

THE FCC SHOULD NOT PICK WINNERS AND LOSERS

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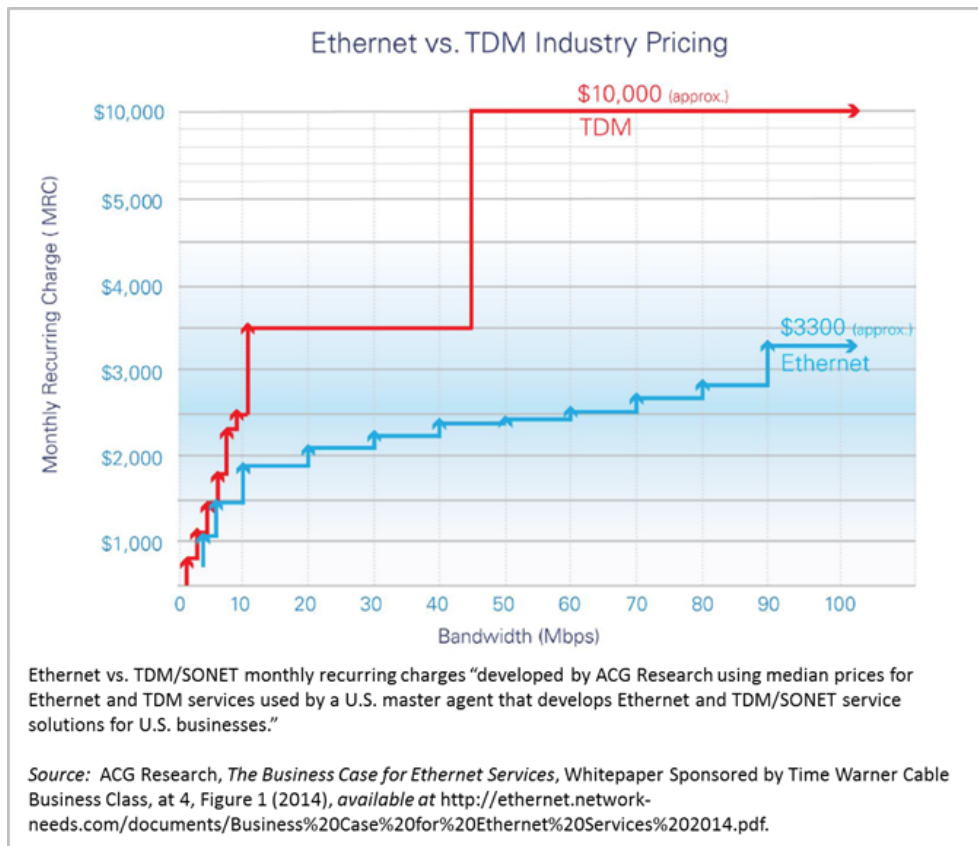


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The third of three papers examining the business broadband marketplace urges federal regulators to develop policies that encourage continued expansion of business broadband investment, rather than tailoring a solution for a single set of competitors.

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As competition in the business broadband marketplace has flourished over the last twenty years, the Federal Communications Commission (FCC) has eased regulation of those services. Today, the business broadband marketplace is more competitive than ever. The entry of cable operators, the formation of Mega CLECs, and the surge in use of fixed wireless technologies have all boosted competition in this space. These competitors provide Ethernet services that are technologically superior to, and more economically efficient than, the legacy special access services that Incumbent Local Exchange Carrier (ILECs) provide using Time Division Multiplexing (TDM) technology. For comparable bandwidth, Ethernet services offer savings as high as 80% or more as compared to the traditional special access services they replace.¹



With competition rising and the prices that customers pay falling, there is no need for new or additional regulation of this thriving marketplace. The FCC took a careful look at this marketplace a decade ago, during AT&T’s and Verizon’s acquisitions of the two largest high-capacity business services providers. The FCC concluded then that, outside a small number of buildings, the mergers would not be anticompetitive.² This is because, as the FCC found, numerous competitors served both the wholesale and retail segments of this marketplace, and that these remaining competitors ensured meaningful competition for consumers as a whole.³ In the ensuing years, competition has grown dramatically and the marketplace is more dynamic than ever. AT&T and Verizon, in particular, have seen their position in the marketplace steadily erode.⁴

Yet, to no one's surprise, companies that stand to benefit from lower prices for ILEC high-capacity services, including traditional special access as well as newer Ethernet services, are advocating for increased regulation. These companies seek regulation as a means to obtain a competitive advantage in the marketplace. They are committed to relying on ILEC facilities to serve end-user customers rather than investing in and deploying their own facilities.

