

HOGAN & HARTSON

MEMORANDUM

To: Jonathan Daniels

From: Joel Winnik
David Sieradzki

Date: March 4, 2009

Re: **U.S. Regulatory Framework for ILEC Unbundling Obligations in the Context of Fiber Loop Deployments**

Summary

In the U.S., the Federal Communications Commission ("FCC") has eliminated nearly all of the network sharing requirements that formerly applied to incumbent local exchange carriers' ("ILECs'") next generation fiber loops used to provide high-speed broadband services. The FCC has concluded that requiring ILECs to sell competitors access to these facilities at regulated wholesale rates would undermine ILECs' incentives to invest in deploying these facilities and reduce competitive service providers' incentives to build their own alternative systems. The FCC has also determined that such wholesale requirements are unnecessary to protect consumers, given the widespread availability of broadband facilities and services from cable operators and other providers. The FCC applies virtually the same deregulatory approach to the fiber-to-the-home loops now being deployed by Verizon and the fiber-to-the-node loops now being deployed by AT&T and Qwest.

Analysis

You requested updated information on the FCC's regulatory framework governing ILEC fiber loops – including fiber-to-the-node ("FTTN"), fiber-to-the-curb ("FTTC), and fiber-to-the-home ("FTTH") – and the rationale for the FCC's decisions to reduce or eliminate requirements regarding wholesale access to such next generation loop facilities, in the context of deployments to mass-market (residential and small business) consumers.¹

The FCC's rules list several different categories of fiber-based next generation loops. The FCC characterizes both FTTN and FTTC loops as "hybrid loops," defined as local loops "composed of both fiber optic cable, usually in the feeder plant, and copper wire or cable, usually in the distribution plant."² The FCC defines FTTH as a local loop consisting entirely of fiber optic cable.³ FTTC is defined as a local loop with the fiber connecting to a copper distribution

¹ This memo does not address the different regulatory frameworks that apply to ILEC loops used by enterprise customers (medium and large businesses) or by other carriers.

² 47 C.F.R. § 51.319(a)(2).

³ 47 C.F.R. § 51.319(a)(3)(i)(A).

plant in which all subloops are not more than 500 feet (152 m) from customers' premises.⁴ FTTN falls within the category of hybrid loops as it would include fiber deployments connected to copper subloops that are located more than 500 feet (152 m) from customers' premises. Of the major U.S. ILECs, AT&T's next generation loop deployments ("Project Lightspeed" or "U-Verse") are primarily FTTN,⁵ as are Qwest's; while Verizon's "FiOS" deployments are mostly FTTH. FTTH and FTTC are treated identically for regulatory purposes and in virtually the same way as FTTN.⁶

1. *Broadband Functionality Of Next Generation Loops.* ILECs formerly were required to make available certain broadband loop transmission functions, on a wholesale basis, both (a) to competitive local exchange carriers ("CLECs") as shared or unbundled network facilities (in FCC parlance, as "Unbundled Network Elements" or "UNEs"), and (b) to Internet service providers ("ISPs") as wholesale telecommunications services. The FCC has eliminated both sets of requirements.
 - a. *CLEC Wholesale Offerings.* ILECs are not obligated to offer CLECs unbundled access (as UNEs) to the broadband, DSL, or packetized functionalities of any types of mass-market fiber or hybrid loops, including FTTN, FTTC, and FTTH.⁷ The FCC provided a number of justifications for its decision to eliminate ILECs' obligation to provide wholesale access to these broadband capabilities as UNEs:
 - i. "First, limiting access to the fiber portion of the hybrid loops would give ILECs incentives to deploy fiber (both feeder fiber and, eventually, FTTH), along with associated next generation networking equipment, and to develop new broadband offerings for mass market consumers. Because unbundling orders reduce return on investment, such orders would inhibit ILECs from making risky investments in next generation technology."⁸
 - ii. "Second, denying CLECs access to ILEC broadband capabilities will stimulate *them* to seek innovative access options for broadband, including self-deployment of new facilities; unbundling, by contrast, would be likely to blunt innovation by locking the CLECs into technological choices made by the ILECs."⁹
 - iii. "[I]ntermodal competition in broadband, particularly from cable companies, means that, even if CLECs proved unable to compete with ILECs in the broadband market, there would still be vigorous competition from other sources."¹⁰

⁴ 47 C.F.R. § 51.319(a)(3)(i)(B).

