

course of the next three to five years, and what it needs to do to keep up with rapidly growing data demand. In response, Verizon stated:

As we said before, we think we are in a very good spectrum position. We think we have the spectrum we need, and are in a good position until about the year 2015 at this point. And we will continue to keep our eyes open to see where we need to buy spectrum or secure spectrum. But right now we are in a very, very good position. I'm not going to speak to the competitor [AT&T]. You can ask those questions as to why they did this and why they needed the spectrum, but I think we're in a very good position.³¹⁰

In the Application, AT&T provides no reasonable explanation as to why it faces a spectrum crunch, particularly when a very similarly situated competitor expresses strong confidence in its own spectrum position. Most likely, it is because AT&T lacks Verizon's commitment "to expand our 4G LTE footprint and invest the necessary capital in 3G to stay ahead of the data demand curve."³¹¹

AT&T's failure to invest the necessary capital in its network can be seen by comparing the two carriers' use of spectrum on a per-subscriber basis.

| | Total Spectrum (nationwide pop-weighted) | Total Subscribers | Spectrum per Subscriber (MHz per million subs) |
|---------|---|-------------------|---|
| Verizon | 88 MHz | 94.1 million | 0.94 |
| AT&T | 99 MHz ³¹² | 86.2 million | 1.15 |

³¹⁰ *Id.* at 17. Like many wireless carriers, Verizon supports the allocation of additional spectrum for mobile broadband, and recently pointed out the need for additional allocations to avoid a spectrum crunch in the future. But at the same time Verizon indicated that it currently has strong spectrum holdings and that any spectrum shortage it would face in the absence of new allocations "is five to ten years down the road." Rich Karpinski, *TIA 2011: Genachowski, Hutchison Push Hard on Spectrum*, TIA2011CONNECTED (May 20, 2011), available at: <<http://tia2011connected.com/stories/tia-2011-genachowski-hutchison-push-hard-on-spectrum-0520/>>.

³¹¹ Verizon 2011 Investor Presentation at 3.

³¹² The 99 MHz of spectrum attributed to AT&T on a nationwide, population-weighted basis

Compared to AT&T, Verizon is doing more with less due to its network investments and smarter network management practices. AT&T is not using its spectrum nearly as efficiently as its nearest rival. Most important, this analysis proves robust because, unlike a comparison with Sprint, Verizon and AT&T basically hold the same *categories* of spectrum. That is, the Twin Bells both hold high-value, low-frequency, broad-ecosystem cellular and 700 MHz spectrum as well as high-value, broad-ecosystem PCS and AWS spectrum. Therefore, the table above suffers from none of the “apples-to-oranges” comparison problems that would occur if disparate materially lower-value bands were introduced into the analysis. In short, AT&T’s poor network performance has nothing to do with spectrum and everything to do with years of ill-advised decisions to invest far below the industry average in its network infrastructure.

4. AT&T’s Own Prior Statements Undermine the Claims in Its Application

Although AT&T claims in the Application that it faces severe capacity constraints and is “using up its spectrum at an accelerating rate,”³¹³ it has told a different story to Wall Street. In its quarterly earnings calls and other forums over the past three years, it has repeatedly and consistently reassured investors that it has the network capacity to meet the exploding demand for mobile data services:

January 2011: “[W]e’re really starting to feel good about the network situation. We’re making a lot of progress here. . . . [W]e had a significant clearing of backlog from our vendors in December. We were having some serious capacity constraints in key markets, and we really saw the backlogs clear. And we spent the last 45 days literally just bringing capacity online in a rather dramatic fashion, and we’re seeing those numbers move. And so you put all this together, we actually feel like, again, with a little volatility

includes AT&T’s current 700 MHz, 850 MHz cellular band, PCS, AWS, and WCS spectrum holdings, but does not include Qualcomm’s 700 MHz spectrum or other 700 MHz licenses AT&T is seeking to acquire. See Stravitz Decl. ¶ 15, n.5.

³¹³ Application at 3, 25-30.

in the first part of the year, we can grow contract subscribers through the course of this year.”³¹⁴ Randall Stephenson, Chairman and CEO, AT&T (2010 Fourth Quarter Earnings Call)

October 2010: “[W]e’re really excited about our network road map. We have the nation’s fastest mobile broadband network today, and the best transition plan in the market. Because of the technology choices we have made, we will have a significant advantage for the next couple of years at least, and customers are starting to get it.”³¹⁵ Ralph de la Vega, CEO of AT&T Mobility and Consumer Markets and President of Mobility and Consumer Markets (2010 Third Quarter Earnings Call)

April 2010: “With our GSM technology foundation, a seamless path through HSPA to LTE, we’ve got a terrific technology path going forward for customers, and we believe the best path forward to capture the next wave of wireless growth.”³¹⁶ Rick Lindner, CFO, AT&T (2010 First Quarter Earnings Call)

January 2010: “The industry has seen unprecedented growth in wireless broadband volumes. . . . Customers with smartphones with advanced data capabilities are more engaged more times per day, evidenced by their usage profiles. Their expectations are higher, because the value and utility are higher. . . . To get ahead of these changes in volumes and expectations, we have executed a number of major initiatives. . . . In short, we have got an aggressive plan; we are working closely with equipment companies. Together, we are creating solutions that will benefit everyone, as usage continues to grow across the industry.”³¹⁷ John Stankey, President and CEO, AT&T Operations (2009 Fourth Quarter Earnings Call)

October 2009: “As everybody knows, we are seeing a data explosion that we have never seen, at least in my history in wireless. . . . And what all of these device manufacturers have realized is that benefit of HSPA and GSM technology that when they make a device, it can be a device that can sell anywhere in the world and that’s a unique advantage to our network, so I feel good about our network capability and reach and technology capabilities, as well as some great devices that are going to be running on that

³¹⁴ Transcript of AT&T Inc. Q4 2010 Earnings Conference Call (Jan. 27, 2011), *available at:* <<http://seekingalpha.com/article/249133-at-t-s-ceo-discusses-q4-2010-results-earnings-call-transcript?part=qanda>>.

