November 16, 2018

Hon. Kathleen H. Burgess, Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223

Re: Case 18-C-0396 – Joint Petition of T-Mobile USA, Inc. and Sprint Communications Company L.P. Concerning an Indirect Transfer of Control

Dear Secretary Burgess,

The Advanced Communications Law & Policy Institute (ACLP) at New York Law School respectfully submits the following comments in the above-referenced docket. Attached hereto is a filing made by the ACLP to the Federal Communications Commission (FCC) in support of the proposed merger of T-Mobile and Sprint (Attached Filing). The Attached Filing provides a comprehensive review of the numerous public interest benefits expected to be generated by the transaction. The following comments summarize key points made in the Attached Filing and highlight important benefits likely to accrue to consumers throughout New York State as a result of the merger.

As an initial matter, the ACLP recognizes that the Commission's authority to review this merger is limited to those aspects of the transaction involving intrastate telecommunications services, *i.e.,* Sprint's New York-based competitive local exchange assets.[1] The Commission lacks regulatory authority over interstate advanced

[1] *See Joint Petition of T-Mobile USA, Inc. and Sprint Communications Company L.P. Concerning an Indirect Transfer of Control*, Petition for Approval, at p. 1, Case 18-C-0396, N.Y. Public Service Commission (submitted July 6, 2018), http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={FE8C892A-1440-4381-BF64-DBE1DFC5F9B3}.

communications services, *i.e.,* wireless,[2] broadband,[3] and VoIP.[4] Even so, it is essential that the Commission's review of the proposed transaction be guided by the larger context within which the merger is taking place.[5] Of most relevance to the Commission's inquiry is that the combination of T-Mobile and Sprint presents a unique and meaningful opportunity to greatly hasten the deployment of next-generation 5G mobile networks, which are expected to deliver significant welfare gains to consumers of all ilk across New York.

It is respectfully submitted that the Commission should conduct its review and approve the transaction as expeditiously as possible in an effort to speed the deployment of 5G networks and the realization of the many benefits expected to flow from them.

A. THE TRANSFORMATIVE POTENTIAL OF 5G

As discussed at length in the Attached Filing, 5G will serve as the foundation for enormous economic growth, an engine for job creation, a catalyst for innovation, and a medium for empowering consumers with access to a universe of new applications.[6] It is projected that the next-generation of wireless networks will create three *million* jobs, which in turn will "boost annual GDP by $500 billion."[7] These economic and employment gains will stem largely from the use of 5G as an enabler of a range of "smart" applications – *e.g.,* smart city services that streamline government offerings and bolster civic engagement; the delivery of real-time telemedicine; autonomous vehicles; and numerous other cutting-edge innovations that will reduce the costs of and enhance access to key services for all consumers.[8] New York should be at the forefront of these significant societal enhancements.

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[2] *See, e.g.,* N.Y. Pub. Serv. Law §5(3); 47 U.S.C. § 332(c)(3).

[3] *See In the Matter of Restoring Internet Freedom,* Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd. 311, ¶¶194-204, FCC (Jan. 4, 2018) (reiterating that broadband internet access services are interstate in nature and subject to the federal deregulatory policy set forth in the Communications Act).

[4] *See, e.g., Minn. Pub. Utils. Comm'n v. FCC*, 483 F.3d 570 (8th Cir. 2007) (upholding FCC preemption of state-level regulation of VoIP services based on the "impossibility exception," which, per 47 U.S.C. § 152(b), "allows the FCC to preempt state regulation of a service if (1) it is not possible to separate the interstate and intrastate aspects of the service, and (2) federal regulation is necessary to further a valid federal regulatory objective, i.e., state regulation would conflict with federal regulatory policies" (citations omitted)); *Charter Advanced Servs. (MN), LLC v. Lange*, 259 F. Supp. 3d 980 (D. Minn. 2017), *aff'd Charter Advanced Servs. (MN), LLC v. Lange*, No. 17-2290 (8th Cir. Sept. 7, 2018) (same).

[5] For an extended discussion of this context, *see* Attached Filing at p. 4-20.

[6] *Id.* at p. 25-33.

[7] *See Smart Cities: How 5G Can Help Municipalities Become Vibrant Cities,* Accenture Strategy (Jan. 2018), https://api.ctia.org/docs/default-source/default-document-library/how-5g-can-help-municipalities-become-vibrant-smart-cities-accenture.pdf.

[8] *See, e.g.,* Attached Filing at p. 30-33. *See also* Roger Cheng, *The 5G Revolution is Upon Us. Here's Everything You Need to Know,* Nov. 13, 2018, CNET, https://www.cnet.com/news/the-5g-revolution-is-upon-us-heres-everything-you-need-to-know/.

By all accounts, the 5G network to be deployed by New T-Mobile will also bolster broadband competition – and this is important to urban and rural New Yorkers alike. New T-Mobile "intends to directly and aggressively compete against conventional in-home wired broadband products, providing consumers with an attractive high-speed broadband alternative to the wired incumbent."[9] This represents a response to efforts already under way to alter the "conventional" way in which broadband has long been delivered into homes (*i.e.,* via a wire). For example, in promoting its forthcoming 5G Home product, Verizon has said that "customers should expect typical network speeds around 300 Mbps and, depending on location, peak speeds of nearly 1 Gig, with no data caps," making it "*ideal for consumers looking to "cut the cord"* or upgrade from their current cable service."[10] AT&T has also experimented with a fixed 5G offering capable of similar speeds.[11] The competitive impact of these efforts on incumbent cable providers is already evident in the "concern" expressed by "telecom investment analysts," who see "5G fixed wireless broadband as the biggest existential threat to broadband providers."[12]

That T-Mobile is the entity spearheading this transaction augurs well for the successful deployment of the promised 5G network and the delivery of continued consumer welfare gains. A close examination of the parties involved in the proposed transaction makes clear that the resulting combination will position New T-Mobile for long-term success as a strong competitor and disruptive innovator in the digital ecosystem.[13] T-Mobile has been able to keep pace with much larger competitors in the wireless market and beyond because of its long history of innovation and focus on upending the mobile space. Its "maverick" spirit and "un-carrier" approach have driven unceasing business model experimentation, which in turn has delivered to consumers a consistent series of innovative new service plans, payment options, streaming services, and other popular options. Sprint, on the other hand, has struggled mightily despite possessing valuable spectrum assets and demonstrating, on occasion, an ability to be disruptive. But for the merger, Sprint would in

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[9] *See In the Matter of Applications of T-Mobile US, Inc. and Sprint Corporation For Consent to Transfer Control of Licenses and Authorizations*, Description of Transaction, Public Interest Statement, and Related Demonstrations, at p. 58, WT Docket No. 18-197, FCC (submitted June 18, 2018), https://ecfsapi.fcc.gov/file/10618281006240/Public%20Interest%20Statement%20and%20Appendices%20A-J%20(Public%20Redacted)%20.pdf.

[10] *See* Press Release, *5G is Here,* Sept. 11, 2018, Verizon, https://www.verizon.com/about/news/5g-here (emphasis added).

[11] *See, e.g.,* Corinne Reichert, *AT&T Trials Fixed-Wireless 5G in Indiana,* June 29, 2018, ZDNet, https://www.zdnet.com/article/at-t-trials-fixed-wireless-5g-in-indiana/.

[12] *See* Daniel Frankel, *Comcast and Charter Brace for Fixed 5G AT&T-Verizon Showdown in Indy,* Aug. 31, 2018, Multichannel News, https://www.multichannel.com/news/comcast-and-charter-brace-for-fixed-5g-at-t-verizon-showdown-in-indy (quoting an analysis by Cowen).

[13] For an extended examination of both T-Mobile and Sprint, *see* Attached Filing at p. 21-25.

all likelihood fail to keep pace with the growing array of competitors in the rapidly converging broadband space. [14]

B. HOW NEW T-MOBILE'S 5G NETWORK WILL BENEFIT NEW YORK

The pro-consumer outcomes described above align with and will help to further many core public policy goals outlined by state and local officials for broadband, high-tech innovation, digital inclusion, and economic empowerment. Indeed, the 5G network to be deployed by New T-Mobile will help the state and its cities realize these goals in numerous ways.

First, New T-Mobile's 5G network will bolster broadband availability across the state, building upon the monumental connectivity gains spearheaded by Governor Cuomo via the landmark New NY broadband grant program. As a result of the Governor's commitment of a record $500 million in public funding, the state is on track to meet its goal for universal broadband availability. In particular, the program facilitated deployment to an additional "2.4 million locations statewide [over the last several years], which means 99.9 percent of New Yorkers will have access to broadband" by the end of 2018.[15]

The rapid deployment of New T-Mobile's 5G network across the state will provide residents and businesses with a second or third or fourth option for broadband internet access, significantly bolstering local competition and helping to further drive down the cost of connectivity. This will be a boon to millions in a state where, according to the FCC, about 98.5% of New York's population already has access to at least two non-mobile broadband providers capable of delivering at least 25 Mbps.[16] As more people choose to rely just on wireless broadband for internet connectivity[17] and as next-generation networks begin to enable the kinds of cutting-edge services noted above, having readily available 5G options will be critical, a dynamic that has already found robust support among policymakers across the state, including the Governor.[18]

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[14] *See, e.g., Written Testimony of Marcelo Claure, Executive Chairman, Sprint Corporation, Before the Senate Committee on the Judiciary,* at p. 3, June 27, 2018 https://www.judiciary.senate.gov/imo/media/doc/06-27-18%20Claure%20Testimony.pdf ("It is important to understand that our plans for 5G in the absence of a merger would necessarily be limited by our spectrum portfolio, lack of scale, and resource constraints.").

[15] *See* Office of the Governor, Broadband for All, https://www.ny.gov/programs/broadband-all.

[16] *See* FCC, Broadband Map – New York (as of June 2017), https://broadbandmap.fcc.gov/#/area-summary?version=jun2017&type=state&geoid=36&tech=acfosw&speed=25_3&vlat=42.797223101880 86&vlon=-75.809183000000 02&vzoom=4.834727365374325.

[17] *See* Pew Research Center, Mobile Fact Sheet (Feb. 5, 2018), http://www.pewinternet.org/fact-sheet/mobile/ (finding that 20% of households rely on wireless broadband as their sole means of internet access) ("*Pew Mobile Data*").

[18] *See, e.g.,* Yancey Roy, *Towns vs. Telecoms: Cuomo pushes to expand cells' faster '5G' network,* March 18, 2018, Newsday, https://www.newsday.com/news/region-state/towns-vs-telecoms-cuomo-pushes-to-expand-cells-faster-5g-network-1.17459847.

Second, the benefits of having multiple choices for high-speed internet access will be felt in both urban and rural parts of the state, helping to close stubborn digital divides, drive economic growth, and spark innovation. In urban areas like New York City, 5G will serve as an important on-ramp in low-income and minority communities, where broadband adoption rates have long lagged.[19] Members of these communities have been in the vanguard of a societal shift toward mobile-only internet connectivity.[20] Rapid deployment of 5G, sparked by New T-Mobile's aggressive rollout plan, will assure that the benefits of next-generation wireless connectivity accrue most immediately to these users.