Under this business model, companies seek government intervention to lower input prices associated with their service. Although beneficial to the bottom line of these individual companies, this policy supplants market forces in favor of regulation. At bottom, it reduces the costs of entry for some, but devalues the investment made by others. More broadly, it distorts the marketplace and discourages investment and innovation by incumbents and competitors alike.

The FCC's mission is to protect competition, not individual competitors or particular business models.⁵ The debate regarding high-capacity services makes clear that the fate of competition should not hinge on the fortunes of any particular group of competitors, much less the ones seeking regulatory action. To the contrary, other competitors in the marketplace have demonstrated the ability to succeed without the need for regulatory handouts.

Cable companies, for example, have achieved great success, not by leasing from the ILECs, but by upgrading and expanding their own networks. These companies have made massive investments in facilities to serve business customers, and it would unfairly disadvantage them – and other competitors who rely on their own networks – to enact government policies that devalue that investment by tilting the playing field and granting a small subset of providers a cheaper and easier way to compete. Thus, cable companies have not, unlike the CLECs, lobbied the FCC to intervene, but instead have chosen to compete using the tools of the competitive marketplace.

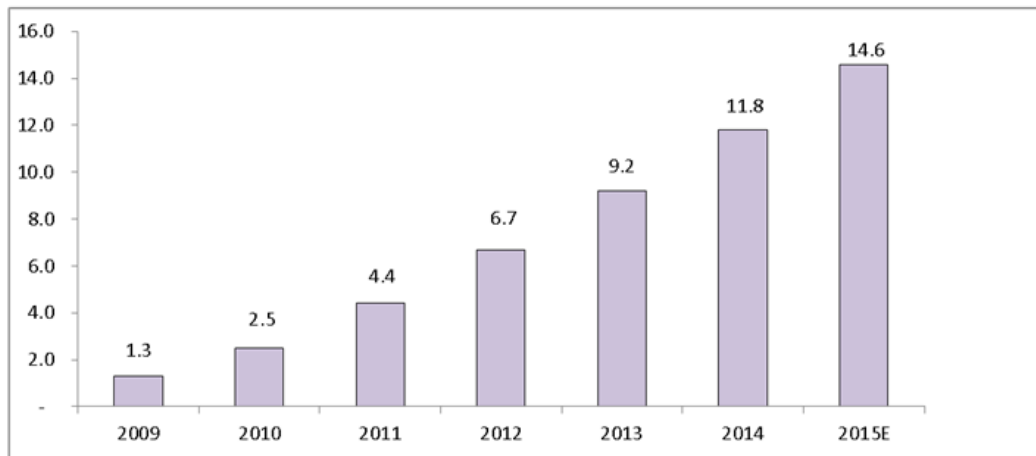
Similarly, some wireless companies have thrived using competitive providers for the backhaul in their networks, while others have sought regulation to help make up for their struggles in the marketplace. T-Mobile announced several years ago that it had deployed fiber to nearly all of its cell sites using a wide range of providers, including mostly competitive suppliers. Sprint, by contrast, chose to rely on ILEC-supplied TDM special access services, and long advocated for greater price regulation of these services. After Sprint announced a modernization of its backhaul from TDM special access to Ethernet, Sprint's lobbying emphasized greater regulation of Ethernet. T-Mobile continued to remain silent in this debate, yet took over Sprint's longtime spot as the third largest U.S. wireless carrier.

CLECs vs. Cable

CLECs currently seek more regulation of ILECs' rates, terms, and conditions for special access and other high-capacity services, and have historically lobbied the FCC to impose price controls on these services. They typically use ILEC facilities primarily to serve end-user locations, which supplants the time and investment necessary to extend their own network facilities. Relying on ILEC networks at regulated rates reduces CLEC financial risks while enhancing their ability to win new customers. This creates a powerful incentive for CLECs to advocate for the lowest ILEC prices possible. Lower input prices essentially guarantee greater CLEC profit.