³¹⁵ Transcript of AT&T Inc. Q3 2010 Earnings Conference Call (Oct. 21, 2010), *available at:* <<http://seekingalpha.com/article/231453-at-t-management-discusses-q3-2010-results-earnings-call-transcript?source=thetstreet>>.

³¹⁶ Transcript of AT&T Inc. Q1 2010 Earnings Conference Call (Apr. 21, 2010), *available at:* <<http://seekingalpha.com/article/200029-at-amp-t-inc-q1-2010-earnings-call-transcript>>.

³¹⁷ Transcript of AT&T Inc. Q4 2009 Earnings Conference Call (Jan. 28, 2010), *available at:* <<http://seekingalpha.com/article/185524-at-amp-t-inc-q4-2009-earnings-call-transcript>>.

network.”³¹⁸ Ralph de la Vega, CEO of AT&T Mobility and Consumer Markets and President of Mobility and Consumer Markets (2009 Third Quarter Earnings Call)

April 2009: “We feel very good about our spectrum position. . . . And we say that with full understanding of what the data demands will be.”³¹⁹ Scott McElroy, Vice President of Technology Realization, AT&T Mobility (Interview)

October 2008: “At AT&T, we have assembled a truly outstanding spectrum position. . . . We have a solid foundation in GSM and high quality spectrum and I feel very good about AT&T’s wireless technology path. In fact, when you combine the quality and depth of our spectrum[,] our clear technology path, and our premiere device lineup, I believe it is clear that we are in the best position of all U.S. carriers to drive wireless data growth.”³²⁰ Ralph de la Vega, CEO of AT&T Mobility and Consumer Markets and President of Mobility and Consumer Markets (2008 Third Quarter Earnings Call)

The Applicants’ assertions about AT&T’s purported spectrum constraints cannot be squared with what AT&T has been telling investors for three years. It is no surprise that AT&T’s sudden change in position has been greeted with skepticism, including a recent article entitled, “The Truth Could Kill the AT&T T-Mobile Deal: Nobody is Buying AT&T’s Justification for T-Mobile Acquisition.”³²¹

³¹⁸ Transcript of AT&T Inc. Q3 2009 Earnings Conference Call (Oct. 22, 2009), *available at:* <<http://seekingalpha.com/article/168288-at-amp-t-q3-2009-earnings-call-transcript?part=qanda>>.

³¹⁹ Kevin Fitchard, *AT&T Doubling 3G Capacity*, CONNECTED PLANET (Apr. 20, 2009), *available at:* <<http://connectedplanetonline.com/wireless/news/att-3g-network-capacity-increase-0420/>>.

³²⁰ Transcript of AT&T Inc. Q3 2008 Earnings Conference Call (Oct. 22, 2008), *available at:* <<http://seekingalpha.com/article/101193-at-amp-t-q3-2008-earnings-call-transcript>>.

³²¹ Dave Burstein, *The Truth Could Kill the AT&T T-Mobile Deal: Nobody is Buying AT&T’s Justification for T-Mobile Acquisition*, BROADBAND DSL REPORTS (Apr. 7, 2011) (“AT&T President John Stankey has been insisting for two years that spectrum shortages were not the cause of their network problems.”), *available at:* <<http://www.dslreports.com/shownews/The-Truth-Could-Kill-the-ATT-T-Mobile-Deal-113606>>.

D. The Applicants' Efficiency Arguments Are Not Merger-Specific Because They Can Alleviate Any Alleged Capacity Restraints Through a Range of Other Measures

AT&T currently has very substantial spectrum holdings, including a large amount of unused spectrum, available to meet consumer demand for its services. AT&T also has a range of options to use its spectrum more efficiently and increase subscriber capacity without eliminating one of its three national rivals. AT&T's predecessor companies made similar, non-merger-specific capacity constraint arguments in the *AT&T-Cingular* proceeding, prompting the Commission to discount such claims:

[The alleged] benefit is difficult to quantify in terms either of effect or time, and we are also not convinced that this benefit is fully merger-specific. We accept that Cingular will acquire spectrum more quickly via this transaction than it is likely to via auction, at least in some markets. However, while the merged entity will be able to concentrate its resources and efforts in the construction of one next-generation network, instead of two, we are not convinced that Cingular could not have achieved at least some of these same network gains by investing a portion of the \$41 billion purchase price associated with this transaction into improvements to its own network.³²²

The Applicants' capacity constraint arguments in the instant proceeding are even more tenuous and should similarly be dismissed as non-merger-specific.³²³ AT&T could achieve the same spectrum efficiencies it claims it would achieve through the proposed transaction by investing in a range of network management practices and technologies such as those described

³²² *AT&T-Cingular Merger Order* ¶ 225. In the *AT&T-Cingular* proceeding, the Commission concluded that while the transaction was likely to result in some public interest benefits, the benefits were not sufficiently large or imminent to outweigh the potential harms, which caused the Commission to impose conditions on its approval of the transaction. The instant transaction would impose far more serious public interest harms that cannot be remedied by conditions or divestitures.

³²³ See CRA Decl. ¶ 187 (AT&T “does not explain (or provide sufficient data and analysis to show) why other practical alternatives could not have provided some or all of the capacity expansion it claims for the merger.”).

below and in the Stravitz Declaration. As explained in the Stravitz Declaration, even in the absence of the proposed transaction, AT&T has three “levers” – putting to use the large amount of fallow spectrum it currently holds, upgrading its network to LTE, and deploying a heterogeneous network topology that includes both macro and small cells – that will dramatically increase its network capacity and allow it to meet consumer demand.³²⁴ Moreover, like every other wireless carrier, AT&T will have opportunities to add long-term network capacity through future FCC spectrum auctions. AT&T could also choose to pursue additional spectrum through the secondary markets.