A similar dynamic will be evident in rural areas, where broadband adoption rates have also historically lagged.[21] A desire to close the persistent rural/urban broadband divide was one of the core animating forces of the Governor's New NY grant program. As noted, the program has helped to all but eliminate that divide, bringing new broadband connections to millions of rural New Yorkers. Post-merger, New T-Mobile has promised to quickly deliver a second option to these areas, creating competitive forces that will help to ensure that rural consumers benefit from the lower prices and innovative offerings that result from head-to-head competition in the broadband space.

Third, the 5G network deployed by New T-Mobile will further enhance the state's standing as a hub for technological innovation. Over the last decade, New York State has emerged as a go-to destination for high-tech firms, venture capital dollars, and well-paying tech jobs. In many instances, these gains were facilitated in some manner by canny state and local government action. Indeed, under Governor Cuomo's leadership, tech jobs have proliferated both Upstate and Downstate. Grants, tax incentives, and a favorable regulatory environment have supported significant investments in semiconductors, autonomous vehicles, and drones, among other high-tech segments.[22] Recently, the Governor oversaw

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[19] *See* Pew Research Center, Internet/Broadband Fact Sheet, Feb. 5, 2018, http://www.pewinternet.org/fact-sheet/internet-broadband/. Broadband adoption trends in New York State have consistently mirrored those at the national level. *See, e.g.,* Charles M. Davidson & Michael J. Santorelli, *Broadband and the Empire State: Toward Universal Connectivity in New York*, ACLP at New York Law School (Sept. 2012), http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/ACLP-Report-Broadband-and-the-Empire-State-September-2012.pdf; *In the Matter of a Study of the State of Telecommunications in New York State,* Comments of the ACLP at New York Law School, Case No. 14-C-0370, N.Y. Public Service Commission (submitted Oct. 23, 2015), documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={044154C3-175E-4411-973D-FA09F2D73FC6}.

[20] *Pew Mobile Data.*

[21] *See, e.g.,* Andrew Perrin, *Digital gap between rural and nonrural America persists,* May 19, 2017, Pew Research Center, Fact Tank, http://www.pewresearch.org/fact-tank/2017/05/19/digital-gap-between-rural-and-nonrural-america-persists/.

[22] *See, e.g.,* Press Release, *Governor Cuomo Announces Cruise Automation Applying to Begin First Fully Autonomous Vehicle Testing in New York State*, Oct. 17, 2017, Office of the Governor of New York State, https://www.governor.ny.gov/news/governor-cuomo-announces-cruise-automation-applying-begin-first-fully-autonomous-vehicle; Press Release, *Governor Cuomo Announces Partners to Develop Drone Corridor in*

the successful luring of Amazon to New York City, solidifying the city's growing reputation as a fertile tech and startup capital. With 5G expected to serve as a platform for innovation and experimentation that will yield tens of thousands of jobs developing new services and applications, assuring the rapid buildout of next-generation broadband networks must be a priority for policymakers across the state.

C. CONCLUSION: TIMELY PSC APPROVAL IS CRITICAL TO HASTENING 5G DEPLOYMENT

In light of the many public interest benefits implicated by the proposed merger of T-Mobile and Sprint – benefits that will accrue to *all* New Yorkers – it is incumbent upon the Commission to expedite its narrow review of the issues before it so that New T-Mobile can get to work building its promised 5G network.

Respectfully submitted,

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Central New York, May 1, 2018, Office of the Governor of New York State, https://www.governor.ny.gov/news/governor-cuomo-announces-partners-develop-drone-corridor-central-new-york; Press Release, *Governor Cuomo Announces ON Semiconductor Officially Opens Expanded Test and Assembly Operations in Rochester*, May 9, 2018, Office of the Governor of New York State, https://www.governor.ny.gov/news/governor-cuomo-announces-semiconductor-officially-opens-expanded-test-and-assembly-operations.

ACLP
ADVANCED COMMUNICATIONS LAW & POLICY INSTITUTE
at New York Law School

NEW YORK LAW SCHOOL

September 17, 2018

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: In the Matter of Applications of T-Mobile US, Inc. and Sprint Corporation For Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 18-197

Dear Ms. Dortch,

The Advanced Communications Law & Policy Institute ("ACLP") at New York Law School respectfully submits the following comments in the above-referenced docket.

Overview

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1. INTRODUCTION AND SUMMARY OF COMMENTS

The proposed merger of T-Mobile and Sprint comes at a time of significant convergence in the digital ecosystem. Historically, a wireless carrier like T-Mobile focused primarily on core competencies like completing voice calls and facilitating basic text messages. Today, T-Mobile and other service providers compete with a diverse array of firms seeking to keep customers consistently engaged on their platforms. Indeed, wireless carriers compete not only with each other, but also with wireline broadband providers, satellite firms, and, increasingly, tech companies for the attention – and dollars – of consumers.

Innovations in pricing, content and other service offerings, and the like are all influenced by this foundational aspect of inter-platform competition.

Viewed against this backdrop of vibrant innovation and intense competition across a broad and multifaceted ecosystem, the merger of T-Mobile and Sprint makes strategic sense. Sprint has failed to keep pace in this new world, while T-Mobile has thrived. With T-Mobile at the helm, a combination of the two promises to deliver consumer benefits that far outweigh any potential harms.

The Commission should seize the opportunity presented by this transaction to articulate and apply a more dynamic framework for evaluating mergers that involve players competing in the digital ecosystem. The stakes of this merger – kickstarting the 5G revolution; bolstering broadband connectivity options for rural and low-income Americans; creating a more robust competitor in the ecosystem; and numerous others – are too high for the Commission to rely on analytical frameworks that were developed for a world long since passed. Many detractors are encouraging the Commission to apply such outdated notions to the transaction in the hopes of undermining it. The Commission should resist those pleas and, consistent with its recent efforts in so many other areas of communications policy, forge a new path that better reflects the realities of today's marketplace.

As an overview, these comments make the following observations and arguments regarding the proposed merger:

- The proposed merger will greatly advance the wireless success story in the U.S. New T-Mobile has committed to investing $40 billion in its first three years to help jumpstart the deployment of 5G networks, providing a robust alternative on-ramp to the Internet for millions of Americans living in big cities, small rural communities, and everywhere in between.

- The most appropriate lens through which the merger should be reviewed is one that accounts for the competitive threats facing the parties in both the immediate wireless space and the broader digital ecosystem. Doing so will make clear that the proposed transaction is a critical effort by T-Mobile and Sprint to assure continued relevance in this diverse and ever-changing marketplace; it is not a move to assert dominance. Post-merger, New T-Mobile will remain an underdog and will have every incentive to remain a maverick as it vies for subscribers in an increasingly crowded marketplace.

- The Commission should apply a more robust framework for reviewing mergers, one that is sufficiently dynamic and expansive in its view of the forces and trends shaping consumers' experiences with digital technologies

like mobile broadband. Doing so will assure a fair review and will yield a decision that is supportive of such pro-consumer combinations.

- Arguments about potential negative impacts do not hold up to close scrutiny. To the contrary, the benefits likely to arise as a result of the merger far outweigh any harms that might result from it. A close examination of the parties involved in the proposed transaction demonstrates that the resulting combination will position New T-Mobile for long-term success in delivering these benefits and serving as a strong competitor and disruptive innovator in the digital ecosystem.

2. THE ESSENTIAL CONTEXT FOR REVIEWING THE PROPOSED MERGER: WIRELESS DYNAMISM & THE COMPETITIVE DYNAMICS OF THE BROADER DIGITAL ECOSYSTEM CALL FOR A MORE ROBUST ANALYTICAL FRAMEWORK TO FULLY VET THE TRANSACTION

Those seeking to derail the proposed merger have attempted to pigeonhole the transaction as a straightforward horizontal combination of wireless firms that will yield harmful consolidation.[1] In this view, the move from four nationwide mobile carriers to three will result in higher prices, less innovation, and overall consumer welfare losses.[2] Indeed, detractors go to great lengths in their filings to convince the Commission that it should view the proposed transaction through a backward-looking lens, one that obscures the myriad of competitive forces buffeting wireless carriers and other players in the digital ecosystem.

Such arguments evince an outdated – and misleading – view of the wireless market and offer a fundamental misreading of the competitive dynamics evident in the broader digital ecosystem. As discussed below, context matters. Wireless carriers compete with a growing number of firms for the attention – and dollars – of consumers. The proposed transaction is an effort by T-Mobile and Sprint to assure continued relevance in this diverse, ever-changing, and intensely competitive digital marketplace; it is not a move to assert dominance. Post-merger, New T-Mobile will remain an underdog and will have every incentive to remain a maverick as it vies for customers in an increasingly crowded marketplace.

Ultimately, the Commission must not opt for the rote application of analytical frameworks that have framed previous merger inquiries. Such would yield an incomplete and unfair evaluation. Instead, the Commission should articulate and apply a more robust framework, one that is sufficiently dynamic and expansive in its view of the forces and

[1] *See, e.g.,* Petition to Deny of Common Cause et al.; Petition to Deny of Free Press; Petition to Deny of Dish Network Corporation.

[2] *See, e.g.,* Petition to Deny of the American Antitrust Institute; Comments of Communications Workers of America.

trends shaping consumers' experiences with digital technologies like mobile broadband. Doing so will assure a fair review and will yield a decision that is supportive of such pro-consumer combinations.

2.1 *The Proposed Merger Represents Another Positive Chapter in the U.S.'s Incredible Wireless Success Story*

In the matter of a decade, mobile broadband in the United States has evolved from a niche offering catering to office workers armed with BlackBerrys and other primitive PDAs to a must-have in a world dominated by smartphones. The following chart provides a snapshot of this evolution.

Mobile Broadband Evolution: A Snapshot

	2008	2014	2017/2018*
# of mobile connections	270M	355M	400+M
Smartphone penetration rate	17%	55%	77%
Avg. mobile broadband download speed	~2 Mbps	12.3 Mbps	22.7 Mbps
Avg. data used/month on smartphones	150MB-275MB (2009)	1.89GB	5GB
Wireless-only HHs (voice)	20.2%	45.4%	53.9%
Wireless-only HHs (broadband)	n/a	~10%	20%

*Latest available
Sources: FCC; CTIA; CDC; Pew; Nielsen

Mobile broadband has become central to the online experience for the vast majority of Americans. Consider the following trends:

- Adults spend an average of 5 hours a day on their mobile devices.[3] Children aged 2-8 spend nearly an hour each day on a mobile device (*e.g.*, smartphone, tablet); half own their own device.[4]

[3] *See* Sarah Perez, *U.S. Consumers Now Spend 5 Hours Per Day on Mobile Devices,* March 3, 2017, Tech Crunch, https://techcrunch.com/2017/03/03/u-s-consumers-now-spend-5-hours-per-day-on-mobile-devices/.

[4] *See The Common Sense Census: Media Use By Kids Age Zero to Eight,* p. 15-18, Common Sense Media (2017), https://www.commonsensemedia.org/sites/default/files/uploads/research/csm_zerotoeight_fullreport_release_2.pdf.

