

A Legal Perspective On FCC Boosting Broadband

An understandable look at the legal issues that tie various FCC broadband decisions together

By Carl Kandutsch ■ *Esq.*

The Federal Communications Commission took several important steps in the past two years to loosen franchised cable's real or imminent dominance in the market for integrated broadband services (voice, video and data). The key, as always, is who controls, the "last mile" between digital networks and the customer premises.

The FCC's recent actions seek to enhance the potential of a relatively new network technology, fiber optics, to upset the cable/DSL duopoly in the delivery of broadband services over the last mile. This article briefly summarizes from a lawyer's point of view three recent FCC decisions relating to fiber optic networks and a related decision intended to expand the role of public utilities in the same markets. First, some background on the regulatory environment for last mile network technology.

The Regulatory Environment

Section 251 of the Telecommunications Act of 1996 requires incumbent local exchange carriers (ILECs) to "unbundle" certain elements of their networks and make them available for use (through leasing) by other telecommunications providers, especially competitive local exchange carriers (CLECs). In any given instance, under the law, the unbundling requirement is triggered by an FCC finding that the failure to require such unbundling would "impair" the ability of competitors to offer their services to consumers.

Since the law was passed in 1996 of course, last mile technology has greatly evolved. Now, a variety of services – not

only voice, but also video and digital data – can all be provided over the same last-mile link, allowing providers to offer consumers an attractive package of "converged" services. This phenomenon of convergence has confronted the FCC (and Congress, for that matter) with the difficult question of how these services should be regulated, or not regulated, so as to foster and ensure competition (with more choices and lower prices) in broadband markets.

The FCC's regulatory challenge is to ensure a healthy competitive environment while avoiding any action that is likely to inhibit investment in the new capital-intensive build-out of high-tech networks. That investment can come from the local telephone monopolies (the Baby Bells, which are subject to the unbundling requirements of Section 251), the cable and satellite broadcasting companies, or the public electric utilities that are wired to virtually every home and business in America.

Networks using fiber optic technology are currently a minor player on the broadband field, but they hold out great promise because fiber optic networks are capable of delivering much more digital data at much higher speeds than either the telcos, DSL (digital subscriber line)



or cable modem technology.¹ For that reason, fiber networks could, in

theory, realize the potential of countless imagined and not-yet imagined high-bandwidth digital applications – the focus today is mainly on video-on-demand over the Internet – that given the technical limitations of today's last-mile bottleneck, remain enticing fantasies in the minds of ambitious software designers.

During the late 1990s, the FCC approved several large and controversial cable mergers based largely on the cable industry's argument that any regulatory barriers would undermine its incentive to invest in cable broadband networks. The bone of contention then was whether the FCC would require large consolidated cable companies (such as AT&T acquiring MediaOne, and AOL acquiring

Time Warner Cable) to provide

unaffiliated Internet service providers (ISPs) with nondiscriminatory access to their cable distribution networks, a requirement modeled on Section 251 and urged by consumer advocates and the DSL providers (that is, the telephone monopolies). The FCC rejected the "open access" arguments in favor of the cable companies' promises to invest in massive build-outs of their networks, and as a result, cable has had the upper hand in the broadband wars.

Fiber Optic Network Initiatives

Recently, the FCC rejected similar

arguments (coming this time from the cable industry and, as always, the consumer advocates) and accepted similar promises from the RBOCs (regional Bell operating companies) in issuing a series of decisions aimed at blunting cable's potential dominance in emerging broadband markets.

The first such action was taken as part of the FCC's *Triennial Review Order* issued in February 2003, and available at 18 FCC Rcd 16978 (2003). There the Commission held that ILECs need not unbundle (pursuant to Section 251) fiber optic loops that extend to most consumers' premises – known as fiber-to-the-home or FTTH loops – on the ground that such unbundling is not necessary to ensure competition in those markets. This decision was based on the assumption that FTTH deployments occur in new construction “greenfield” (as opposed to “brownfield” or overbuild) situations, where investments could sup-

posedly as easily be made by competitive carriers as by incumbents.