By contrast, the nation’s major cable operators have chosen a very different approach, one that has enhanced significant and far-reaching competition. Each of the nation’s major cable companies has formed business units designed to serve business customers – from small businesses run out of the home, to the largest U.S. corporations, and everything in between. Rather than rely on ILEC special access services, cable companies have embraced a facilities-based strategy to competition based on network expansion and build-outs. According to NCTA, the cable industry’s trade association, cable has invested more than \$245 billion since the 1996 Act, and continues to invest an average of \$14 billion or more annually.⁶ And deployment of facilities necessary to serve businesses represents a significant portion of the cable industry’s recent capital investment. Naturally, these cable investments have spurred rapid network expansion.⁷

Cumulative Business Services Capital Expenditures for Cable Operators
2009 to 2015 (\$ billions)

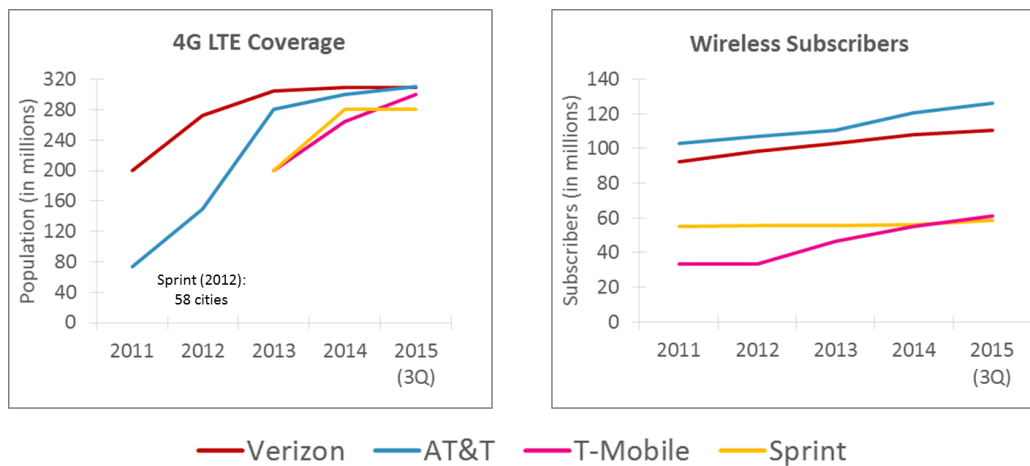


Source: USTelecom analysis of company financial reports; estimates for unreported periods and non-reporting companies. Comcast, Time Warner Cable, and Charter report business services capex. The remainder of the industry is extrapolated based on their proportionate share of the cable U.S. footprint. Time Warner Cable 2014 and 2015 capex conservatively estimated to be unchanged from 2013. Comcast and Charter 2015 estimate based on three quarters actual data and conservative quarterly distribution estimates for capital expenditures.

Although the existing footprint of their widespread and increasingly dominant consumer broadband networks gives cable companies a natural entry advantage, they have also proven capable of competing without ILEC facilities even outside their respective broadband network footprints. Cable companies have formed partnerships to lease each other’s networks, giving one cable operator access to the network coverage of another. After Comcast announced the formation of its new enterprise-focused business unit in September 2015, for example, it stated that it would serve enterprise customers in major markets nationwide, such as Los Angeles and New York City, through partnerships with other cable operators such as Time Warner Cable and Cox Communications.⁸

Sprint vs. T-Mobile

Wireless carriers have traditionally used ILEC special access for backhaul, *i.e.*, connecting cell towers to their respective networks. Like the CLECs, Sprint is a long-time user of ILEC special access and an outspoken proponent of regulation for both traditional TDM-based special access and newer Ethernet services. In its lobbying efforts before the FCC, Sprint claims that such regulation is necessary to “expand[] the coverage of mobile broadband services and provid[e] the data speeds consumers demand.”⁹ Although Sprint itself has fallen well behind the other major wireless carriers in deploying mobile broadband services,¹⁰ a comparison to T-Mobile vividly demonstrates that this is not the result of Sprint’s inability to obtain ILEC facilities at lower rates.