- By 2019, the time spent on one's smartphone each day will likely overtake time spent watching TV.[5] This has precipitated a significant shift in advertising spending and has dramatically disrupted the traditional television business model.[6]

- 82% of all Internet users "go online at least daily through their phones…compared to 73% of users who go online with a computer."[7]

- In terms of what people do with their phones: 93% text;[8] 92% place calls;[9] 67% stream music and/or video;[10] 58% play games;[11] 51% shop;[12] 28% apply for jobs;[13] and 9% use dating apps.[14]

Such insatiable consumer demand for mobile broadband has driven significant investment in next-generation wireless networks. These investments have been made consistently by carriers over the last two decades. Since 1994, carriers have invested in excess of $475 billion in their networks.[15] About half of that staggering sum – $226 billion – was invested in just the last eight years in support of rolling out 4G services across the country.[16] The result? By the end of 2016, 4G networks capable of delivering at least 5 Mbps/1 Mbps mobile broadband speeds were available to 99.6% of the U.S. population,

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[5] *See U.S.: Smartphone Time to Overtake TV in 2019,* June 20, 2018, Advanced Television, https://advanced-television.com/2018/06/20/us-time-spent-on-smartphone-to-overtake-tv-in-2019/.

[6] *See* Michael Santorelli, *How to Make the Golden Age of TV Even Better,* July 25, 2018, Forbes Washington Bytes, https://www.forbes.com/sites/washingtonbytes/2018/07/25/how-to-make-the-golden-age-of-tv-even-better/#1c07e04949fc.

[7] *See 2017 Digital Future Report*, p. 20, Center for the Digital Future (Oct. 2017), http://www.digitalcenter.org/wp-content/uploads/2013/10/2017-Digital-Future-Report.pdf.

[8] *Id.* at p. 51.

[9] *Id.*

[10] *Id.*

[11] *Id.*

[12] *See* Lee Rainie and Andrew Perrin, *10 Facts About Smartphones as the iPhone Turns 10,* June 28, 2017, Pew Research Center, http://www.pewresearch.org/fact-tank/2017/06/28/10-facts-about-smartphones/.

[13] *Id.*

[14] *Id.*

[15] *See Wireless Snapshot 2017,* CTIA https://api.ctia.org/docs/default-source/default-document-library/ctia-wireless-snapshot.pdf.

[16] *See The State of Wireless 2018,* p. 12, CTIA, https://api.ctia.org/wp-content/uploads/2018/07/CTIA_State-of-Wireless-2018_0710.pdf.

up from just under 90% in 2012.[17] As discussed more fully below, the proposed merger would greatly advance these gains: New T-Mobile has committed to investing $40 billion in its first three years to help jumpstart the deployment of 5G networks to millions of Americans.[18]

This success story stems directly from the minimalist federal regulatory framework that was devised in the early 1990s by a bipartisan Congress to govern mobile services. The Commission has played a key role in administering the commands of Congress vis-à-vis the wireless sector by, among many other things, consistently making available key blocs of spectrum for auction;[19] removing regulatory barriers impacting the construction of wireless infrastructure;[20] and providing firms with wide latitude to explore business models, partnerships, and combinations in an effort to hasten network deployment.[21]

Efforts to recalibrate this regulatory environment towards a more interventionist stance have had negative impacts on the ecosystem. In particular, the Commission's adoption of stifling net neutrality rules in 2015 undermined incentives for ISPs to invest in their networks. The result was a noticeable dip in network investment.[22] The rules also implemented an amorphous "general conduct" standard that amounted to a "Mother-may-I" approach to innovation.[23] In the short time the rules were in effect, the

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[17] *See In the Matter of Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 2018 Broadband Deployment Report, Table 2a, GN Docket No. 17-199. FCC (Feb. 2, 2018), https://docs.fcc.gov/public/attachments/FCC-18-10A1.pdf ("*2018 Broadband Deployment Report*").

[18] *See T-Mobile Public Interest Statement* at p. 15.

[19] *See, e.g.,* Charles M. Davidson & Michael J. Santorelli, *Seizing the Mobile Moment: Spectrum Allocation Policy for the Wireless Broadband Century*, 19 CommLaw Conspectus 1 (2010), http://www.nyls.edu/advanced-communications-law-and-policy-institute/wp-content/uploads/sites/169/2013/08/Davidson-Santorelli-Seizing-the-Mobile-Moment-CommLaw-Conspectus-2010.pdf.

[20] The FCC has a long history of acting in this manner, ranging from the adoption of a shot-clock to guide local decision-making processes to a recent spate of orders focused on 5G deployment. For an overview of recent efforts, *see* Brendan Carr, *Grassroots Leadership on 5G,* Sept. 4, 2018, FCC, https://docs.fcc.gov/public/attachments/DOC-353925A1.pdf.

[21] *Cf.* Thomas M. Koutsky and Lawrence J. Spiwak, *Separating Politics from Policy in FCC Merger Reviews: A Basic Legal Primer of the "Public Interest" Standard,* 18 CommLaw Conspectus 329 (2010) (detailing the many downsides of using the merger review process as a means of imposing inefficient or politically-motivated conditions on transactions under the guise of the "public interest" standard).

[22] *See In the Matter of Restoring Internet Freedom,* Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd 311, ¶¶88-98, FCC (Jan. 4, 2018) ("*Restoring Internet Freedom Order*").

[23] *See, e.g.,* Corynne McSherry, *Dear FCC: Rethink the Vague "General Conduct" Rule,* Feb. 24, 2015, EFF, https://www.eff.org/deeplinks/2015/02/dear-fcc-rethink-those-vague-general-conduct-rules; Steve Daines and Michael O'Rielly, *FCC, May I Please Innovate?*, Jan. 20, 2016, Forbes Capital Flows, https://www.forbes.com/sites/realspin/2016/01/20/fcc-innovation-net-neutrality/#27e65ed972e4.

Commission sought to wield its newfound authority to micromanage the wireless space, most notably by opining on the legality of free data services that were (and remain) enormously popular with consumers.[24]

Fortunately, the Commission reversed course in 2017 and reimplemented the minimalist regulatory framework that fostered the incredible growth of the broadband ecosystem.[25] Returning to the *status quo ante* ensured that popular consumer offerings like T-Mobile's BingeOn were allowed to continue. More broadly, removing the unnecessarily exacting net neutrality framework freed wireless ISPs to engage in the kind of freewheeling business model experimentation that has delivered numerous consumer-friendly offerings and that has allowed this segment to respond to rising competition from other players in the ecosystem. As discussed below, the proposed merger represents another in a long line of strategic moves by the firms to try to keep pace in this chaotically competitive new world.

2.2 *The Competitive Dynamics of the Broader Digital Ecosystem Must Be Recognized & Accounted for in Mergers Reviews*

T-Mobile and Sprint face a daunting array of competitors in the wireless sector and in the broader digital ecosystem. As these spaces converge, there is increasing competition on all fronts to attract and retain the attention of customers. The proposed merger is a means for the two companies to combine assets in a manner that will allow them to compete more effectively by, among other things, offering a more attractive suite of products and services to customers than either would be able to make available on its own.

2.2.1 Competition in the Mobile Market is Already Intense and Becoming More Robust

The most immediate source of competition facing T-Mobile and Sprint is located within the market for wireless subscribers. Given the importance of mobility to consumers, more and more firms are looking to the wireless space as a source of revenue. Such high levels of competition in this sector have yielded significant consumer welfare gains. Indeed, per the American Consumer Satisfaction Index's (ACSI) 2018 Telecommunications Report,

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[24] *See Policy Review of Mobile Broadband Operators' Sponsored Data Offerings for Zero-Rated Content and Services,* FCC Wireless Telecommunications Bureau Report (Jan. 9. 2017), https://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0111/DOC-342987A1.pdf; *cf.* Statement of FCC Chairman Ajit Pai, *Free Data Programs*, Feb. 3, 2017, FCC, https://docs.fcc.gov/public/attachments/DOC-343345A1.pdf (closing the FCC's investigation of wireless free data programs, noting that such have "proven to be popular among consumers, particularly low-income Americans, and have enhanced competition in the wireless marketplace.").

[25] *See generally Restoring Internet Freedom Order.*

"wireless firms have been competing for customers on price and service, which has boosted customer satisfaction to an all-time high."[26] In its most recent review of the wireless market, the FCC noted that mobile prices have steadily declined in recent years.[27] As more firms jockey for customers in this segment, these trends are likely to continue.

A qualitative review of the offerings by competitors in this space indicate significant rivalry among a diverse range of firms employing a range of strategies for catering to consumers' evolving demands.

- ***AT&T and Verizon Remain Formidable Competitors***. Post-merger, New T-Mobile would remain the third-largest national wireless carrier in the U.S.; Verizon will still be the largest, followed by AT&T.[28] Both Verizon and AT&T have aggressively touted their plans for 5G deployment since the proposed merger was announced, with each trying to one-up the other in announcing the markets where its next-generation services will be made available.

  Verizon, for example, has begun advertising 5G Home, the "world's first commercial 5G service," which will roll out in Houston, Indianapolis, Los Angeles, and Sacramento in October.[29] To underscore what it considers to be its leadership position in spearheading this new technology, Verizon is attempting to frame this initial product release as a means of "encourag[ing] others in the ecosystem to move more quickly at every step."[30] At the same time, Verizon is seeking to maintain its leads in overall wireless subscribers by touting the robustness of its existing 4G network. To that end, in response to being named the "#1 wireless network in the country for a record 10th consecutive time" by RootMetrics, a Verizon executive argued that such demonstrated that the firm had an

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[26] *See ACSI Telecommunications Report 2018,* p. 12, American Customer Satisfaction Index (May 22, 2018), https://www.theacsi.org/news-and-resources/customer-satisfaction-reports/reports-2018/acsi-telecommunications-report-2018 ("*ACSI 2018 Report*").

[27] *See In the Matter of Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, 20th Report, 32 FCC Rcd 8968, ¶58 (2017) ("*20th Wireless Competition Report*").

[28] *See, e.g.,* Rani Molla, *A Merged T-Mobile and Sprint Will Still be Smaller Than AT&T or Verizon,* April 30, 2018, Recode, https://www.recode.net/2018/4/30/17300652/tmobile-sprint-att-verizon-merger-wireless-subscriber-chart ("*A Merged T-Mobile and Sprint Will Still be Smaller*").

[29] *See* Press Release, *5G is Here,* Sept. 11, 2018, Verizon, https://www.verizon.com/about/news/5g-here ("*5G is Here*").