In response to the 2003 *Triennial Review Order*, telcos Bell South and Sure West requested reconsideration of the extent to which fiber loops serving multiple-dwelling unit (MDU) customers are exempt from Section 251's unbundling requirements. In August 2004, the FCC partially granted the telcos' request, ruling that while fiber networks serving mostly commercial customers in MDUs must be made available to competitors, loops serving “primarily residential” MDUs would be exempt from Section 251.ⁱⁱ Assuming that fiber-based broadband is more than a pipedream, the FCC's decision has broad implications, given that as many as one in three American consumers lives in an apartment or condominium complex.

Reaction from the Bell Companies has been swift and high-profile. SBC, Bell South and Verizon have each

trumpeted plans for expanded fiber build-outs. SBC's announcement was particularly ambitious and presumably gratifying for FCC Chairman Michael Powell: SBC's “Project Lightspeed” calls for an investment of \$4 to \$6 billion to deploy 38,800 miles of fiber over five years (about double the amount used to build SBC's DSL network), including the use of fiber optics for new builds in its territory. It is significant in this regard that SBC has a deal with Microsoft for the development of advanced tvoIP (Television over Internet Protocol) products including high-definition programming, digital video recording and video-on-demand. These applications all would benefit from the deployment of fiber optics.

Broadband Over Power Lines

By deregulating fiber optic networks, the FCC hopes to help the telephone companies compete with the cable gi-



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ants. At the same time, however, the Commission issued a less heralded decision designed to upset the cable/telco duopoly in broadband by permitting utility companies to carry digital data on their electric wires, using a technology called “broadband over power lines” or BPL.ⁱⁱⁱ Data can be sent over electric wires by using electrical frequencies that are presently wasted, allowing BPL users to plug their computers directly into electrical outlets and receive Internet service.

The obvious advantage to BPL is that virtually every home and business in America is already wired to the nation’s electrical grid.

There is a technical challenge, so we won’t be plugging in just yet. To allow a pure data stream without interference from amateur “ham” radio operators, emergency and federal government radio systems, the signal has to bypass transformers – and there are transformers on

virtually every route from power station to neighborhood and neighborhood to home. The FCC decision envisions BPL as an emerging competitor to cable modem and DSL service, and in his statement, Chairman Powell optimistically refers to BPL as a “third pipeline.”

Conclusion

It is also important to remember that millions of people do not receive broadband services not because the networks are incomplete but because they do not view those services as sufficiently essential to justify their price.

And the only way to ensure that broadband services are affordably priced is to ensure that the emerging markets remain robustly competitive, which takes us back to the rationale behind Section 251’s unbundling requirements.

The FCC’s position is that there is no point in worrying about the monopoli-

zation of markets that only barely exist, and that the agency’s first priority must be to create a climate where investment need not be shared with competitors.

The Commission is banking on the likelihood that once the broadband networks are built and deployed, healthy competition will drive prices down – a likelihood that, due to the peculiar economics of networks generally, is at least open to question. Only time will tell, but in the meantime, boosters of fiber optic communications have cause to celebrate. ♦

References

ⁱ Consultant Paul Green Jr., provides an excellent relatively accessible discussion of the technical dimensions of fiber optic networking (including comparisons to DSL and cable) in his “Fiber-to-Home White Paper” (2003), available at [http://www.ftthcouncil.org/dbfiles/tech-exchange/FTTH White Paper PaulGreen 0203.pdf](http://www.ftthcouncil.org/dbfiles/tech-exchange/FTTH%20White%20Paper%20PaulGreen0203.pdf).

The Fiber to the Home Council’s website offers a superb resource for anyone interested in learning about fiber optic communications technology, see <http://www.ftthcouncil.org/ftthinformation.tpl?category=Member%20White%20Papers>.

ⁱⁱ In October 2004, the Commission made it clear that unbundling relief applies not only to FTTH but also to fiber-to-the-curb or FTTC loops extending to within 500 feet of the customer’s premises, where the fiber connects to the end user via a twisted copper pair or coaxial cable. The FTTH decision is contained in the FCC’s *Triennial Review MDU Reconsideration Order* (FCC 04-191, rel. Aug. 9, 2004), and the FTTC decision is in the *Triennial Review FTTC Reconsideration Order* (FCC 04-248, rel. Oct. 18, 2004).

ⁱⁱⁱ The FCC’s BPL decision is in Report and Order (FCC 04-245, rel. Oct. 14, 2004).

About The Author

Carl Kandutsch, Ph.D., formerly with the FCC, is an attorney and consultant on telecommunications matters. He may be reached at ckandutsch@adelphia.net.



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