1. Expediting Migration to New Services

AT&T claims that its capacity restraints are exacerbated by its need to support multiple generations of technology – second generation GSM technology, third generation UMTS/HSPA technology, and fourth generation LTE technology.³²⁵ But AT&T is hardly unique in this regard. Sprint, for example, provides service to subscribers using iDEN and CDMA (including both second generation CDMA and third generation EV-DO) technologies, and provides fourth generation WiMAX service through its arrangement with Clearwire. Verizon is providing second and third generation CDMA service (CDMA-1XRTT and EV-DO) nationwide, LTE service in numerous markets, and GSM service in certain areas as a result of its purchase of ALLTEL and other carriers.³²⁶ In many ways, Verizon and Sprint face a more difficult task in supporting multiple technologies with their spectrum holdings. LTE is part of the same family of technologies that have evolved from GSM, providing AT&T an easier, forward-compatible

³²⁴ Stravitz Decl. ¶ 42.

³²⁵ Application at 22-25.

³²⁶ Verizon Communications, Inc., Annual Report (Form 10-K), at 6-7 (Feb. 28, 2011). *See also* Stravitz Decl. ¶ 20.

deployment scenario for its network equipment and subscriber handsets.³²⁷ Verizon and Sprint, in contrast, must deal with the fact that their 4G and earlier generation networks are from different technology families, making the design of their devices and infrastructure more challenging.

AT&T is thus in a stronger position to take consumer-friendly steps to expedite the migration of subscribers to newer generations of technology, which in turn facilitate the repurposing of a carrier's existing spectrum for newer technologies. Existing subscribers will have an incentive to upgrade to new handsets if the new service offers faster speeds and more features and applications. Indeed, even without taking targeted steps to expedite migration and even in a bad economy, the average subscriber gets a new cell phone every eighteen months.³²⁸ As the economy improves, and as consumers learn more about the benefits of 4G technologies, the cell phone replacement rate is likely to be faster – as it had been prior to the national economic slowdown.

³²⁷ See Stravitz Decl. ¶ 21. See also W. David Gardner, InformationWeek, *AT&T Announces LTE Suppliers, Timetable* (Feb. 10, 2010) (quoting AT&T executive as stating that “AT&T has a key advantage in that LTE is an evolution of the existing GSM family of technologies that powers our network and the vast majority of the world's global wireless infrastructure today”), available at: <<http://www.informationweek.com/news/infrastructure/management/222700797>>; Transcript of AT&T Inc. Q1 2010 Earnings Conference Call (Apr. 21, 2010) (statement of Rick Lindner, Senior Executive V.P. and CFO, AT&T Inc.) (“With our GSM technology foundation, a seamless path through HSPA to LTE, we’ve got a terrific technology path going forward for customers, and we believe the best path forward to capture the next wave of wireless growth.”), available at: <<http://seekingalpha.com/article/200029-at-amp-t-inc-q1-2010-earnings-call-transcript>>.

³²⁸ Matt Richtel, *Consumers Hold On to Products Longer*, N.Y. TIMES, Feb. 25, 2011 (“Industry analysts also report that people on average upgrade their cellphones every 18 months, up from every 16 months just a few years ago.”), available at: <<http://www.nytimes.com/2011/02/26/business/26upgrade.html>>.

AT&T, which calls itself “an industry leader in smartphone and data-centric device customers,”³²⁹ can leverage its large spectrum holdings and 4G technology plans to accelerate the migration of its existing subscribers to this new technology. The Application never adequately explains why AT&T cannot step up its efforts to migrate its subscribers to more efficient LTE technology. As the Application recognizes, “LTE is . . . about 860 percent more spectrally efficient than GSM.”³³⁰ LTE technology (particularly Release 10) is evolving towards even greater spectral efficiencies.³³¹ The first step AT&T should take is to expedite deployment of LTE on its unused 700 MHz and AWS spectrum. As noted above, AT&T is well behind Verizon, Sprint, Clearwire, and MetroPCS in deploying 4G technologies. The faster it deploys LTE, the sooner its subscribers will have the ability to migrate to AT&T’s 4G service and the sooner AT&T will be able to reduce the capacity demands of its 2G and 3G networks. The subscribers who place the largest data demands on networks through their use of smartphones and other data-hungry devices will naturally be attracted to upgrading to a 4G service that offers faster speeds. AT&T can also accelerate migration to newer technologies by offering larger discounts on the newer services and devices, reducing the amount of spectrum it needs to dedicate to GSM as well as UMTS/HSPA services.³³²

³²⁹ Declaration of Rick L. Moore, attached to Applications of AT&T Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses and Authorizations, WT Docket No. 11-65, ¶ 7 (Apr. 21, 2011) (“Moore Decl.”)

³³⁰ Application at 24.

³³¹ Stravitz Decl. ¶ 64 (describing LTE Release 10 spectral efficiencies as “nearly equivalent to the increase that AT&T will realize in upgrading from HSPA+ to LTE”).

³³² See CRA Decl. ¶ 187 (AT&T “does not explain why it would not be practical to use incentives, promotions, or other means to achieve more rapid migration.”); Stravitz Decl. ¶ 22 (“All carriers provide deadlines for the transition of subscribers from legacy networks and offer incentives to move to new, more efficient devices, supported by the latest network technology.”)

In many ways, however, AT&T has pursued a path that has *slowed* migration to more spectrally efficient networks. For example, AT&T continues to subsidize and sell GSM phones rather than steering as many customers as possible to substantially more efficient 3G and 4G devices.³³³ In addition, AT&T has yet to deploy its flagship smartphone – the Apple iPhone 4 – to take advantage of HSPA+ technology. Instead, subscribers using AT&T’s most popular device continue to use HSPA 7.2 technology, which uses 15 percent more radio resources than a HSPA+ device.³³⁴ As a result, “the full potential of HSPA+ speed is unavailable to help relieve capacity constraints for AT&T’s most important, data-hungry customers.”³³⁵ AT&T also appears to have failed to “pre-seed” the market with LTE-ready devices that could deliver immediate network capacity gains when AT&T eventually begins providing LTE service.³³⁶ “If it were behaving as a prudent steward of its spectrum resources, AT&T would already be pre-seeding the market with LTE/HSPA+ devices as a means of ensuring the timely transition of data traffic from its older-generation networks to its far more efficient next generation systems.”³³⁷

These incentives come in the form of subsidized or free mobile devices upgrades, discounted services, and flexible contract terms.”).