[30] *Id.*

"overwhelming lead over the competition" and that there is a "significant gap between our network's performance and all the others."[31]

AT&T has also focused on positioning itself as the leader in 5G deployment. Around the same time that Verizon announced its 5G product release, AT&T made public that it had successfully made "the world's first wireless 5G data transfer over millimeter wave using standards-based, production equipment with a mobile form factor device."[32] AT&T also announced that it would expand its initial 5G offering to 19 cities, besting Verizon's four initial test markets.[33] The company is also in the process of integrating its recently acquired media properties in an effort to retain and attract wireless subscribers. To that end, AT&T has made HBO "part of [its] Unlimited Plus[SM] wireless plan, making this [its] best plan ever for unlimited entertainment."[34]

- ***MVNOs Remain an Important Source of Competition***. Although MVNOs rely on the spectrum and wireless networks of other carriers, these entities represent an increasingly important source of competition in the mobile market as they provide consumers with a range of additional choices for mobile services. Indeed, in the latest Consumer Reports rankings of wireless service providers, the top three spots went to MVNOs; T-Mobile was best among facilities-based carriers, and Sprint was the worst.[35] Similarly, ACSI's 2018 report on wireless service found that "[c]ustomers prefer the service of smaller providers," giving these carriers, many of which are MVNOs, the highest satisfaction score in the survey.[36] The ACSI survey also found that TracFone, the country's largest MVNO, scored the highest customer satisfaction rating for individual companies, just beating out T-Mobile; Sprint had the lowest score.[37]

- ***Cable is Emerging as a Major Competitor***. Among the most significant developments in the wireless market in recent years is the offering of mobile

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[31] *See* Press Release, *Verizon's Wireless Network Named #1 for the 10th Time in a Row, According to RootMetrics*, July 26, 2018, Market Watch, https://www.marketwatch.com/press-release/verizons-wireless-network-named-1-for-the-10th-time-in-a-row-according-to-rootmetricsr-2018-07-26.

[32] *See* Press Release, *AT&T Makes World's First Standards-Based Mobile 5G Millimeter Wave Connection,* Sept. 10, 2018, AT&T, http://about.att.com/story/2018/5g_cities_2018_2019.html.

[33] *Id.*

[34] *See* Press Release, *Only AT&T Offers Unlimited Entertainment with HBO Included on Your Unlimited Wireless Plan,* April 5, 2017, AT&T, http://about.att.com/story/unlimited_wireless_plan_hbo.html.

[35] *See* Chris Mills, *Sprint is the Worst Carrier Money Can Buy, Consumer Reports Says,* Dec. 21, 2017, BGR, https://bgr.com/2017/12/21/best-wireless-network-2017-sprint-vs-t-mobile-consumer-reports/.

[36] *ACSI 2018 Report* at p. 12-13.

[37] *Id.*

services by Comcast and Charter, the two largest cable companies in the country. Both firms are leveraging their expansive Wi-Fi hot-spot networks and a reseller agreement with Verizon to deploy mobile voice and broadband offerings.[38] Detractors of the proposed merger have attempted to dismiss the competitive threat posed by these wireless offerings,[39] but, when viewed objectively, both Comcast and Charter are poised to disrupt the mobile marketplace. That is good for consumers.

Comcast and Charter have several built-in advantages as they enter the wireless market. First and foremost, they have the ability to market their services as part of a quadruple play to their existing customer base (neither company's mobile service is available to consumers who aren't current subscribers of their cable service). This provides them with a sizeable audience for marketing purposes: as of the second quarter of 2018, Comcast had 26.5 million broadband customers,[40] while Charter had 23 million.[41] Both companies have framed their mobile offering as "designed to save you money" and are marketing the service as essentially an extension of their broadband and cable television services.[42]

Second, both companies have the ability to leverage a vast network of Wi-Fi hotspots, which will serve as a backbone of the wireless services offered by both companies.[43] Comcast reports having 18 million such hotspots,[44] while Charter has over 500,000.[45]

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[38] *See* Jeff Baumgartner, *Comcast, Charter Form Mobile Platform Partnership,* April 20, 2018, Multichannel News, https://www.multichannel.com/news/comcast-charter-form-mobile-platform-partnership.

[39] *See, e.g.,* Petition to Deny of Common Cause et al. at p. 12-15.

[40] *See Comcast Reports 2nd Quarter 2018 Results,* p. 3, July 26, 2018, Comcast, https://www.cmcsa.com/node/31431/pdf.

[41] *See Second Quarter 2018 Results,* p. 7, July 31, 2018, Charter Communications, http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NDA5MzM5fENoaWxkSUQ9LTF8VHlwZToz&t=1&cb=636686258219257399.

[42] *See* Comcast, Xfinity Mobile, https://www.xfinity.com/mobile/; Charter, Spectrum Mobile, https://www.spectrum.com/mobile.html.

[43] *See* Mike Farrell, *Charter Launches Spectrum Mobile,* July 3, 2018, Multichannel News, https://www.multichannel.com/news/charter-launches-spectrum-mobile.

[44] *See What Are Xfinity WiFi Hotspots and How Do I Connect?*, June 13, 2018, Comcast, Xfinity Mobile, https://www.xfinity.com/mobile/support/article/221762167/what-are-xfinity-wifi-hotspots-and-how-do-i-connect.

[45] *See* Charter, Spectrum WiFi, https://www.spectrum.com/wifi-hotspots.html.

Since launching its mobile service in mid-2017, Comcast has built a subscriber base of 781,000.[46] In the second quarter of 2018, Comcast reported "a gain of 204,000 Xfinity Mobile lines,"[47] which was more than both Sprint's and U.S. Cellular's total net subscriber additions in the same quarter.[48] Charter only recently launched its mobile service, but it is estimated that it will reach 650,000 subscribers in a year.[49] Analysts are especially optimistic about the prospects of Comcast's mobile offering (likely owing to its relatively longer operational track-record), with some estimating that its subscribership "will increase…to around 1.3 million by the end of this year" and "grow[]…to 2.3 million by the end of next year and 3.3 million by 2020."[50]

The entrance of these firms into the mobile market has already proven to be disruptive: according to one analysis, the bulk of Comcast's subscribers have come from AT&T and Verizon.[51] Overall, 75% of Comcast's mobile subscribers cited its lower costs as the primary reason for switching.[52]

- ***Alternative Wireless Models are Increasingly Popular and Compete Fiercely on Price***. The Wi-Fi/MVNO model being used by Comcast and Charter to provide mobile service was pioneered by firms like Republic Wireless and Google's Project Fi, both of which remain popular low-cost alternatives for consumers. Each offers unlimited talk and text (Fi for $20/month,[53] Republic for $15/month[54]) and sells mobile broadband by the gig. Indeed, on a per gig basis, both Fi and Republic are cheaper than Comcast and Charter:

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[46] *See* Mike Dano, *Comcast's Xfinity Mobile to Grow to 3.3M Customers by 2020, Analyst Predicts,* Aug. 14, 2018, Fierce Wireless, https://www.fiercewireless.com/wireless/comcast-s-xfinity-mobile-to-grow-to-3-3m-customers-by-2020-analyst-predicts ("*Xfinity Mobile to Grow*").

[47] *Id.*

[48] *See* Mike Dano, *How Verizon, AT&T, T-Mobile, Sprint and More Stacked up in Q2 2018: The Top 7 Carriers,* Aug. 13, 2018, Fierce Wireless, https://www.fiercewireless.com/wireless/how-verizon-at-t-t-mobile-sprint-and-more-stacked-up-q2-2018-top-7-carriers.

[49] *Xfinity Mobile to Grow.*

[50] *Id.*

[51] *See* Jeff Baumgartner, *Verizon, AT&T Subs Most Apt to Switch to Xfinity Mobile: Study,* May 3, 2018, Multichannel News, https://www.multichannel.com/blog/verizon-att-subs-most-apt-switch-xfinity-mobile-study ("*Most Apt to Switch*").

[52] *Id.*

[53] *See* Google, Project Fi – About, https://fi.google.com/about/plan/ ("*Google Fi*").

[54] *See* Republic Wireless, Plan, https://republicwireless.com/cell-phone-plans/.

- Republic: $5/gig[55]
- Fi: $10/gig[56]
- Comcast Mobile: $12/gig[57]
- Charter Mobile: $14/gig[58]

Ting uses a similar hybrid model to support its mobile offerings, but its pricing model is completely different. Usage of talk, text, and data is pooled and shareable across multiple devices. In addition, users only pay for what they use each month, providing a kind of metered billing that diverges from the traditional approach of purchasing a specific bucket of minutes and data for use each month.[59]

2.2.2 Competition for Consumers' Attention is Increasing Across the Digital Ecosystem

For many years, the interests of wireless carriers and tech companies like Google and Facebook were complementary: carriers deployed more advanced networks; content providers leveraged those media to deliver more engaging services to end users; device manufacturers created handsets that could more effectively harness the new networks to deliver more bandwidth-intensive content; consumers demanded greater bandwidth and more reliability. And on went the cycle. Now, though, these interests are beginning to conflict as the ecosystem converges:

> "Gone are the days when bright lines neatly delineated discrete segments of the communications and media market. Digitization has flattened this space, lowering entry barriers to the point where it no longer makes sense for firms to compete solely within a particular slice of the market. Compounding this dynamic is how lucrative and easy it is to monetize the data emanating from consumers' use of digital services.
>
> "Even in this converged market, it might appear that big tech firms like Facebook, which dominate the digital ad space, have little in common with a company like T-Mobile. In reality, though, they all compete fiercely for customers' attention, positioning consumer demand as the primary force shaping the marketplace.

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[55] *Id.*

[56] *Google Fi.*

[57] *See* Xfinity, Mobile Plan, https://www.xfinity.com/mobile/plan.

[58] *See* Spectrum Mobile, Plans, https://mobile.spectrum.com/plans.

[59] *See* Ting, Rates, https://ting.com/rates.

> "A desire to dominate consumer attention drives competition in our digital era. The strategies for doing so vary widely. Big tech is focused on monopolizing the online experience in order to collect as much personal information as possible, which they then use to target personalized ads."[60]

In this new world, data is a commodity that tech companies seek to monopolize and monetize. As such, there are strong incentives for tech companies like Google and Facebook to dominate the user experience by attempting to serve as the sole arbiter of the online experience.[61] This has yielded business models that seek to keep users firmly ensconced within a proprietary platform, walling off that user's attention from others and allowing the proprietor to reap all of that person's data. The following offers only a small sampling of tech companies' machinations on this front – developments that directly impact the competitive dynamics of the broader ecosystem and that increasingly shape the decision-making of wireless firms like T-Mobile and Sprint.

- ***Amazon*** – the world's largest and most dominant e-commerce site "controls 49 cents of every e-commerce dollar spent in the U.S."[62] Even so, the company is seeking to expand its reach further into consumers' daily lives: in addition to its core retail offerings, Amazon has become "a marketing platform, a delivery and logistics network, a payment service, a credit lender, an auction house, a major book publisher, a producer of television and films, a fashion designer, a hardware manufacturer, and a leading provider of cloud server space and computing power."[63] Amazon has also dabbled in selling Internet service offerings (*e.g.*, prepaid plans) of existing ISPs, and its video offerings have proven immensely popular, providing it with significant clout to impact the business decisions of ISPs and others in the ecosystem.