⁵ See, e.g., http://www.att.com/Uverse/files/HowUverseIsDelivered_2-22.pdf.

⁶ The minor differences between the regulatory treatment of different forms of next generation loops pertain primarily to "greenfield" deployments of new fiber. See *infra* at footnote 17.

⁷ *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 18 FCC Rcd 16978, ¶ 273-75, 288 (2003) ("*Triennial Review Order*"), corrected by errata, 18 FCC Rcd 19020 (2003), *aff'd in pertinent part, remanded in part, United States Telecom Ass'n v. FCC*, 359 F.3d 554 (D.C. Cir. 2004) ("*USTA II*").

⁸ *USTA II*, 359 F.3d at 580.

⁹ *Id.*

¹⁰ *Id.*

- iv. "[T]he potential rewards from FTTH deployment are significant. . . . [C]arriers will be able to earn a substantially greater return on their FTTH investment by offering voice, data, video, and other services. Thus, we find that the substantial revenue opportunities posed by FTTH deployment help ameliorate many of the entry barriers presented by the costs and scale economies."¹¹
 - b. ISP Wholesale Offerings. The FCC also eliminated the ILECs' former obligation to offer competing ISPs a telecommunications service consisting of the broadband transmission component of wireline broadband Internet access service (including such transmission over hybrid fiber/copper loops and FTTH).¹²
 - i. The FCC found that maintaining such a mandate would "diminish a carrier's incentive and ability to invest in and deploy broadband infrastructure" and may "imped[e] the development of competitive alternatives ... [and] reduce incentives for ISPs to seek alternative arrangements from other broadband Internet access platform providers and for those other providers to offer such arrangements."¹³
 - ii. "[E]liminating [such] rules at this time will make it more likely that wireline network operators will take more risks in investing in and deploying new technologies" and will "enable consumers to reap the benefits of advanced wireline broadband Internet access services that incorporate the latest technologically advanced integrated equipment, on a more widely available and more timely basis than if we maintained the existing regime."¹⁴
 - iii. Note that broadband (as well as narrowband) Internet access services are considered "information services," and ILECs have no obligation to offer them to ISPs on a wholesale basis.¹⁵ ISPs also are not entitled to purchase UNEs.¹⁶
2. Narrowband Capabilities of Next Generation Loops
- a. Fiber Overbuild Deployments. In situations where an ILEC deploys fiber next generation loops (FTTN, FTTC, or FTTH) as an "overbuild," parallel to or in replacement of its pre-existing copper plant, the ILEC must provide to CLECs wholesale unbundled access only to the unbundled features, functions, and capabilities of such loops that can be used to transmit voice-grade (64 kbps) capacity using time-division multiplexing (TDM) technology – but not the broadband, packetized, or DSL functionalities. The ILEC is permitted to remove pre-existing copper loop facilities; if it has not done so, it may offer such wholesale access to unbundled voice-grade

¹¹ *Triennial Review Order*, 274

¹² *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, 20 FCC Rcd 14853 (2005) ("*Wireline Broadband Order*"), *aff'd*, *Time Warner Telecom v. FCC*, 507 F.3d 205 (3d Cir. 2007). See 53 & n.154.

¹³ *Wireline Broadband Order*, 44, 63.

¹⁴ *Id.*, 72, 80.

¹⁵ *Id.*, 12-17

¹⁶ 47 U.S.C. § 251(c)(3).

functionality over pre-existing end-to-end copper loops instead of providing it over the fiber loops.¹⁷

- b. Greenfield Deployments. ILECs have no obligation to provide CLECs with any wholesale access to FTTC or FTTH loops in the context of "greenfield" construction projects, where no loop facilities previously existed. The FCC held that ILECs have no first-mover advantage in such situations, that ILECs and CLECs face the same investment hurdles, and that CLECs are not "impaired" without access to ILEC facilities in this context.¹⁸