³³³ Stravitz Decl. ¶ 17.

³³⁴ *Id.* ¶ 18.

³³⁵ *Id.*

³³⁶ *Id.* (“Pre-seeding, a common industry practice, is a process by which mobile network operators introduce devices capable of running on a more advanced, yet-be-launched, network, that are still compatible with existing networks. In doing so, mobile network operators establish an installed user base that is ready to take advantage of the newest network when it is launched.”).

³³⁷ *Id.* ¶ 19.

AT&T consequently can address its alleged capacity constraints by more aggressively pursuing well-established customer migration strategies to maximize the efficient use of its spectrum. AT&T should not need to continue dedicating so much spectrum to its GSM service “well into this decade” and to its UMTS/HSPA service for “even longer” and cannot reasonably claim that it has no alternative to supporting its customers other than the proposed takeover.³³⁸ AT&T may have business reasons for avoiding a faster migration schedule, but, from a spectrum efficiency and public interest perspective, its projected schedule is too conservative and demonstrates a failure to make the necessary investments to accelerate the migration of its subscribers to newer and more efficient technology.

2. Using State-of-the-Art Network Technologies

The Applicants’ spectrum constraint arguments also reflect outdated assumptions about network technologies. As the Stravitz Declaration explains, “[t]here are many economically viable and focused engineering solutions available to mobile network operators that can relieve substantial congestion on their networks. However, AT&T has not fully employed the full range of widely-available solutions to help address the significant growth in mobile data demand.”³³⁹ Although AT&T claims its network cannot handle increased data traffic while supporting three different technologies across different spectrum bands, it ignores various innovative solutions that would greatly increase its network capacity without the proposed takeover.

Software-Defined Radio. Software-defined radio is a cost-efficient technology that would allow AT&T to integrate its multiple networks into a common, multimode, multiband

³³⁸

Application at 23.

platform.³⁴⁰ The enormous spectrum efficiencies and flexibility this technology provides prompted Sprint in December 2010 to announce its “Network Vision” plan to incorporate software-defined radio technology in its networks within the next few years.³⁴¹ Software-defined radio technology would similarly offer AT&T a clear, proven solution to its alleged capacity constraints. In contrast to the proposed transaction, which takes capacity out of the industry, using software-defined radio is a pro-competition, pro-innovation, capacity-additive solution that AT&T could initiate today and complete within the next few years at a fraction of the cost of its proposed merger.³⁴²

Heterogeneous Networks and Small-Cell Technologies. Wireless technology is evolving toward heterogeneous networks that provide carriers the option of using a mix of macro cells, micro cells, and femto cells to maximize the efficient use of spectrum and greatly increase

³⁴⁰ 47 C.F.R. § 2.1 (defining “software defined radio” as a “radio that includes a transmitter in which the operating parameters of frequency range, modulation type or maximum output power (either radiated or conducted), or the circumstances under which the transmitter operates in accordance with Commission rules, can be altered by making a change in software without making any changes to hardware components that affect the radio frequency emissions”).

³⁴¹ With Network Vision, Sprint will consolidate these multiple networks into one seamless infrastructure by implementing multi-mode technology to enhance service and create network flexibility. See *What Is Software-Defined Radio*, WIRELESS INNOVATION FORUM, available at: <http://www.wirelessinnovation.org/page/Introduction_to_SDR> (last visited May 5, 2011) (“Traditional hardware based radio devices limit cross-functionality and can only be modified through physical intervention. This results in higher production costs and minimal flexibility in supporting multiple waveform standards. By contrast, software defined radio technology provides an efficient and comparatively inexpensive solution to this problem, allowing multi-mode, multi-band and/or multi-functional wireless devices that can be enhanced using software upgrades.”).

³⁴² In addition to software-defined radio, vendors (including Nokia Siemens Networks, Alcatel-Lucent, Ericsson, and others) are offering equipment upgradeable to LTE with just the addition of new LTE cards in the carrier’s cell sites rather than requiring a complete infrastructure overhaul, as was the case in upgrading 2G networks to 3G. The use of this upgrade technology significantly facilitates the transition to newer generation networks and the refarming of spectrum to support the newer networks.

network capacity. UMTS/HSPA+ technology can support such heterogeneous networks, and LTE standards in particular will incorporate these new innovations. Indeed, standards to promote heterogeneous networks are expected to be defined next year in LTE Release 10.³⁴³ The use of these innovative network topologies, including small-cell technologies, allows carriers to increase the reuse of their spectrum and thereby greatly increase network capacity. The Commission’s Technical Advisory Council, which includes an AT&T representative as a member, recently recognized that accelerating deployment of small-cell technologies “would meet growing market demand for mobile broadband in dense, urban areas”³⁴⁴

The Application fails to explain why AT&T cannot address many if not all of its alleged capacity challenges through the greater use of heterogeneous networks and small-cell technology. Many of AT&T’s arguments, as well as its plans for integrating T-Mobile cell sites, seem premised on the continuation of a macro-cell based architecture. As the Stravitz Declaration states, “AT&T’s focus on increasing its macro-cell density through the [T-Mobile] acquisition is ill-conceived and against the growing trend of utilizing small-cell site-based network architectures.”³⁴⁵ The Applicants’ claims regarding the benefits of combining the AT&T and T-Mobile networks should be given no weight when the Application fails to account for the efficiency gains AT&T could generate through the use of more efficient, more innovative network topologies.

³⁴³ See Stravitz Decl. ¶¶ 47-48.

³⁴⁴ Memorandum from Tom Wheeler, Chairman, Technical Advisory Council, to Chairman Genachowski, FCC, at 3 (Apr. 22, 2011), *available at*: <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-306065A1.doc>.

³⁴⁵ Stravitz Decl. ¶ 50.