- ***Facebook*** – the world's largest social networking site has gone to great lengths in recent years to keep consumers constantly engaged on its ever-growing platform. It purchased WhatsApp and Instagram, two competing services, in an effort to

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[60] *See* Michael Santorelli, *Why The Merger of T-Mobile and Sprint is a Great Idea,* June 27, 2018, Forbes Washington Bytes, https://www.forbes.com/sites/washingtonbytes/2018/06/27/why-the-merger-of-t-mobile-sprint-is-a-great-idea/#66d029863b0b ("*Merger is a Great Idea*").

[61] *See, e.g.,* Michael Santorelli, *Halo, Goodbye: Cleaning up the Digital Ecosystem After the Facebook Data Spill,* April 24, 2018, Forbes Washington Bytes, https://www.forbes.com/sites/washingtonbytes/2018/04/24/halo-goodbye-cleaning-up-the-digital-ecosystem-after-the-facebook-data-spill/.

[62] *See* David Magee, *Will Trillion Dollar Amazon, Jeff Bezos Become Public Enemy Like Walmart?*, Sept. 5, 2018, Newsweek, https://www.newsweek.com/will-trillion-dollar-amazon-jeff-bezos-become-public-enemy-walmart-1107857.

[63] *See* Lina M. Khan, *Amazon's Antitrust Paradox,* 126 Yale L. J. 710, 713 (2017), https://www.yalelawjournal.org/pdf/e.710.Khan.805_zuvfyyeh.pdf

protect its status as the top social network;[64] it has become a major purveyor of news (and fake news);[65] its Messenger and Live services are enormously popular communications tools;[66] and, in the past, it has experimented with mobile offerings.[67] Facebook has also been exploring the provision of Internet service to customers in an effort to connect more people and to control the user experience (and thus extract even more data). For example, it is experimenting with a gigabit-level Wi-Fi-like service – Terragraph – that could be rolled out in a small number of cities in 2019.[68] It has also invested in satellite broadband; it could launch its own satellite for these purposes next year.[69]

- ***Google*** – Facebook's myriad of efforts to dominate users' attention reflect similar strategies that Google has deployed in recent years. The array of holding companies that now sit under the umbrella of Alphabet illustrate the many ways in which the company is attempting to harvest ever-more granular data about consumers. Google is already by far the most popular search engine on the planet: across its various platforms (search, YouTube, Maps, etc.), Google handles in excess of 90% of all web searches.[70] Its forays into robotics and artificial intelligence are a means of drilling even deeper for personal data that it might monetize.[71] Google has also long tinkered with serving as an ISP – first via Wi-Fi,[72]

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[64] *See, e.g.,* Prachi Bhardwaj and Shayanne Gal, *Instagram's $100 Billion Valuation Pushes Facebook's Dominance of Social Media to New Heights,* June 27, 2018, Business Insider, https://www.businessinsider.com/instagram-valuation-facebook-industry-dominance-charts-2018-6.

[65] *See, e.g.,* Josh Constine, *How Facebook Stole the News Business,* Feb. 3, 2018, Tech Crunch, https://techcrunch.com/2018/02/03/facebooks-siren-call/.

[66] *See, e.g.,* David Cohen, *A Deeper Look Into How People Use Facebook Messenger and Similar Channels,* Nov. 16, 2017, Ad Week, https://www.adweek.com/digital/the-art-of-communication-messages-that-matter/.

[67] *See, e.g.,* Roger Cheng, *Here's Why the Facebook Phone Flopped,* May 8, 2013, CNET, https://www.cnet.com/news/heres-why-the-facebook-phone-flopped/.

[68] *See, e.g.,* Brian Heater, *Facebook and Qualcomm Will Bring Fast Wi-Fi to Cities in Mid-2019,* May 21, 2018, Tech Crunch, https://techcrunch.com/2018/05/21/facebook-and-qualcomm-will-bring-fast-wifi-to-cities-in-mid-2019/.

[69] *See, e.g.,* Louise Matsakis, *Facebook Confirms It's Working on a New Internet Satellite,* July 20, 2018, Wired, https://www.wired.com/story/facebook-confirms-its-working-on-new-internet-satellite/.

[70] *See* Jess Desjardins, *How Google Retains More than 90% of Market Share,* April 23, 2018, Business Insider, https://www.businessinsider.com/how-google-retains-more-than-90-of-market-share-2018-4.

[71] *See, e.g.,* Tim Simonite, *Google and Microsoft Can Use AI to Extract Many More Ad Dollars from our Clicks,* Aug. 31, 2017, Wired, https://www.wired.com/story/big-tech-can-use-ai-to-extract-many-more-ad-dollars-from-our-clicks/.

[72] *See, e.g.,* Katy Steinmetz, *Google Gives San Francisco Free Wi-Fi in Public Places,* Oct. 2, 2014, Time, http://time.com/3453871/google-gives-san-francisco-free-wi-fi-in-public-places/.

then via fiber and gigabit wireless,[73] and, more recently, via balloons.[74] Combined with its dominant email, chat, and video offerings, as well as its Android operating system for smartphones, which is the most popular mobile OS in the world, Google has become a formidable challenger in the converging communications/media space.

- ***Microsoft*** – although Windows and Office remain the most popular services in their respective categories worldwide, Microsoft has continued to experiment with expanding its hold on consumers' attention.[75] Recently, it has spearheaded efforts to leverage spectrum in the TV "white spaces" to deliver Internet service to rural residents.[76] This represents yet another attempt by the company to become a major player in the wireless space. It once angled for market share in the handset OS market, and although those initial efforts failed,[77] the company is in the process of attempting to leverage the popularity of Windows as a way to offer mobile users a more familiar experience and convenient way to work across their phones and PCs.[78] Microsoft has also released an app that allows Windows users to buy prepaid mobile connectivity directly on their device.[79]

Many other companies are investing significant sums in an effort to create a similar "walled garden" approach to dominating the user experience. ***Apple***, for example, continues to expand its hardware offerings as its well-designed offerings seep further into customers' daily lives – *i.e.,* the iPhone begot the iPad, which begot wearables like the Apple Watch, which begot in-home devices like Home Pad. It is also ramping up production of original television content,[80] and rumors abound about a potential foray

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[73] *See, e.g.,* Blair Levin and Larry Downes, *Why Google Fiber is High-Speed Internet's Most Successful Failure,* Sept. 7, 2018, Harvard Business Review, https://hbr.org/2018/09/why-google-fiber-is-high-speed-internets-most-successful-failure.

[74] *See, e.g.,* X Company, Projects – Loon, https://x.company/projects/loon/.

[75] *See, e.g.,* Andre Da Costa, *A Look at 25 Years of Microsoft Office (Then and Now),* April 20, 2018, Groovy Post, https://www.groovypost.com/unplugged/23-years-microsoft-office/.

[76] *See* Microsoft, Airband Initiative, https://www.microsoft.com/en-us/airband.

[77] *See, e.g.,* Jon Fingas, *Microsoft Officially Ends Support for Windows Phone,* July 11, 2017, Engadget, https://www.engadget.com/2017/07/11/windows-phone-support-ends/.

[78] *See, e.g.,* Mark Hachman, *Microsoft's Mobile Strategy: Create Windows-Like App 'Experiences' for Smartphones,* May 8, 2018, PC World, https://www.pcworld.com/article/3269829/windows/microsofts-mobile-strategy-create-windows-like-app-experiences-for-smartphones.html.

[79] *See, e.g.,* Mary Jo Foley, *Microsoft to Enable Windows 10 PC Users to Directly Buy, Connect to Mobile Data Plans,* Jan. 8, 2016, ZDNet, https://www.zdnet.com/article/microsoft-to-enable-windows-10-pc-users-to-directly-buy-connect-to-mobile-data-plans/.

[80] *See, e.g.,* Jason Cross, *Apple's Original TV Shows and Series,* Sept. 10, 2018, Macworld, https://www.macworld.com/article/3245534/streaming-services/list-of-apple-tv-shows-and-series-news-actors-release-dates.html.

into cars.[81] ***Snapchat,*** which has long nipped at the heels of Facebook/Instagram, developed Spectacles to make it easier for users to take videos, stream video, and be constantly connected to the service.[82]

In sum, tech companies large and small are seeking to leverage consumers' insatiable appetite for wireless services in their attempts to establish a dominant position in the collection and monetization of data. That many of these companies are exploring the possibility of becoming ISPs makes sense given the enormous financial incentives associated with monopolizing users' attention when online. These same incentives are driving ISPs to explore a range of novel business models in response, demonstrating that the consequences of the decisions made by players in one segment are no longer confined to that particular corner of the ecosystem.

2.3 *Situating the Proposed Merger in the Proper Context Demonstrates that the Transaction is a Sensible Business Strategy*

The competitive dynamics described above have had direct and discernible impacts on the business models and decision-making of existing mobile ISPs. Each has responded in different ways. AT&T, for example, has pursued a vertical strategy, acquiring media properties and leveraging that content to attract and retain customers.[83] Verizon is attempting to become more like a tech company by acquiring digital properties like AOL and Yahoo and using those platforms as a way to create new digital revenue streams.[84]

T-Mobile's strategy for maintaining relevance in this new world appears to be threefold. First, by combining with Sprint, New T-Mobile is looking to deploy the most advanced and widespread 5G network in the world.[85] The robustness of that network will allow it compete more forcefully with AT&T and Verizon and to vie for a slice of the home broadband market.[86] In short, T-Mobile's strategy is of a piece with most other ISPs – *i.e.,*

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[81] *See, e.g., Apple Car – Everything We Know About Apple's Rumored Electric Car,* 9to5Mac, https://9to5mac.com/guides/apple-car/.

[82] *See, e.g.,* Josh Constine, *Snapchat Launches Spectacles V2, Camera Glasses You'll Actually Wear,* April 26, 2018, Tech Crunch, https://techcrunch.com/2018/04/26/snapchat-spectacles-2/.

[83] *See, e.g.,* Michael J. Santorelli, *Why the AT&T-Time Warner Merger Makes Sense,* Nov. 16, 2017, N.Y. Times, https://www.nytimes.com/2017/11/16/opinion/att-time-warner-merger.html.

[84] *See, e.g.,* Klint Finley, *Verizon's Longshot Bet to Disrupt Google and Facebook,* Oct. 20, 2017, Wired, https://www.wired.com/story/verizons-longshot-bet-to-disrupt-google-and-facebook/.

[85] *See, e.g., T-Mobile Public Interest Statement* at p. 15 ("New T-Mobile will be able to leverage a unique combination of assets and unlock massive synergies that will allow it to build a world-leading 5G network, resulting in substantial benefits for consumers, competition, and the country.").

[86] *See, e.g.,* Dan Jones, *T-Mobile: 5G Lets Us Take Broadband Across America,* Aug. 1, 2018, Light Reading, https://www.lightreading.com/mobile/5g/t-mobile-5g-lets-us-take-broadband-across-america-/d/d-id/745092.

doubling-down on investing in its network and expanding its reach to attract more customers.