Sprint’s lagging 4G deployment is due not to high ILEC prices, but rather results from long-running financial struggles and corporate mishaps that have impeded its ability to invest. Ever since its \$35 billion acquisition of Nextel in 2005 – whose network and technology Sprint was forced to abandon just a few years later¹¹ – the company has failed to record an annual profit.¹² In connection with that acquisition, Sprint decided to adopt WiMax, an inferior 4G technology. That proved to be a costly mistake, as the rest of the industry adopted LTE, and Sprint ultimately was forced to reverse course.¹³ Moreover, according to the company’s CFO, Sprint’s cost structure is “bloated.”¹⁴ Indeed, although Sprint has the same competitive backhaul alternatives as some of its rivals, Sprint’s cost as a percentage of revenue is the highest among the major wireless carriers.¹⁵ Sprint has only recently modernized its backhaul network from TDM-based special access to Ethernet, despite the significant cost savings of this shift. In mid-2015, Sprint announced that “[a]s part of our recently completed modernization program, we modified our existing backhaul architecture to enable increased capacity to our network at a lower cost by utilizing Ethernet as opposed to time division multiplexing (TDM) technology.”¹⁶ Sprint’s failure to upgrade sooner has caused the company to lose subscribers for years, despite massive growth in the marketplace as a whole.¹⁷ Earlier this year, Sprint dropped from the third largest wireless carrier – a position it had held for over 10 years – to fourth, behind a surging T-Mobile.¹⁸

In stark contrast to Sprint, T-Mobile has focused on enhancing its product rather than seeking artificial regulatory advantages. Access to ILEC facilities is not an important issue for T-Mobile because the company has successfully expanded its broadband coverage without heavy reliance on ILECs. Following a massive investment program, in August 2012, T-Mobile announced it had “enhanced backhaul covering 100% of our 4G network, 95% of which is fiber backhaul,” and that it had “upgraded to fiber backhaul on over 32,000 cell sites.”¹⁹ T-Mobile achieved this by “working with dozens of backhaul partners,” which included cable operators (Bright House Networks) as well as numerous CLECs (including FPL FiberNet, IP Networks, and Zayo Bandwidth).²⁰

In October 2015, T-Mobile’s CTO, Neville Ray, was asked by analysts about the FCC “starting to make noise about attacking some of the rate structure” for ILEC special access services. Mr. Ray responded that special access was simply not “our battle to fight” because T-Mobile was “in a good place already.”²¹ He explained that, “we resolved our backhaul problem for our cell sites several years ago. We embarked on a fiber to the [cell] strategy . . . and that’s been a huge help for us with our LTE rollout. Not only did we run fiber, we run very scalable fiber and great deals behind that, which have hugely helped us with the flat cost structure we’ve been delivering to the business.”²²

BT Americas vs. British Telecom

British Telecom and its experience with regulators in the United Kingdom provides valuable insight and a cautionary tale to the FCC as it is about to address the state of the U.S. business broadband marketplace and the need for regulation. It demonstrates the consequences of regulations that inhibit investment in modern broadband networks through restrictive mandatory leasing and price regulation, as opposed to policies that further facilities-based investment as a mechanism to enhance innovation and competition.

British Telecom is the major wireline incumbent provider in the U.K., controlling (through its Openreach subsidiary) that country’s copper network infrastructure.²³ Whereas the FCC has pursued a “pro-competitive and de-regulatory” framework under the Telecommunications Act of 1996, British regulators embraced a more heavy-handed regulatory approach toward their telecommunications markets. This approach included functional separation of BT’s wholesale and retail business units and unbundling obligations that far exceeded what was required in the United States.²⁴ Ofcom, the U.K. regulator, refused to relax telecom regulations outside of the Central London area based on a finding that competition in other parts of the country was lacking.²⁵

Back home, BT has harshly criticized Ofcom’s regulation and its most recent competitive study. In its filings there, BT claims that Ofcom’s analysis “fails to reflect the realities of actual competition and the actual features of the” high-capacity marketplace.²⁶ BT further argues that Ofcom’s approach “will undermine investment by BT and other network operators to the detriment of our customers at a time when network investment is crucially needed to fulfill customer needs.”²⁷

BT's criticisms of the U.K. experience appear to be well founded. According to independent studies, these heavy-handed regulations have not only failed to create meaningful competition, they have also deterred investment by competitors and incumbent alike.²⁸ A key difference between the U.S. and the U.K. markets is the depth and breadth of cable networks and their market penetration in the U.K., which has limited the scope of cable entry into the business broadband marketplace.²⁹ Fewer than 50% of U.K. households have access to a cable network, compared to more than 99% in the U.S.³⁰ Ofcom estimates that only 22 percent of broadband connections in the U.K. occur over cable networks, as compared to more than 65 percent in the U.S.³¹