WiFi and In-Building Systems. Although AT&T has deployed WiFi hotspots, data in the Application indicates that only “an extremely small percentage of AT&T’s data traffic is likely being carried via the high-efficient and low-cost Wi-Fi network.”³⁴⁶ The installation of more Wi-Fi hotspots, particularly in areas of high smartphone usage, would offload a large portion of AT&T’s data traffic onto WiFi networks and free up substantial capacity on AT&T’s wireless network. For example, AT&T could increase the number of home-based WiFi systems and facilitate greater customer use of these systems.³⁴⁷ AT&T could also install more in-building wireless systems (primarily enabled by Distributed Antenna Systems) in areas of high data traffic.³⁴⁸ The Application fails to provide a sufficient explanation why these solutions cannot help AT&T address its alleged capacity constraints.

3. Cell Splitting Through the Installation of New Cell Sites

AT&T can also address its alleged capacity constraints by installing new cell sites in areas where its network is congested.³⁴⁹ By doing so, it can implement any necessary “cell splitting” to increase the utilization of its spectrum in the absence of the proposed transaction. In most areas, AT&T can install new base stations on existing towers, obviating the need to install a new tower. There are a host of tower companies that offer to lease tower space in virtually every area of the country. Many of these existing towers have capacity available for new base

³⁴⁶ *Id.* ¶ 53.

³⁴⁷ *Id.* ¶¶ 55, 58.

³⁴⁸ *Id.* ¶ 56.

³⁴⁹ *Id.* ¶¶ 44-46. The Application argues that the proposed takeover will allow AT&T to integrate T-Mobile cell sites into its network and create greater network capacity through cell-splitting, but, as explained in Part B, Section II.E., *infra.*, AT&T fails to provide verifiable facts to substantiate this argument. The proposed takeover is also unnecessary to achieve any such cell-splitting capacity gains because, as explained above, AT&T has numerous options for achieving the same objectives in the absence of the takeover.

stations.³⁵⁰ For example, a recent article reported that “AT&T and other wireless operators could double the amount of capacity they supply with current spectrum by investing more in new wireless equipment on existing cell towers,” and quoted the CEO of American Tower, one of the nation’s leading tower companies, as saying that “[o]ur tower sites are about 50 percent loaded on average.”³⁵¹ Even where towers are currently at capacity, they often can be readily modified to add additional space. American Tower has stated that “[w]e believe that of our towers that are currently at or near full structural capacity, the vast majority can be upgraded or augmented to meet future tenant demand, with relatively little capital investment.”³⁵²

Even assuming AT&T cannot find available tower space in a specific area, it can still enter into tower-sharing arrangements with other carriers or acquire existing towers from current owners. Interestingly, just a few months ago T-Mobile expressed interest in selling its cell towers to raise capital. In particular, at a January 20, 2011 investor conference, DT’s CEO stated that “[w]e are among other options . . . ready to consider a potential sale of . . . non-strategic core

³⁵⁰ See, e.g., American Tower Corp., Annual Report (Form 10-K), at 4 (Feb. 28, 2011) (“As a result of wireless industry capital spending trends in the markets we serve, we anticipate consistent demand for our communications sites because they are attractively located for wireless service providers and have capacity available for additional tenants.”) (“American Tower Corp. Annual Report”); Crown Castle International Corp., Annual Report (Form 10-K), at 1-2 (Feb. 15, 2011) (“We seek to maximize [our] site rental revenues derived from our towers by co-locating additional tenants on our towers through long-term contracts as our customers deploy and improve their wireless networks.”). See also *14th CMRS Competition Report* ¶ 288 (“Co-locating base station equipment on an existing structure is often the most efficient and economical solution for existing and new wireless service providers that need new cell sites.”).

³⁵¹ Spencer Ante and Amy Schatz, *Skepticism Greets AT&T Theory: Telecom Giant Says T-Mobile Deal Will Improve Network Quality, but Experts See Other Options*, WALL ST. J., Apr. 4, 2011, available at: <<http://online.wsj.com/article/SB10001424052748703806304576236683511907142.html>>.

³⁵² American Tower Corp. Annual Report at 4.

assets, for example the U.S. tower portfolio.”³⁵³ By acquiring access to T-Mobile’s towers, rather than eliminating T-Mobile as a competitor, AT&T would gain tower space at the same cell sites it claims are so important to enhance its network capacity. T-Mobile, in turn, could lease space on the towers to accommodate its base station equipment and also gain capital to invest in its network. Alternatively, AT&T could lease tower space from T-Mobile and install the same type of multi-band antennas and equipment it describes in the Application.³⁵⁴ Each of these alternatives would be less costly than paying \$39 billion for the proposed T-Mobile takeover, while not imposing the serious anti-competitive harms that would result from it.

AT&T also has the option of deploying new towers in the few places where it is unable to co-locate on an existing tower. CRA estimates that, for \$10 billion (about one-quarter of the \$39 billion purchase price for T-Mobile), AT&T could build 30,000 new cell sites,³⁵⁵ which would amount to more than 60 percent of T-Mobile’s total number of cell sites.³⁵⁶ AT&T could consequently achieve the same alleged capacity gains for much less money if it simply acquires new cell sites rather than acquire T-Mobile, particularly given the fact that it does not plan to use a large portion of T-Mobile’s cell sites anyway.³⁵⁷ The Commission has recently taken steps to accelerate the cell tower siting process, adopting a ruling in 2009 that, among other things,

³⁵³ Jan. 20, 2011 Deutsche Telekom Briefing at 4.

³⁵⁴ Application at 35.

³⁵⁵ CRA Decl. ¶ 192.

³⁵⁶ Jan. 20, 2011 Deutsche Telekom Briefing at 2 (stating that T-Mobile has 49,000 cell sites).