Second, another key element of its strategy is its commitment to maintaining a maverick approach to pricing and innovation in service offerings. Because it will remain the third-largest wireless carrier post-merger, New T-Mobile has significant incentives to continue experimenting with its "Un-Carrier" offerings (section 3.1, *infra*, provides additional discussion on this point).[87] Contrary to the assertions of detractors, New T-Mobile will have little incentive to raise prices – doing so would undermine its "Un-Carrier" brand and would likely lead to customer losses. Moreover, new entrants, particularly Comcast and Charter, are actively mimicking this pricing strategy, creating even more pressure to continue forward with it. As previously noted, this strategy has already helped Comcast lure customers away from AT&T and Verizon.[88]

Third, T-Mobile is also exploring a video service and other offerings in an effort to keep customers engaged on its platform.[89] This strategy reflects similar efforts by AT&T, which is leveraging its Time Warner properties for the same purpose; Comcast and Charter, which are framing their mobile offerings as a way to access cable content at any time on a mobile phone; and of the tech companies mentioned above, many of which are developing their own devices and networks for similar purposes.[90]

In sum, when viewed in proper context – *i.e.,* against the backdrop of chaotic competition among wireless carriers new and old, and with tech companies for consumers' attention – it is clear that the proposed merger of T-Mobile and Sprint is a strategic play for relevance, not dominance. As such, the proposed merger represents a sound business strategy that should not be thwarted by the Commission.

2.4 *The Commission Should Seize the Opportunity to Articulate and Apply a More Robust Analytical Framework in Order to Assure a Sufficiently Comprehensive Examination*

The dynamics of competition across the rapidly converging and evolving digital ecosystem are complex and have yet to be integrated in a meaningful way into the Commission's merger review processes. The Commission should seize the opportunity provided by the proposed merger of T-Mobile and Sprint to address this shortcoming and develop a more robust and dynamic approach to how it reviews mergers.

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[87] *See, e.g., A Merged T-Mobile and Sprint Will Still be Smaller.*

[88] *Most Apt to Switch.*

[89] *See* T-Mobile, T-Mobile is Coming to TV, https://www.t-mobile.com/tv.

[90] *See, e.g.,* Chris Welch, *Everything We Know About T-Mobile's TV Service Coming in 2018,* Dec. 15, 2017, The Verge, https://www.theverge.com/2017/12/15/16781540/tmobile-streaming-tv-service-features-rumors.

The Commission has an uneven track-record of accurately gauging the true scope of emerging competition in the context of merger reviews, traditionally opting instead for an overly conservative approach to defining relevant markets. In some cases, this approach has yielded conclusions that not only contradicted persuasive evidence to the contrary, but that also proved to be extremely shortsighted. For example, in its review of the merger of AT&T and DirecTV, the Commission decided that streaming video providers (*e.g.,* Netflix) were not viable substitutes for traditional multichannel (*i.e.,* cable and satellite) service, thereby narrowing greatly the relevant product market.[91] But only a few years later, a federal court, when evaluating the merger of AT&T and Time Warner, found the opposite – *i.e.,* that multichannel video providers do in fact compete fiercely with streaming video platforms.[92] Similarly, in its review of the merger of Charter and Time Warner Cable, the Commission elected to define the relevant product market as consisting only of cable and fiber ISPs, despite the robustness of and consumer preference for mobile.[93] Since then, the Commission has become more accepting of the ability of other broadband platforms – notably mobile and fixed wireless, and, increasingly, satellite – to serve as acceptable substitutes for Internet access.[94]

The proposed merger at issue provides a viable opportunity for the Commission to begin the process of updating how it approaches transactions that are taking place in the converging digital ecosystem described above. The need for such is long overdue and palpable:[95] the Commission has not changed how it defines the relevant market in the context of wireless mergers since 2008.[96] Indeed, for the last decade, the Commission has defined the relevant market as "a combined 'mobile telephony/broadband services' product market…which is comprised of mobile voice and data services, including mobile voice and data services provided over advanced broadband wireless networks (mobile

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[91] *See Applications of AT&T and DIRECTV for Consent to Assign or Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 30 FCC Rcd 9131, ¶68 (2015).

[92] *See U.S. v. AT&T,* Civil Case No. 17-2511 (RJL) (D.D.C. June 12, 2018).

[93] *See Applications of Charter Communications, Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership for Consent to Assign or Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 31 FCC Rcd 6327, ¶50 (2016).

[94] *See, e.g., 2018 Broadband Deployment Report* at ¶14.

[95] To be fair, the Commission has not had occasion to review a major wireless merger since 2014. *See Applications of Cricket License Company, LLC, et al., Leap Wireless International, Inc., and AT&T Inc. for Consent to Transfer Control of Authorizations*, Memorandum Opinion and Order, 29 FCC Rcd 2735 (2014).

[96] *See Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and De Facto Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act*, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 17444, ¶45 (2008).

broadband services)."[97] In light of the diverse array of competitive threats facing carriers like T-Mobile and Sprint, such a narrow definition is quaint and inapposite.

The Commission in the past has indicated a willingness to be more expansive in its market definitions. When it last altered its approach to defining the relevant product market for wireless mergers, the Commission noted the "risks associated with defining product markets too narrowly, since doing so may thwart this and future pro-competitive deals that take place in the context of rapidly evolving markets and services."[98] At the time, the Commission recognized "[s]ubstantial ongoing developments in the evolution of the provision of wireless services, especially the increasing prominence of mobile broadband services," which led it to "revisit the product market definitions that [it] employed in the past."[99]

Since then, the evolution of wireless services has only accelerated. As noted above, that evolution is increasingly being shaped by developments across the broader digital ecosystem. As such, the Commission should once again "revisit the product market definitions [it] employed in the past" and delineate a broader and more accurate conception of the chaotically competitive milieu within which the proposed transaction is taking place. Doing so will assure a more comprehensive and fair evaluation of the instant merger and future proposed combinations.

3. EVALUATING THE BENEFITS OF THE PROPOSED MERGER: EXPECTED CONSUMER BENEFITS FAR OUTWEIGH ANY POTENTIAL HARMS

In addition to identifying the proper context and standard of review for evaluating the proposed merger, it is necessary to evaluate the likely benefits that will result from the transaction. As discussed in this section, those benefits far outweigh any harms that might arise post-merger. Moreover, the likelihood that those benefits will be realized are bolstered by the established track-record of T-Mobile as an innovator and competitive agitator. This section begins with a review of that track-record and an examination of Sprint's inability to keep pace with its competitors in the wireless space and beyond. Thereafter, this section evaluates how the 5G network promised by New T-Mobile will impact the broadband market, consumers, and the U.S. economy.

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[97] *Id.*

[98] *Id. See also Sprint Nextel Corporation and Clearwire Corporation Applications for Consent to Transfer Control of Licenses, Leases, and Authorizations*, Memorandum Opinion and Order, 23 FCC Rcd 17570, ¶37 (2008) ("*Sprint-Clearwire Merger Order*").

[99] *See, e.g., Sprint-Clearwire Merger Order* at ¶33.

3.1 *Evaluating the Parties*

A close examination of the parties involved in the proposed transaction make clear that the resulting combination will position New T-Mobile for long-term success as a strong competitor and disruptive innovator in the digital ecosystem. T-Mobile has been able to keep pace with its competitors in the wireless market and beyond because of its long history of innovation and focus on upending the mobile space. Sprint, on the other hand, has struggled mightily despite possessing valuable spectrum assets and demonstrating, on occasion, an ability to be disruptive.

3.1.1 T-Mobile's Established Track-Record of Consumer-Focused Innovation & Disruption Position it Well for Continued Success Post-Merger

T-Mobile has long forged its own path in the wireless market. In doing so, it has gained a reputation as a rebel innovator that focuses first and foremost on providing its customers with the most satisfying user experience possible.

T-Mobile's early embrace of the Sidekick provides an illustrative case study of this approach to wireless service. At a time when other carriers were racing to make available expensive PDAs like the Blackberry – devices with a relatively limited market (*e.g.,* government and corporate employees) – T-Mobile opted to offer the Sidekick, a lower-cost mobile device that provided consumers with similar functionality.[100] This choice proved prescient as the Sidekick turned out to be more in tune with the tastes of customers who wanted an accessible and affordable texting device without having to purchase a stodgy "corporate" device like a Blackberry.[101] In 2002, T-Mobile " introduced the phone at $199 after rebate, with unlimited data usage at $39.99 a month."[102] The newest Blackberry at the time was retailing for $499; Blackberry charged "$45 a month for unlimited e-mail and up to 300 instant messages, not including cellular service."[103] That the Sidekick was a "fun" and slightly subversive device that was priced competitively ultimately helped to distinguish T-Mobile in a crowded mobile market.[104]

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[100] *See* Jason Duaine Hahn, *The History of the Sidekick: The Coolest Smartphone of All Time,* Sept. 11, 2015, Complex, https://www.complex.com/pop-culture/2015/09/history-of-the-sidekick.

[101] *Id.*

[102] *Id.*

[103] *See* Brian L. Clark, *Chasing the BlackBerry,* June 17, 2002, CNN Money, https://money.cnn.com/2002/06/17/pf/saving/handhelds/index.htm.

[104] *See* Gary Krakow, *Tragically Hip: The T-Mobile Sidekick,* Oct. 2, 2002, NBC News, http://www.nbcnews.com/id/3078311/ns/technology_and_science-tech_and_gadgets/t/tragically-hip-t-mobile-sidekick/#.W51Vo_YpA2w.

T-Mobile built on this early success with the Sidekick by continuing to be a pioneer in tweaking the traditional mobile business model. For example, it introduced some of the very first hybrid service plans, like its FlexPay program, which eliminated the monthly contract. Instead, customers would "simply pay the retail cost of the phone and the regular monthly service charge for the service."[105] The company was also one of the first wireless carriers to begin prorating early termination fees (ETFs), providing subscribers with more flexibility by reducing the size of the penalty associated with prematurely ending a contract.[106]

T-Mobile's competitors in the wireless space consistently responded in kind, creating a vibrantly innovative and customer-focused mobile sector, one where customer service remains an important point of competition. As noted above, the wireless sector enjoys very high customer satisfaction rankings. T-Mobile in particular has prioritized its customer service, a decision that has led the company to be consistently recognized by groups like J.D. Power on this front. Indeed, in its most recent rankings, J.D. Power awarded T-Mobile "the he highest score of any company, ever" in its 2018 U.S. Wireless Customer Care Full-Service Study.[107]

J.D. Power observed that its "results show a clear customer affinity for the T-Mobile care experience."[108] Such "affinity" has been carefully cultivated by the company, yielding its "Un-Carrier" approach, a rebranding that was "animated by a desire to keep customers' attention in this era of hyperactive competition."[109] This rebranding "garnered headlines and trended on social media…[s]ubscribership has steadily increased in response."[110] Innovations stemming from this move included offering to pay the ETFs of customers of other carriers so they could switch and become T-Mobile subscribers.[111] In the 18 months after rebranding, T-Mobile added 22.5 million subscribers, making it the "fastest-growing network."[112]

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[105] *See* Marguerite Reardon, *T-Mobile to Prorate Early Termination Fees,* June 23, 2006, CNET, https://www.cnet.com/news/t-mobile-to-prorate-early-termination-fees/.