Oddly, despite its ongoing critique of U.K. regulation and Ofcom's findings back at home, BT favors this regulatory structure as a model for the FCC to follow in the U.S. In a presentation made to the FCC in June 2015, BT pointed to Ofcom's recent studies as a framework to assess competition, and praised its "effective regulation."³² BT argued that ILECs here are "dominant" and urged the FCC "to promptly re-regulate and set competitive prices for Ethernet access services."³³

The U.S. and the U.K. are, of course, distinct markets with different characteristics and different rules. It makes little sense to import U.K. regulation here, particularly given the failure of such policies to foster competition. BT's contrary view can best be explained by the fact that, in contrast to its role in the U.K., in the U.S. marketplace BT is a competitor that prefers to rely on ILEC facilities rather than risk investing in last-mile networks of its own. BT operates in the U.S. throughout its BT Americas subsidiary, which owns and operates its own network that "includes nation-wide reach to all major U.S. . . . cities," and "enables [it] to reach more than 80% of key customers' sites within a 200-mile radius."³⁴ For those last few hundred miles, however, BT has chosen not to build out facilities, but to obtain them from other providers, often the ILEC. BT is thus in the opposite position in the U.S., where it is a purchaser from the ILECs, from the one back home, where it *is* the incumbent. Here, BT stands to benefit from lower ILEC prices, and has adjusted its advocacy accordingly.

End Notes

¹ See ACG Research, *The Business Case for Ethernet Services*, Whitepaper Sponsored by Time Warner Cable Business Class, at 1 (2014), available at <http://ethernet.network-needs.com/documents/Business%20Case%20for%20Ethernet%20Services%202014.pdf> (“Compared to TDM solutions, end-to-end native Ethernet solutions offer significant savings in monthly recurring charges up to: 81% for point-to-point private line,” “44% lower for point-to-multipoint configurations,” “65% lower for multipoint-to-multipoint configurations”).

² See *Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18433, ¶¶ 2,3 (2005); *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd 5662, ¶¶ 2, 3 (2007).

³ See *Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18,433, ¶ 3 (2005) (“we find that competition for medium and large enterprise customers should remain strong after the merger because medium and large enterprise customers are sophisticated, high-volume purchasers of communications services that demand high-capacity communications services, and because there will remain a significant number of carriers competing in the market.”); *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd 5662, ¶ 3 (2007).

⁴ See, e.g., Carol Wilson, *Cable Looking Past AT&T, Verizon*, Light Reading (Dec. 4, 2015), <http://www.lightreading.com/cable/cable-business-services/cable-looking-past-atandt-verizon/d/d-id/719679> (“Bright House’s [Craig Cowden], who is chief network officer and VP-enterprise solutions, said he no longer views AT&T Inc. . . . and Verizon Communications Inc. . . . as the top players in the enterprise space, but is seeing aggressive activity from competitive players such as Level 3 Communications Inc. . . . and XO Communications Inc., as well as from over-the-top players such as 8x8 Inc. ‘AT&T and Verizon aren’t as focused on this space as they used to be,’ he commented, saying the operators seem more focused on their wireless business. ‘Other competitive operators are, but there is no reason cable can’t serve this [enterprise] market and dominate it.’”).

⁵ Compare, e.g., *Brown Shoe Co. v. United States*, 370 U.S. 294, 320, 344 (1962) (“antitrust laws protect competition not competitors”).

⁶ NCTA, *Broadband by the Numbers*, <https://www.ncta.com/broadband-by-the-numbers> (over \$245B in cable infrastructure investment since 1996); NCTA, *Setting the Record Straight on Broadband Investment* (May 13, 2014), <https://www.ncta.com/platform/public-policy/setting-the-record-straight-on-broadband-investment/> (“Infrastructure investment is cyclical in nature but over the last seven years, capital investment levels have ranged between \$13 billion and \$14.5 billion”). See also NCTA, *America’s Cable Industry: Working for Our Future: A Review of Industry Data from the 2015 Bortz Media Report*, at 11, <https://www.ncta.com/sites/prod/files/Impact-of-Cable-2014-NCTA.pdf> (“In 2014, Bortz Media estimates that cable operator capital investment totaled \$18.7 billion. Notably, the industry’s capital investment in 2014 is believed to be the industry’s largest absolute dollar commitment in more than a decade and exceeds the amounts invested during most years of the

⁷ See, e.g., USTelecom, *The Competitive Business Broadband Marketplace* at 2-7 (February 2016).

