

Will the Telcos Ever Build the Fiber Network?

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Printed in the United States of America.

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In its 1997 report, *Transforming the Local Exchange Network*, Technology Futures, Inc. (TFI) forecast that local telcos would substantially complete the conversion from copper cable to distribution fiber technologies by the 2015 timeframe. Since the telcos are deploying precious little fiber in the distribution plant today, some people wonder if they are ever going to get started, let alone get done—especially by 2015. To get at the most likely answer, we need to examine where the industry is now and where it is going.

First, the current environment encourages telcos to make no more than the minimum investment in the regulated network that is required to keep the revenues flowing. Let's examine their basic choices:

- (1) *Invest in the regulated utility.* This is an investment with risk and a low *maximum* return, in a business where loss of market share is inevitable and the fruits of the investment are shared with competitors at bargain prices.
- (2) *Invest elsewhere.* This is an investment with risk but unlimited return, in a business where market share can grow and no one even thinks of making you open your cupboards to your competitors.

The cost model of any landline distribution architecture—whether fiber, copper or coax—makes option one even less appealing than it is already. That model imposes large cost penalties as the number of subscribers drops from 100%, a problem that is much less

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spectacular for competing wireless technologies. Little wonder that telco investors pursue option two overseas in wireless and in other telecom lines of business.

The flip side is that being the best at high-speed digital access would put a telco in a key position in the future business and entertainment paradigm. This is why xDSL technology has so much appeal to telcos—it allows them to play in the rain without getting too wet. However, after a while, the theoretical limitations of xDSL, along with ever-increasing thresholds of minimum acceptable bandwidth, means that the network must be substantially fiber anyway. (for example, 52 Mb/s xDSL requires a maximum copper length of 1,000 feet, qualifying it as a fiber-in-the-loop technology.) Thus, there will be a crossover point where the telcos will have to go to fiber—or perhaps wireless—or get out of the business. The TFI forecasts indicate this crossover is likely to begin in about five years.

With regulatory problems far from resolved and with a suitable interim technology in hand, it is no surprise that telcos are biding their time. However, we shouldn't mistake short-term behavior for long-term strategy and outcomes. For lots of reasons, the likely technology winners in the long run are fiber and wireless, and at least some telcos are likely to reverse course. In the meantime, and throughout the planning window for many everyday decisions, copper is likely to dominate the distribution plant.

If you believe that TFI could be of assistance to your organization in developing a fast follower strategy, please contact Larry Vanston, John Vanston, David Smith, or any other member of the TFI consulting staff.