[106] *Id.*

[107] *See* Press Release, *T-Mobile and MetroPCS Take J.D. Power's Top Spots for Customer Care,* Aug. 2, 2018, T-Mobile, https://www.t-mobile.com/news/jdp-top-spots-for-customer-care.

[108] *Id.*

[109] *Merger is a Great Idea.*

[110] *Id.*

[111] *See, e.g.,* Sean Hollister, *T-Mobile Will Now Pay $350 for You to Leave AT&T, Sprint, or Verizon,* Jan. 8, 2014, The Verge, https://www.theverge.com/2014/1/8/5289044/t-mobile-will-pay-you-up-to-350-to-leave-your-existing-carrier.

[112] *See* Lauren Johnson, *How T-Mobile Trashed its Own Industry and Gained 22 Million Subscribers in the Process,* Oct. 23, 2014, Ad Week, https://www.adweek.com/digital/how-t-mobile-trashed-its-own-industry-and-gained-22m-subscribers-process-160935/ ("*How T-Mobile Trashed its Own Industry*").

Shortly after the "Un-Carrier" announcement, T-Mobile unveiled its first free data programs. These allowed customers to consume significantly more data without having to pay for it. T-Mobile observed that (1) wireless customers were increasingly consuming streaming media services, (2) its competitors maintained strict data caps that limited how much a person could stream each month, and (3) "37% of people [avoided] streaming on their phones – the majority out of fear that [they would] use up their data and run into overages."[113] In response, T-Mobile unveiled two programs – one focused on streaming music (Music Freedom) and one focused on streaming video (Binge On) – that allowed customers to consume as much streaming media as they wished from those entities with which it had forged a partnership.[114] Consumers loved these offerings, and millions of new subscribers flocked to T-Mobile.

T-Mobile has grown from a scrappy carrier to one of the most innovative and consumer-friendly ISPs in the U.S. Its success derives from an ethos that prizes outside-the-box thinking over maintaining the status quo. Reverting back to the norm – *i.e.,* becoming like the competitors it has reveled in "trash[ing]"[115] – would thus make little sense, and arguments by detractors that the proposed merger would somehow yield a sluggish, disinterested wireless giant should be dismissed out of hand. The history of T-Mobile and the proven strategies it has pursued make it very unlikely that it would be anything other than double-down on its "Un-Carrier" strategy post-merger.

3.1.2 Sprint Has Long Struggled to Keep Pace in the Wireless Market; Without the Merger, it Will Likely Fail

T-Mobile's rise came largely at the expense of Sprint, which has floundered for much of the last decade in its attempt to keep pace with its competitors in the deployment of next-generation networks and the provision of innovative new offerings.

Many of Sprint's recent woes can be attributed to a series of costly business decisions made by the firm. First, in 2005, Sprint sought to merge with Nextel, a combination that brought together the third- and fifth-largest wireless carriers in the country.[116] A primary motivation for the merger was a desire by the firms to stitch together each company's network in an effort to provide a robust competitive alternative in a market that was

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[113] *See* Press Release, *T-Mobile Sets Your Music Free,* June 18, 2014, T-Mobile, https://www.t-mobile.com/news/t-mobile-sets-your-music-free.

[114] *See, e.g., Understanding and Appreciating Zero-Rating: The Use and Impact of Free Data in the Mobile Broadband Sector*, p. 3-7, MMTC (2016), http://mmtconline.org/WhitePapers/MMTC_Zero_Rating_Impact_on_Consumers_May2016.pdf.

[115] *How T-Mobile Trashed its Own Industry.*

[116] *See, e.g.,* Margaret Kane, *Sprint, Nextel Agree to $35 Billion Merger,* Feb. 14, 2005, CNET, https://www.cnet.com/news/sprint-nextel-agree-to-35-billion-merger/.

rapidly evolving. It turned out, however, that the two networks and the two corporate cultures were anything but compatible, leading to technical issues, confused marketing, and a rapid decline in stock price and market share.[117]

Compounding this fall was Sprint's choice to bet on WiMax as the architecture for its next generation network. WiMax was initially described as "a technology that can spread a wireless Internet signal over several miles, a long-range version of the popular short-range wireless Internet technology, Wi-Fi."[118] Unfortunately for Sprint, the WiMax standard proved difficult and expensive to operationalize; the company eventually gave up on it in favor of deploying networks architected around similar standards as its competitors (*e.g.,* 4G LTE).[119] This detour proved costly, however, both in terms of a lower share price and a loss of customers. In an effort to catch up with rivals, Sprint merged with Clearwire, a move driven by a need for additional spectrum to support deployment of its 4G network.[120]

Sprint made another bold – and ultimately unsuccessful – bet in its attempt to keep up with its rivals. In 2011, Sprint agreed to a deal with Apple to purchase $20 billion worth of iPhones – over 30 million in total – over the next few years.[121] Although the deal finally brought the iPhone to the Sprint network, Sprint still lost subscribers and bled money because of the industry practice of heavily subsidizing the iPhone, which resulted in it "los[ing] money on each iPhone sold."[122] In addition, the rise in popularity of Android-based phones, particularly those made by Samsung, further cast the Sprint iPhone deal in a negative light.

Eventually, Sprint was able to right its ship, thanks in large part to significant investments by SoftBank. But the scars from its many previous bad bets have hobbled the firm

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[117] *See, e.g.,* Kim Hart, *No Cultural Merger at Sprint Nextel,* Nov. 24, 2007, Wash. Post, http://www.washingtonpost.com/wp-dyn/content/article/2007/11/23/AR2007112301588.html; Laura M. Holson, *Sprint Nextel Posts $29.5 Billion Loss,* Feb. 29, 2008, N.Y. Times, https://www.nytimes.com/2008/02/29/technology/29sprint.html.

[118] *See* Amol Sharma and Don Clark, *Sprint Bets on New Wireless 'WiMax,'* Aug. 8, 2006, Wall St. Journal, https://www.wsj.com/articles/SB115500155372529472.

[119] *See, e.g.,* Bill Ray, *Sprint CEO Admits WiMAX Gamble Didn't Pay Off,* Dec. 9, 2010, The Register, https://www.theregister.co.uk/2010/12/09/clearwire_sprint_wimax/.

[120] *See, e.g.,* Michael J. De La Merced, *Sprint Offers $2.1 Billion for Clearwire and its Spectrum,* Dec. 13, 2012, N.Y. Times DealBook, https://dealbook.nytimes.com/2012/12/13/sprint-looks-to-buy-remaining-stake-in-clearwire-for-2-1-billion/.

[121] *See, e.g.,* Joann S. Lublin and Spencer E. Ante, *Inside Sprint's Bet on iPhone,* Oct. 4, 2011, Wall St. J., https://www.wsj.com/articles/SB10001424052970203405504576603053795839250.

[122] *See Sprint Still Worth $4.25 Despite iPhone Deal, Debt Concerns,* Dec. 29, 2011, Forbes, https://www.forbes.com/sites/greatspeculations/2011/12/29/sprint-still-worth-4-25-despite-iphone-deal-debt-concerns/#3e0cec363468.

significantly. Indeed, as its Executive Chairman Marcelo Claure has stated on several occasions, but for its merger with T-Mobile, Sprint would struggle to deploy a 5G network that could compete with the those being built by AT&T, Verizon, and T-Mobile.[123] Sprint is thus best seen as a fading firm that is being rescued by T-Mobile, a nimbler company that has proven itself in this market. Sprint does bring important spectrum assets and other resources to the table, which will prove invaluable in support of New T-Mobile's 5G plans. But left to its own devices, Sprint might very well fail.

3.2 *The 5G Promise: The Merger Will Bolster Next-Generation Wireless Deployment, Spark Innovation, Support Job Growth, and Extend U.S. Leadership on Critical Wireless Issues*

The centerpiece of the proposed merger is the promise that the combination will "allow[] New T-Mobile to invest in new network technology, innovation, and operations to rapidly construct and deploy the first true, nationwide 5G network."[124] Such will be made possible by a marriage of each company's "spectrum, sites, and equipment," which, once stitched together, "will provide New T-Mobile with the scale and resources necessary" to quickly deploy its next-generation network."[125]

Why is 5G important? The following statements by current FCC Commissioners provide a good overview:

- *Chairman Pai*: "There's a global race to become the first country to deploy 5G networks, with China, South Korea and Japan offering strong competition. But we want the United States to lead in 5G….Why? Throughout the history of communications, we've seen that the country that sets the pace in rolling out each new generation of wireless technology gains an economic edge. The United States was the first to build out 4G LTE networks broadly, and a recent analysis estimated that our leadership boosted our GDP by $100 billion and increased wireless-related jobs in the United States by 84 percent…The potential impact of 5G is even greater. This high-speed, high-capacity wireless connectivity will unleash new innovations to grow our economy and improve our quality of life. Imagine a world where everything that can be connected will be connected — where driverless cars talk to smart transportation networks and where wireless

[123] *See, e.g., Written Testimony of Marcelo Claure, Executive Chairman, Sprint Corporation, Before the Senate Committee on the Judiciary,* p. 3, June 27, 2018 https://www.judiciary.senate.gov/imo/media/doc/06-27-18%20Claure%20Testimony.pdf ("It is important to understand that our plans for 5G in the absence of a merger would necessarily be limited by our spectrum portfolio, lack of scale, and resource constraints.").

[124] *T-Mobile Public Interest Statement* at p. 15.

[125] *Id.*

sensors can monitor your health and transmit data to your doctor. That's a snapshot of what the 5G world will look like."[126]

- *Commissioner Carr*: "5G is a platform that can support transformative applications. It's about autonomous cars—which could reduce the number of traffic deaths from the 40,000 per year we see today to nearly zero. It's about the Internet of Things and smart cities—which could bring tremendous efficiencies to businesses and neighborhoods alike. It's about delivering remote surgery and telehealth applications to communities that lack the healthcare options they deserve. And it's about use cases we cannot even envision today."[127]

- *Commissioner O'Rielly*: "The vision for next-generation, or 5G, networks, is that they will be able to meet the demands of a broad range of applications. While there is no firm definition, everyone agrees that next generation networks will provide greater capacity, faster speeds and lower latency. If expectations materialize into reality, we could have the first truly terrestrial, high-speed, high-capacity, fully-seamless wireless Internet experience, that includes wireless backhaul… It is expected that 5G will fundamentally change the way people use the Internet and even change business culture, and everything will be mobile. For example, 5G will allow virtual reality apps permitting "immersive travel." You can visit Rome from your couch. A surgeon in New York will be able to operate in Alaska. Industrial manufacturing and production could be controlled wirelessly in realtime. And, I have even seen mentions of hologram video conferencing."[128]

- *Commissioner Rosenworcel:* "These new networks will support dramatic gains in capacity with significant reductions in latency. They will drive the evolution of the internet itself, powering the hyper-connected possibilities of the internet of things — from self-driving cars to virtual reality to other innovative uses that have yet to even be imagined."[129]

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[126] *See* Ajit Pai, *Florida is on the Leading Edge of 5G,* May 14, 2018, Tampa Bay Times, https://www.tbo.com/opinion/columns/Column-Florida-is-on-the-leading-edge-of-5G_168227409.