³⁵⁷ Application at 51-52 (stating that AT&T would decommission “thousands of surplus [T-Mobile] sites”).

defined presumptively reasonable time parameters for state or local zoning authorities to review cell site applications.³⁵⁸

4. Acquiring Additional Spectrum Capacity

AT&T's large existing spectrum holdings, coupled with use of network management practices and technologies such as those described above, should be more than sufficient to ensure that AT&T has the network capacity to meet consumer demand for its services well into this decade.³⁵⁹ There is also a large amount of spectrum that could be acquired or leased in the short term from existing licensees. For example, wireless carriers likely will be able to lease MSS spectrum or wholesale capacity in the L and S Bands for terrestrial services once the various issues and proceedings are resolved concerning those bands.³⁶⁰ Joint ventures with other spectrum holders are another option for addressing AT&T's alleged spectrum constraints.³⁶¹

AT&T as well as other parties will also have opportunities to acquire additional spectrum rights at FCC auctions within the next few years. As an AT&T senior executive recently

³⁵⁸ *Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance*, Declaratory Ruling, 24 FCC Red 13994 (2009). See also CRA Decl. ¶ 192.

³⁵⁹ Stravitz Decl. ¶¶ 9, 68-69.

³⁶⁰ See, e.g., *Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1626.6 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz*, ET Docket No. 10-142, Report and Order, FCC 11-56 (rel. Apr. 6, 2011), as amended by Erratum (rel. Apr. 15, 2011) (“MSS Report & Order”); *LightSquared Modification Order*; *MSS NPRM & NOI*; *Globalstar Licensee LLC*; *Application for Modification of License to Extend Dates for Coming into Compliance with Ancillary Terrestrial Component Rules And Open Range*; *Request for Special Temporary Authority*, Order, 25 FCC Red 13114 (2010); National Broadband Plan at 84, 87-88.

³⁶¹ For example, wireless operators can dramatically increase cell site density and network capacity through multi-operator radio access network (“RAN”) sharing arrangements. RAN sharing is technically feasible and has had demonstrated success in international markets. See Stravitz Decl. ¶ 51-52.

recognized, “there is broad consensus on a bipartisan basis among the President, the Congress, the FCC and the wireless industry that we need to make additional spectrum available”³⁶²

This consensus is paving the way for the Commission to auction significant amounts of spectrum. The National Broadband Plan identified the H Block, J Block, and AWS-3 Block as well suited for mobile broadband services and identified these blocks for auction.³⁶³ NTIA has made it a top priority to evaluate the reallocation of federal government spectrum, including the 1755-1780 MHz band, for commercial use and pairing with AWS-3 spectrum in an FCC auction. In January 2011, a T-Mobile executive predicted that 50 MHz of such reallocated spectrum as well as AWS-3 spectrum would be auctioned “somewhat later” than 2012.³⁶⁴

A large amount of spectrum is thus expected to be available within the next several years from existing licensees or FCC auctions. Moreover, President Obama and the National Broadband Plan have called for the allocation of 500 MHz of additional spectrum for mobile broadband.³⁶⁵ To help meet this goal, Congress and the Commission are considering

³⁶² Transcript of Panel Regarding a Framework for Innovative Federal Spectrum Policy, The Brookings Institution, Statement of James W. Cicconi, Senior Executive Vice President, External and Legislative Affairs, AT&T Services, Inc., at 7 (Mar. 30, 2011), *available at*: <http://www.brookings.edu/~media/Files/events/2011/0330_spectrum/20110330_spectrum_transcript.pdf>.

³⁶³ National Broadband Plan at 86-87.

³⁶⁴ Jan. 20, 2011 Deutsche Telekom Briefing at 16.

³⁶⁵ “President Obama Details Plan to Win the Future through Expanded Wireless Access,” White House Press Release (Feb. 10, 2011), *available at*: <<http://www.whitehouse.gov/the-press-office/2011/02/10/president-obama-details-plan-win-future-through-expanded-wireless-access>>; National Broadband Plan at 84. *See also* Memorandum for the Heads of Executive Departments and Agencies, *Unleashing the Wireless Broadband Revolution*, (Presidential Memorandum), released June 28, 2010, 75 Fed. Reg. 38387 (July 1, 2010), *available at* <<http://www.whitehouse.gov/the-press-office/presidential-memorandum-unleashing-wireless-broadband-revolution>> (directing NTIA to collaborate with the FCC “to make available a total of 500 MHz of Federal and nonfederal spectrum over the next 10 years, suitable for both mobile and fixed wireless broadband use.”); National Telecommunications and Information

incentive-based mechanisms for repurposing up to 120 MHz of broadcast UHF spectrum to be auctioned for mobile broadband use, although the timing of incentive-auction legislation is unclear.³⁶⁶ To be sure, significant portions of the spectrum described above do not yet meet the Commission's spectrum screen criteria, and the availability of this spectrum would not remedy the very substantial harm to the spectrum input market if the Commission approved the proposed T-Mobile takeover, given the resulting dominance AT&T and Verizon would gain over the most commercially valuable segments of spectrum. But, in the absence of the proposed takeover, a competitive marketplace, including a device and infrastructure ecosystem that is not dominated by the Twin Bells, would promote the deployment of services on the new spectrum that will be made available in the coming years for mobile broadband services.

5. Network Investment and Spectrum Efficiencies

In declining to approve the *EchoStar-DirecTV* merger, the Commission rejected arguments that are similar to the efficiency claims Applicants make in this proceeding:

An additional problem with the Applicants' efficiency claims is that they ignore the possibility that, because the merged entity will possess more spectrum, it will use it less efficiently than would EchoStar and DirecTV individually absent the merger. In particular, the merger may affect the incentive of the merged entity to adopt new, more productive technology, which in turn could affect how efficiently the spectrum will be used. The reason that the merged entity may be less willing to invest in productivity-enhancing technology is that the marginal value of a firm's spectrum will decline as the total amount of spectrum it controls increases. This suggests that, if as a result of the merger, New EchoStar doubles the amount of spectrum it controls, it will have a reduced incentive to invest in

Administration, U.S. Dept. of Commerce, *Plan and Timetable to Make Available 500 Megahertz of Spectrum for Wireless Broadband* (Oct. 2010), available at <http://www.ntia.doc.gov/reports/2010/TenYearPlan_11152010.pdf>.