⁸ Comcast Business Press Release, *Comcast Business Announces New Unit Targeting Fortune 1000 Enterprises* (Sept. 16, 2015), <http://corporate.comcast.com/news-information/news-feed/comcast-business-announces-new-unit-targeting-fortune-1000-enterprises>.

⁹ See, e.g., Letter from Charles W. McKee, Sprint, to Marlene H. Dortch, FCC, WC Docket No. 05-25 & GN Docket No. 15-191, at 1 (Dec. 10, 2015), <http://apps.fcc.gov/ecfs/document/view?id=60001354138>.

¹⁰ See, e.g., Verizon Communications Inc., *Investor Quarterly Fourth Quarter 2012*, at 5 (Jan. 22, 2013) (Verizon Wireless 4G LTE coverage, year-end 2012: 273 million people); AT&T Inc. News Release, *AT&T 4G LTE Coverage Doubled in 2012* (Nov. 16, 2012), www.att.com/gen/press-room?pid=23553 (AT&T 4G LTE coverage, November 2012: 150 million people); Sprint Corporation News Release, *Sprint Nextel Reports Fourth Quarter and Full Year 2012 Results* (Feb. 7, 2013), http://s2.q4cdn.com/578722565/files/doc_financials/quarterly/2012/1001172361.PDF (Sprint 4G LTE coverage, year-end 2012: 58 cities); Verizon Communications Inc., *Investor Quarterly Fourth Quarter 2013*, at 5 (Jan. 21, 2014) (Verizon Wireless 4G LTE coverage, year-end 2013: 305 million people); AT&T Inc., *2013 Annual Report*, at 22 (Feb. 21, 2014), http://www.att.com/Investor/ATT_Annual/2013/downloads/ar2013_annual_report.pdf (AT&T 4G LTE coverage, year-end 2013: 280 million people); T-Mobile US, Inc., Form 10-K, at 5 (SEC filed Feb. 19, 2015), <https://www.sec.gov/Archives/edgar/data/1283699/000128369915000010/tmus12312014form10-k.htm> (T-Mobile USA 4G LTE coverage, year-end 2013: 200 million people); Sprint Corp. News Release, *Sprint Reports Fourth Quarter and Full Year 2013 Results* (Feb. 11, 2014), http://s2.q4cdn.com/578722565/files/doc_financials/quarterly/2013/1500056456.PDF (Sprint 4G LTE coverage, year-end 2013: 200 million people).

¹¹ See, e.g., Paul Taylor, *Sprint to Shut Down Nextel Network*, Financial Times (May 29, 2012), <http://www.ft.com/intl/cms/s/0/1f03cb7a-a9c9-11e1-a6a7-00144feabdc0.html#axzz3uUdaPPNg> (“Sprint Nextel, the third-largest US mobile network operator by subscriber numbers, plans to shut down its Nextel network next year, marking the end of a disastrous ‘marriage of equals’ which began in 2004 when Sprint announced plans to acquire Nextel for \$35bn.”).

¹² Ryan Knutson, *Sprint to Cut Jobs, Up to \$2.5 Billion in Costs*, Wall St. J. (Oct. 1, 2015), <http://www.wsj.com/articles/sprint-expected-to-cut-jobs-up-to-2-5-billion-in-costs-1443737398> (“Sprint hasn’t posted an annual profit since 2006.”).

¹³ See John Cox, *Is Sprint Losing Its WiMAX/4G Gamble?*, Network World (July 26, 2010), <http://www.networkworld.com/article/2214649/wireless/is-sprint-losing-its-wimax-4g-gamble-.html> (“At the same time, WiMAX is losing ground in the United States to LTE. A 2009 IBM survey of telecom companies found that just 8% of mobile operators said that WiMAX was critical to their success over the next five years, compared to 67% for LTE. ‘It is increasingly looking like WiMAX will have a tough time in North America,’ says mobile analyst Jack Gold. Others are more emphatic. ‘It’s over,’ says Paul DeBeasi, a research director at Gartner.”); Doug Mohny, *Sprint’s Big Mistake: Upgrading*

by Clearwire, ultimately left Sprint stuck clearly owning Clearwire and its assets in July 2013. The WiMAX network, billed as the first ‘4G’ network in the U.S., will be shut down in 2015 – seven years after launch.”).

