. (We're working to fix that.)

- Although states have moved to state-wide franchising in about 80 percent of the RBOC footprint, federal telecommunications policy remains muddled. Net neutrality? Spectrum sales? Encouragement for new types of investors in broadband networks? Legal status of private cable operators? Congress seems distracted, while the FCC seems sure it wants to regulate content but unsure of what it takes to ensure competition while encouraging investment and protecting consumers.

The result is an environment considerably less friendly to fiber than one finds in Asia. The comparison with Europe is mixed. We don't strangle network builders with red tape, as is done in Europe. But we are less capable of attracting the mix of investors that is fueling “public-private partnerships” for municipal network builds there – partnerships that are all but nonexistent in the US.

If we don't move quickly, we'll stifle here the innovative flood of new services and network-aware appliances that is sweeping Japan and Korea. By the time our fiber is in place, we'll be buying such things from Asian companies, not homegrown entrepreneurs.

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