³⁶⁶ See Public Safety Spectrum and Wireless Innovation Act, S.28, 112th Cong. § 204 (2011) (proposed bill to authorize FCC to conduct incentive auctions); National Broadband Plan at 88-93.

productivity-enhancing technology. . . . Thus, from a social welfare point of view, the merged entity may select a technology that is less efficient than it would select if each separate DBS competitor controlled less spectrum, resulting in a public interest harm rather than a benefit.³⁶⁷

The Commission's concern in the *EchoStar-DirectTV* proceeding applies with equal strength to Applicants' efficiency claims. Rather than paying DT \$39 billion to acquire T-Mobile, AT&T could invest a portion of that sum in pro-competitive network investments to meet its capacity needs through the new technologies and infrastructure improvements described above. Such investments promote the public interest by maximizing the efficient use of existing spectrum and promoting competition.

Wireless carriers compete with each other in upgrading and managing their networks. Indeed, every year in its mobile wireless competition report the Commission analyzes how carriers compete with each other in terms of network coverage and technology upgrades.³⁶⁸ This competition not only improves service for customers, but also creates jobs, encourages new capital investment, and promotes innovation in the United States. AT&T, however, seeks to avoid this competition and investment through its proposed anti-competitive acquisition of T-Mobile. This approach may serve AT&T's private interests, but it harms the public interest.

E. The Applicants' Alleged Efficiencies in Combining Their Two Networks Are Speculative and Unsupported

The Commission should give no weight to the Applicants' alleged network synergies not only because they are not merger-specific, but also because they are speculative, unsupported, and based on outdated technological assumptions. The Applicants argue that the transaction would create network synergies through the integration of T-Mobile's cell sites into AT&T's

³⁶⁷ *EchoStar-DirectTV Hearing Designation Order* ¶ 201 (footnotes omitted).

³⁶⁸ See, e.g., *14th CMRS Competition Report* ¶¶ 104-17.

network, the elimination of redundant control channels, and channel pooling and utilization efficiencies.³⁶⁹ However, many of these alleged synergies appear to apply only to AT&T’s voice network and therefore would not help address the increased demands on AT&T’s data network.³⁷⁰ AT&T’s alleged synergies also are premised on traditional macro-cell density networks, even though such system architectures are inherently sub-optimal for areas with large traffic volumes.³⁷¹ Rather than pursue the T-Mobile takeover as a means of supporting older generation services based on outmoded network technology assumptions, AT&T should focus on deploying current technologies and the small-cell site-based network architectures described in subsection D above.

The Applicants’ synergy claims also never directly address a contradiction in the Application itself. On the one hand, the Applicants claim that combining their two networks would relieve AT&T’s capacity constraints. On the other hand, the Application states that “T-Mobile USA faces spectrum constraints of its own, despite its substantial investments in spectrum and network facilities.”³⁷² How can combining two allegedly congested networks relieve the congestion? As Gerald Faulhaber, a former FCC Chief Economist, recently stated, “[p]utting the two networks together does not create spectrum.”³⁷³ Common sense suggests that combining two congested networks simply results in a bigger congested network.

³⁶⁹ Application at 33-42.

³⁷⁰ See Stravitz Decl. ¶ 33. As described in the Stravitz Declaration, while data traffic has increased, AT&T and other wireless carriers are experiencing stagnating or declining voice usage on their networks on a per-subscriber basis. *Id.* ¶ 16.

³⁷¹ *Id.* ¶ 50.

³⁷² Application at 30.

³⁷³ Spencer Ante & Amy Schatz, *Skepticism Greets AT&T Theory: Telecom Giant Says T-Mobile Deal Will Improve Network Quality, but Experts See Other Options*, WALL ST. J., Apr.

A number of the Applicants’ synergy theories ignore this common sense notion. For example, the Applicants’ “utilization efficiencies” are premised on “one or both companies’ GSM networks [being] underutilized.”³⁷⁴ Applicants offer only two examples of markets where they claim this will be the case and they provide no specific data to verify these claims.³⁷⁵ In fact, in the large majority of markets it is quite likely that where one company’s network is congested the other company’s network will also be congested, negating any potential utilization efficiencies. Specifically, congestion arises in dense population centers and will tend to afflict both the AT&T and T-Mobile networks in the same areas, especially given the fact that the Application asserts that *both* companies are facing network constraints.

The Applicants’ “channel pooling” efficiencies are similarly flawed and speculative. The Applicants provide scant concrete evidence of these efficiencies, offering only one example of a market where they claim they will see an increase in capacity from channel pooling.³⁷⁶ In addition, the Applicants recognize that the “variation in the size of the channel pooling efficiencies we expect in different areas is . . . a function of the size of the existing channel pools of each company in each area – greater channel pooling gains can typically be achieved when

4, 2011, *available at*: <<http://online.wsj.com/article/SB10001424052748703806304576236683511907142.html>>. *See also* Peter Svensson, *AT&T Talks of Spectrum Shortage, Yet It Has Plenty*, THE WASHINGTON TIMES, Mar. 21, 2011 (“[M]uch of T-Mobile’s spectrum is already in use, so the deal won’t result in fresh airwaves becoming available.”), *available at*: <<http://www.washingtontimes.com/news/2011/mar/21/att-talks-of-spectrum-shortage-yet-it-has-plenty/>>.

³⁷⁴ Application at 39.