¹⁴ Scott Moritz, *Sprint’s Cost Structure Is “Bloated,” New CFO Robbiati Says*, Bloomberg Business (Oct. 9, 2015), <http://www.bloomberg.com/news/articles/2015-10-09/sprint-s-cost-structure-is-bloated-new-cfo-robbiati-says> (citing Sprint Corp. Chief Financial Officer Tarek Robbiati).

¹⁵ Ryan Knutson, *Sprint to Cut Jobs, Up to \$2.5 Billion in Costs*, Wall St. J. (Oct. 1, 2015), <http://www.wsj.com/articles/sprint-expected-to-cut-jobs-up-to-2-5-billion-in-costs-1443737398> (“Sprint says it has the highest cost as a percentage of revenue among the major wireless carriers, therefore the cuts are necessary to remain competitive.”).

¹⁶ Sprint Corp., Form 10-K, at 27 (SEC filed May 26, 2015), <http://www.sec.gov/Archives/edgar/data/101830/000010183015000012/sprintcorp201410-k.htm>.

¹⁷ See *Sprint Looks to a New Future with Softbank, But Subscriber Growth a Concern*, Seeking Alpha (Aug. 1, 2013), <http://seekingalpha.com/article/1596742-sprint-looks-to-a-new-future-with-softbank-but-subscriber-growth-a-concern> (“Going forward, with the iDEN network shut down and the U.S. wireless market nearing saturation, Sprint will find it even tougher to find new subscribers given its lagging 4G LTE coverage as compared to rivals Verizon and AT&T.”); Chris Neiger, *Here’s One Area Where T-Mobile Still Trails Sprints*, The Motley Fool (Aug. 23, 2015), <http://www.fool.com/investing/general/2015/08/23/heres-one-area-where-t-mobile-still-trails-sprint.aspx> (“Those additions, and Sprint’s loss of customers over the past few years, have made T-Mobile the third-largest wireless carrier by subscriber numbers, surpassing Sprint’s subscriber count by about two million.”).

¹⁸ See Kevin Fitchard, *It’s Lonely at the Bottom: Sprint Falls to No. 4 in Mobile Subscriber Ranks*, Fortune (Aug. 4, 2015), <http://fortune.com/2015/08/04/sprint-mobile-subscriber/> (“For more than a decade, Sprint has had to be content with the third place in the race for the most mobile subscribers. That trend ended today, but not in the way CEO Marcelo Claure would have liked. Sprint is now the smallest of the four nationwide mobile operators, giving up its 3rd place slot to T-Mobile.”).

¹⁹ David Beren, *T-Mobile Says “Backhaul Strategy Key to A Competitive 4G Experience,”* TmoNews: The Unofficial T-Mobile Blog (Aug. 1, 2012), <http://www.tmonews.com/2012/08/t-mobile-says-backhaul-strategy-key-to-a-competitive-4g-experience/>; Wayne Rash, *T-Mobile LTE Backhaul Nearly Complete*, FierceMobileIT (Aug. 7, 2012), <http://www.fiercemobileit.com/story/t-mobile-lte-backhaul-nearly-complete/2012-08-07> (Mayo [T-Mobile’s Senior Vice President of Technology] noted that T-Mobile is eliminating the old T1 lines from its system, and that all but a handful have already been replaced with fast network connections. He did say that many of T-Mobile’s competitors still use those slow T1s. He also said that the company has nearly reached its goal of building out all of the sites it needs for LTE deployment. ‘Our aspiration is to have 37,000 modernized sites,’ Mayo said.”); Carol Wilson, *Level 3: Mobile Backhaul Brutally Competitive*, Light Reading (Oct. 7, 2011), <http://www.lightreading.com/mobile/backhaul/level-3-mobile-backhaul-brutally-competitive/v/d-id/705103> (video interview of Amanda Tierney of Level 3, noting that “4G is really the catalyst for the ubiquity of Ethernet and the ubiquity of fiber to the tower.”).

²¹ See T-Mobile Earnings Report: Q3 2015 Conference Call Transcript (Oct. 28, 2015), <http://www.thestreet.com/story/13341417/1/t-mobile-us-inc-tmus-earnings-report-q3-2015-conference-call-transcript.html> (statement by Neville Ray, EVP & CTO, T-Mobile).