3. Copper Loops

- a. Basic Copper Loops. ILECs must offer CLECs unbundled access to copper loops as UNEs at TELRIC-based rates. The FCC has found that copper loops must be provided as UNEs because a CLEC's ability to provide local voice service would be "impaired" without such access. In addition, if the CLEC deploys its own DSLAM equipment, then the CLEC may provide DSL service, as well as voice service, over unbundled copper loops, and ILECs must provide any line conditioning necessary for them to do so.¹⁹
- b. DSLAMs and Line Sharing. ILECs have no obligation to provide CLECs access to ILEC DSLAMs or packet switching.²⁰ The FCC also eliminated the ILECs' obligation to offer "line sharing" (in which the CLEC bought only the broadband/DSL capacity of the copper loop while the ILEC continued to provide voice-grade service to the end user).²¹ State commissions are preempted from mandating line sharing or requiring ILECs to offer wholesale DSL service to CLECs in conjunction with other loop UNEs.²²

¹⁷ *Triennial Review Order*, 281-83, 296-97; 47 C.F.R. §§ 51.319(a)(2)(iii)(A) & (B), 51.319(a)(3)(iii). This wholesale access requirement also applies in the context of greenfield deployments with respect to next generation loops other than FTTH and FTTC. *Triennial Review Order*, 289. This requirement to provide voice grade TDM access to competitors in a greenfield situation is the only difference the FCC applies between FTTN and the FTTH and FTTC categories in the mass market context.

¹⁸ *Triennial Review Order*, 275. The same rules apply to FTTC as to FTTH. *See Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Reconsideration, 19 FCC Rcd 20293, ¶ 13 (2004) ("*FTTC Reconsideration Order*").

¹⁹ 47 C.F.R. §§ 51.319(a)(1), 51.319(a)(1)(ii) & (iii).

²⁰ *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order, 15 FCC Rcd 3696, 306-12 (1999) ("*UNE Remand Order*"), reversed in part, *United States Telecom Ass'n v. FCC*, 290 F.3d 415 (D.C. Cir. 2002) ("*USTA I*"); *Triennial Review Order*, 537-541.

²¹ *Triennial Review Order*, 255-63. The FCC found that line sharing rules create competitive distortions and improper incentives for CLECs, and "discourage innovative arrangements between voice and data competitive LECs and greater product differentiation between the incumbent LECs' and the competitive LECs' offerings," whereas eliminating such rules "will encourage the deployment of new technologies providing the mass market with even more broadband options." *Id.*, 261, 263.

²² *BellSouth Telecommunications, Inc. Request for Declaratory Ruling that State Commissions May Not Regulate Broadband Internet Access Services by Requiring BellSouth to Provide Wholesale or Retail Broadband Services to Competitive LEC UNE Voice Customers*, Memorandum Opinion and Order, 20 FCC Rcd 6830 (2005).

- c. *Copper Subloops.* ILECs must offer CLECs unbundled access to the copper subloop component of hybrid loops or copper loops. Thus, for example, a CLEC may deploy its own fiber facilities to bypass the ILEC's fiber feeder plant, interconnect with the ILEC network at the feeder/distribution interface or other technically feasible points, and obtain access to unbundled copper subloops (the ILEC's distribution plant) to reach end users' premises.²³ A CLEC may provide both voice service and DSL (using the CLEC's own DSLAMs) over copper subloops.²⁴

The foregoing can be summarized as follows:

	<i>Broadband, Packetized, or DSL Functionality</i>	<i>Voice-Grade Functionality</i>
<i>Copper Loops and Subloops</i>	No requirement to provide CLECs wholesale access to ILEC DSLAMs or "line sharing," but a CLEC buying unbundled copper loops or subloops may provide DSL over such facilities if it deploys its own DSLAMs	Wholesale offering (unbundling) required
<i>Next Generation Fiber Loops (FTTN, FTTC and FTTH)</i>	No wholesale access required: neither as unbundled network elements (to CLECs) nor as wholesale telecommunications services (to ISPs)	Very limited wholesale (unbundling) access required: ILECs must provide CLECs the TDM equivalent of a voice-grade channel over a hybrid loop (or a pre-existing spare copper loop). However, in the context of greenfield deployments of FTTC and FTTH, no unbundling at all is required.

²³ See also 47 C.F.R. § 51.319(b)(1)(i), (b)(2)(i) & (ii) (specifying technically feasible points where CLECs are entitled to interconnect with subloops and other facilities in ILEC networks); *Triennial Review Order*, 254.

²⁴ See *Triennial Review Order*, 291 (discussing relationship between the copper subloop unbundling mandate and incentives for CLEC to invest in their own next generation network equipment, rather than relying on access to ILEC fiber loops).