³⁷⁵ *Id.*

³⁷⁶ *Id.* at 38.

smaller pools are combined than when larger pools are combined.”³⁷⁷ But, the Application provides no evidence regarding the extent to which the transaction would lead to the combination of smaller channel pools rather than larger channel pools. Such unsupported synergy claims are unverifiable and thus not cognizable by the Commission. It is also fair to assume that, in larger markets where there is greater demand for wireless services, the second and fourth largest carriers in the country will each have *large* channel pools to meet their existing service requirements, and that combining the two pools would therefore result in few if any efficiencies under the Applicants’ own theory.³⁷⁸

The Applicants assert that AT&T would integrate a certain number of T-Mobile cell sites into its network and thus create “cell splits” that expand the capacity of AT&T’s network.³⁷⁹ But this plan does not extend to a large portion of T-Mobile cell sites because elsewhere in the Application the Applicants state that AT&T will decommission “thousands of surplus sites.”³⁸⁰ With respect to the T-Mobile sites that are not considered “surplus,” the Application provides no empirical support to demonstrate how many are configured in a way that would address AT&T’s alleged capacity problems. To make this demonstration, AT&T would need to provide specific data concerning the location and usage patterns of the sites in question as well as other information (*e.g.*, height, orientation, gain, and radiation pattern of the site antennas).³⁸¹ The Application does not provide this information, most likely because AT&T has not performed the

³⁷⁷ Declaration of William Hogg, attached to Applications of AT&T Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses and Authorizations, WT Docket No. 11-65, at 27, n.20 (Apr. 21, 2011) (“Hogg Decl.”).

³⁷⁸ See Stravitz Decl. ¶ 34.

³⁷⁹ Application at 34-35.

³⁸⁰ *Id.* at 51.

³⁸¹ See Stravitz Decl. ¶¶ 27-28.

necessary analysis to back up its claims. Indeed, the Application indicates that only if and when the Application is approved would AT&T begin the process of “identifying T-Mobile USA sites that are complementary to AT&T’s cell grid”³⁸²

Even assuming that the integration of T-Mobile’s cell sites provides some of the hoped-for efficiency gains, these gains may not be achieved until so far into the future as to be speculative at this point. The Applicants claim that AT&T “expects to see service improvements in areas of various markets in as early as nine months, and it expects to complete this integration process and optimize its network architecture on a national basis within twenty-four months.”³⁸³ AT&T’s allusion to a vague set of “service improvements” within “as early as nine months” is not enough to satisfy its burden of proof in this proceeding. Precisely what type of benefits will AT&T achieve through the merger that it could not achieve through other means? If these benefits occur at all, which ones will occur nine months from now and which ones will occur two years from now? Precisely how often – and over how large a geographic area – will these benefits occur? And exactly who will enjoy the unspecified benefits that AT&T projects will occur? Only voice subscribers? The Application provides no answers to these important questions.

The Applicants have the burden of proving the validity of their efficiency claims by a preponderance of the evidence. They are the only parties to this proceeding with access to tower locations and the ability to analyze that data to identify where these ostensible benefits might occur. Yet the Application provides virtually no detail to substantiate the benefits envisioned or AT&T’s projected timeline. The integration process would first require AT&T to identify which

³⁸² Application at 35.

³⁸³ *Id.*

T-Mobile sites are even candidates for integration. AT&T would then need to “replac[e] T-Mobile USA’s antennas and equipment with multi-band antennas and AT&T’s equipment.”³⁸⁴ Implementing these infrastructure changes could require negotiations with tower and building owners and raise other potentially complicated, time-consuming issues, such as zoning approvals.³⁸⁵ The Applicants, however, do not even acknowledge these issues.

These potential complications could very well delay AT&T’s integration schedule beyond the Applicants’ projected two-year implementation schedule. These potential delays in achieving such benefits, and the lack of supporting detail, make them even more speculative. Moreover, this schedule is comparable to the time it would take AT&T to deploy new sites in the absence of the transaction.³⁸⁶ In short, the Applicants’ alleged efficiencies provide no basis for approving the proposed transaction.

F. The Proposed Transaction Is Not Necessary to Meet T-Mobile’s Network Capacity and Broadband Requirements

Most of the Applicants’ network synergy arguments focus on AT&T’s alleged network problems. The Application, however, has a short section arguing that the proposed transaction is necessary for T-Mobile to confront its own capacity constraints and provide a path to LTE. The Commission should reject these arguments. As described in Part A, Section IV.A of this petition, while the Application paints a dire outlook for T-Mobile, T-Mobile’s own statements in January show that T-Mobile is a strong competitor with sufficient spectrum capacity to compete and a range of options to strengthen its service in the long term. DT’s CEO stated that T-Mobile “currently own[s] 54 megahertz of spectrum in our major markets which for the next few years

³⁸⁴ *Id.*

³⁸⁵ *See* Stravitz Decl. ¶ 29.

³⁸⁶ *Id.* ¶¶ 25-26.

put us into a position which is actually better than most of our competitors are in.”³⁸⁷ Likewise, T-Mobile’s Chief Technology Officer stated that T-Mobile has “[s]ufficient spectrum in [the] short to medium-term,” and, like all other carriers, will explore participating in FCC spectrum auctions to address long-term needs.³⁸⁸ As explained above, T-Mobile also made clear during the January investor conference that it believes it is in a strong position to compete with 4G services, including Verizon’s and AT&T’s LTE service.

At the January 2011 conference, DT’s CEO stated that T-Mobile would consider partnership and network-sharing options.³⁸⁹ Depending on the specific circumstances, such options may very well enhance T-Mobile’s service and promote competition. AT&T’s proposed acquisition of T-Mobile, however, would not. It would harm competition and would provide no verifiable benefits to T-Mobile subscribers or the public at large.

III. AT&T’S LTE DEPLOYMENT PLANS ARE SPECULATIVE AND UNRELATED TO THE PROPOSED TRANSACTION

Prior to the proposed transaction, AT&T had announced plans to deploy LTE service on its 700 MHz and AWS spectrum to cover approximately 250 million people, or 80 percent of the U.S. population, by the end of 2013.³⁹⁰ The Applicants claim that AT&T would now increase its LTE deployment to 97 percent of the U.S. population to cover approximately an additional 55 million people at some undefined point in the future.³⁹¹ Applicants argue that the proposed transaction would help AT&T reach this new LTE deployment target by providing AT&T with

³⁸⁷ Jan. 20, 2011 Deutsche Telekom Briefing at 2.

³⁸⁸ *Id.* at 15-16.

³⁸⁹ *Id.* at 4.

³⁹⁰ Hogg Decl. ¶ 27.

³⁹¹ Application at 55-56.