²² *Id.* (Neville Ray, EVP & CTO, T-Mobile: “For us, I mean to be quite frank, we resolved our backhaul problem for our sale sites several years ago. We embarked on a fiber to the [cell] strategy. It’s five years ago, and that’s been a huge help for us with our LTE rollout. . . . Much of what we’ve been doing on expanding the footprint has driven us into obviously more rural parts of America and backhaul is tougher to find, but that’s less of a special access issue I think.”).

²³ See Ofcom, *Business Connectivity Market Review: Review of Competition in the Provision of Leased Lines*, § 3.18 (May 15, 2015) (“BT’s physical network is ubiquitous in the UK and BT can deliver leased lines almost everywhere in the country except in the Hull area, where KCOM is the main provider of physical network. BT’s significant network presence means that it can use this network to self-supply (nearly) all downstream retail services as well as selling services to others CPs that do not have the same level of network coverage.”).

²⁴ See Ex Parte Letter from Sheba Chacko, BT Americas Inc., to Marlene H. Dortch, FCC, WC Docket No. 05-25, RM-10593, GN Docket No. 13-5, at 2 & n.4 (FCC filed June 3, 2015) (describing “regulatory safeguards” as including “functional separation of BT in the UK for a decade” and “equivalence of input obligations on the functionally separated entity, BT openreach, that supplies Ethernet services to BT affiliates and competitors on an absolutely equivalent basis”).

²⁵ See Ofcom, *Business Connectivity Market Review: Review of Competition in the Provision of Leased Lines*, § 4.3.4.2 (May 15, 2015).

²⁶ BT’s Response to Ofcom’s Consultation Document § 1.3 (July 31, 2015) (“BT July 31, 2015 Response”).

²⁷ *Id.* § 1.1.

²⁸ See, e.g., J. Gregory Sidak & Andrew P. Vassallo, *Did Separating Openreach from British Telecom Benefit Consumers?*, 38 *World Competition: Law and Economics Review*, at 25 (Mar. 2015), <http://www.experts.com/content/articles/Gregory-Sidak-Did-Separating-Openreach-British-Telecom-Benefit.pdf> (“The evidence above is consistent with the conjecture that functional separation has deterred investment in superior broadband technology in the United Kingdom. Communications providers have indicated that they have no intention of laying their own fiber. Moreover, they have announced intentions to rent Openreach’s fiber at the same low prices that they pay for access to copper.”).

²⁹ See, e.g., Ofcom, *Infrastructure Report 2014*, at 19, § 3.3 (Dec. 8, 2014), <http://stakeholders.ofcom.org.uk/binaries/research/infrastructure/2014/infrastructure-14.pdf> (“Ofcom Infrastructure Report 2014”) (Virgin Media covers 44% of UK premises”).

³⁰ IHS Inc. and Valdani Vicari & Associati Consulting, *Broadband Coverage in Europe 2014: Mapping Progress Towards the Coverage Objectives of the Digital Agenda*, at 26 & 96 (2015) (study

³¹ See Ofcom Infrastructure Report 2014 at 44 § 3.83 & Fig. 23 (“the majority (59%) of connections in the UK are ADSL2 or ADSL2+, despite [Next-Generation-Access] coverage of 78% nationally. Seven per cent of UK broadband connections are still operating on the most basic ADSL technology; 22% are on Virgin Media DOCSIS, 12% on FTTC and 0.1% on FTTP.”); Ind. Anal. & Tech. Div., Wireline Competition Bureau, FCC, *Internet Access Services: Status as of December 31, 2013*, at 28, Chart 12 (Oct. 2014), https://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db1016/DOC-329973A1.pdf (cable modem share of residential fixed connections of at least 3 Mbps downstream and 768 kbps upstream, as of December 31, 2013).

³² See BT, *UK – Regulation of Leased Lines and Benefits for Consumers* (June 1, 2015), attached to Ex Parte Letter from Sheba Chacko, BT, to Marlene H. Dortch, FCC, WC Docket No. 05-25, RM-10593, GN Docket No. 13-5 (FCC filed June 3, 2015).

³³ Ex Parte Letter from Sheba Chacko, BT, to Marlene H. Dortch, FCC, WC Docket No. 05-25, RM 10593 & 11358, GN Docket No. 13-5, PS Docket No. 14-174 (FCC filed Dec. 3, 2014).

³⁴ BT, *U.S. & Canada*, <http://btplc.com/Careercentre/Ourlocations/USA/index.htm>.