[127] *See* Brendan Carr, *Next Steps on the Path to 5G*, April 19, 2018, Remarks at CTIA's Race to 5G Summit, https://docs.fcc.gov/public/attachments/DOC-350348A1.pdf.

[128] *See* Michael O'Rielly, *Next Generation 5G Wireless Networks: Seizing the Opportunities and Overcoming the Obstacles,* July 25, 2017, Remarks Before the Free State Foundation, https://docs.fcc.gov/public/attachments/DOC-345941A1.pdf.

[129] *See* Jessica Rosenworcel, *It's Time to Chart a Course for 5G Success,* Jan. 10, 2018, Tech Crunch, https://www.fcc.gov/sites/default/files/rosenworcel-5g-01102018.pdf.

These statements underscore the significant potential of 5G to serve as the foundation for enormous economic growth, an engine for job creation, a catalyst for innovation, and a medium for empowering consumers with access to a universe of new applications. New T-Mobile's 5G network is being positioned as vital to realizing these benefits in a timelier manner than would otherwise occur.

Detractors have sought to derail the proposed merger by pushing back against the claimed benefits New T-Mobile argues will result from the transaction. These have ranged from the general – *e.g.,* that the claimed benefits will be realized with or without the merger[130] – to the specific – *e.g.,* estimated job gains will not materialize.[131] These arguments ultimately fail on several accounts.

First, these arguments dismiss the competitive impact that the merger will have on 5G deployment. Both companies have stated that neither, acting alone, would be able to construct as robust a network as they will be able to post-merger.[132] The 5G network promised by New T-Mobile would introduce a third robust competitor in the race to build out this critical digital infrastructure. The battle to be the first company to deploy 5G at scale, which has greatly intensified of late, has already yielded important advances by AT&T and Verizon; the merger would greatly hasten these efforts, as evidenced by the ramp-up in advertising by competitors in this space regarding their own plans for and progress toward 5G deployment.[133]

Second, the speed with which 5G deployment occurs is of central importance to the U.S. staking out a leadership role in the global race to shape the future of these networks. Such leadership is also important to ensuring that the U.S. remains a locus of mobile-centric technological innovation. National security is also implicated.

> "Around the world, giant wireless-technology companies are coordinating with their governments to come up with winning strategies to implement 5G, the next generation of cellular networks that promise to deliver ultrafast speeds and open up a range of new applications.
>
> "The U.S., China, South Korea and Japan are leading the early rounds…
> …
> "While wireless-industry executives say applications that tap the full potential of 5G—self-driving cars, virtual reality and remote surgery—are several years away, leading the way does matter for a country's economy, if

[130] *See, e.g.,* Petition to Deny of Free Press.

[131] *See, e.g.,* Comments of Communications Workers of America.

[132] *See generally T-Mobile Public Interest Statement.*

[133] *See supra,* section 2.2.1

> the race to 4G is a guide. If the U.S. hadn't led the way on 4G, the country might not dominate mobile technology, and its platforms, such as Instagram, Snapchat and perhaps even Facebook and Netflix might not have become global powers.
> …
> "For their part, U.S. officials have said that winning the 5G race is critical to both the economy and national security. That is, in part, how the government has justified the extraordinary steps it has taken to curb Chinese wireless-electronics giant Huawei, preventing its sales in the U.S., among other actions.
>
> "Officials believe Huawei could spy on behalf of the Chinese government, which becomes an even greater risk in a 5G era, in which exponentially more machines and everyday objects are connected to the internet. Huawei says it would never spy on behalf of any country.
>
> "Another worry is that if China develops widespread 5G first, it could be in a better position to experiment with autonomous vehicles and other emerging technologies—and displace Silicon Valley as the hub for the leading engineers."[134]

Echoing these many concerns, FCC Chairman Pai has noted that the U.S. "aspire[s] to lead the world in 5G. Make no mistake about it: I want the United States to be the best country for innovating and investing in 5G networks. I want American entrepreneurs to push the boundaries of the possible and American consumers to benefit from next-generation technologies."[135] The proposed transaction will go a long way toward helping to realize this vision much sooner than expected.

Third, arguments that the merger will result in spectrum concentration fail to account for (1) the current spectrum holdings of a diverse array of firms, and (2) ongoing efforts to make available additional swaths of the airwaves for the express purpose of supporting 5G deployment.

Regarding existing spectrum allocation, few serious competitors in the mobile space seem to view the proposed merger as a threat vis-à-vis spectrum. Verizon, for example, actively touts its "massive spectrum holdings" as the "cornerstone" of its emerging 5G network.[136]

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[134] *See* Stu Woo, *Why Being First in 5G Matters,* Sept. 12, 2018, Wall St. Journal, https://www.wsj.com/articles/why-being-first-in-5g-matters-1536804360.

[135] *See* Ajit Pai, *Remarks at the Mobile World Congress,* Feb. 26, 2018, FCC, https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0226/DOC-349432A1.pdf.

[136] *See* Kyle Malady, *There's 5G, Then There's Verizon 5G Ultra Wideband,* Sept. 11, 2018, Verizon, https://www.verizon.com/about/news/theres-5g-then-theres-verizon-5g-ultra-wideband.

Dish, which opposes the merger, has been described as "sitting on a treasure trove of underappreciated spectrum assets" that could play a key role in the deployment of a 5G network. [137] Other competitors in this space, including Comcast, have begun to amass spectrum in an effort to improve their competitive standing.[138]

Looking ahead, the Commission has committed to freeing up and auctioning off considerable spectrum assets in order to support 5G deployment. Two auctions for high-band spectrum, critical inputs to next-gen mobile networks, will occur in November of this year.[139] Thereafter, the Commission has promised to take further "aggressive actions…to promote innovation, investment, and United States leadership in 5G," including:

> "In the second half of 2019, we intend to hold an auction of three more millimeter-wave spectrum bands: 37 GHz, 39 GHz, and 47 GHz. Between that auction and the auctions for which we establish procedures today, we'll push almost 5 gigahertz of spectrum into the commercial marketplace over the course of the next seventeen months. We're also reforming our wireless infrastructure rules to ensure that the small-cell and fiber-based networks of the future can be built, for all the 5G spectrum in the world is pointless without 5G networks to make use of it."[140]

Viewed in this context, the proposed merger will likely have little impact on the efforts of others to obtain the spectrum needed for 5G deployment.

Fourth, attempts to frame the merger as one that will yield job losses do not hold up. Claimed jobs impacts – both positive and negative – are difficult to predict. Accordingly, some have reasonably cautioned that "the blanket labeling of mergers as automatic "job killers" is invalid," as "the data suggest that mergers may have a beneficial impact on

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[137] *See* Kendra Chamberlain, *Dish 'Undervalued' Spectrum Assets Worth $30.2B,* March 27, 2018, Fierce Wireless, https://www.fiercewireless.com/wireless/dish-s-undervalued-spectrum-assets-worth-30-2b-analyst.

[138] *See, e.g.,* Dan Meyer, *T-Mobile US, Dish, Comcast Dominate 600 MHz Incentive Auction, Verizon a No-Show,* April 13, 2017, RCR Wireless, https://www.rcrwireless.com/20170413/policy/t-mobile-us-dish-comcast-dominate-600-mhz-incentive-auction-verizon-a-no-show-tag2.

[139] *See, e.g.,* Mike Snider, *The U.S. Just Took a Key Step to Making 5G Smartphones a Reality,* July 11, 2018, USA Today, https://www.usatoday.com/story/tech/talkingtech/2018/07/11/faster-phones-smarter-devices-come-fcc-5-g-spectrum-auctions/773270002/.

[140] *See Statement of Chairman Pai re Spectrum Frontiers Auction 101 (28 GHz) and Auction 102 (24GHz), AU Docket No. 18-85,* Aug. 3, 2018, FCC, https://docs.fcc.gov/public/attachments/FCC-18-109A2.pdf.

employment."[141] But looking more broadly, the merger will play a key role in accelerating the realization of expected job gains stemming from 5G. Indeed, it is projected that the next-generation of wireless networks will create three *million* jobs, which in turn will "boost annual GDP by $500 billion."[142] These are massive employment gains that should not be dismissed, especially in light of the profound – and measurable – impacts that 4G has had on the U.S. economy since being deployed: "US leadership in 4G accounted for nearly $100 billion of the increase in annual GDP by 2016 as the trajectory of the wireless industry's contribution to US GDP shifted from a projected $350.3 billion in 2016 to a realized $445.0 billion. The launch of 4G in the US increased total wireless-related jobs by 84% from 2011 to 2014."[143]

In sum, the criticisms leveled at the merger fail to convince. As discussed above, there are many more reasons to be optimistic about the fruits of the transaction than there are to be worried about possible negative impacts. The next-generation network that will result from the combination of T-Mobile and Sprint will help to further accelerate the country's 5G leadership position, which in turn will yield significant economic and consumer benefits.

3.3 *Consumers Will Reap the Benefits of Continued Pricing & Service Offering Innovation Spearheaded by New T-Mobile*

The proposed merger will deliver a range of important benefits to consumers. As previously noted, New T-Mobile's business strategy will be shaped by incentives to maintain its "Un-Carrier" ethos, which has already generated significant pricing and service offering innovations. These will likely proliferate as the new entity seeks to maintain relevance in a chaotically competitive digital ecosystem.

Additional benefits will stem from how 5G is harnessed and operationalized. The Internet of things and smart city applications are expected to be prime areas of 5G-enabled innovation.[144] As described by Verizon:

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[141] *See* George S. Ford and Lawrence J. Spiwak, *Wireless Mergers and Employment: A Look at the Evidence,* p. 1, Perspectives 11-02, Phoenix Center for Advanced Legal & Economic Policy Studies (May 10, 2011), http://www.phoenix-center.org/perspectives/Perspective11-02Final.pdf.

[142] *See Smart Cities: How 5G Can Help Municipalities Become Vibrant Cities,* Accenture Strategy (Jan. 2018), https://api.ctia.org/docs/default-source/default-document-library/how-5g-can-help-municipalities-become-vibrant-smart-cities-accenture.pdf ("*How 5G Can Help*").

[143] *See How America's 4G Leadership Propelled the U.S. Economy,* Recon Analytics (April 16, 2018), https://api.ctia.org/wp-content/uploads/2018/04/Recon-Analytics_How-Americas-4G-Leadership-Propelled-US-Economy_2018.pdf.

[144] *See, e.g., How 5G Can Help; 5G: The Chance to Lead for a Decade,* Deloitte (2018), https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-5g-deployment-imperative.pdf; *Smart Cities: Digital Solutions for a More Livable Future,* McKinsey Global Institute (June 2018),

> "The Internet of Things refers to the rapidly expanding collection of devices that collect, transmit and share data via the internet. At present, roughly 8.4 billion "things" make up this universe—known commonly as IoT—from cars to appliances to wearable tech. That represents a 31% increase since 2016. By 2020, some 20.4 billion devices are forecast to connect, and by 2025 that number could swell to 55 billion."[145]

The overall capacity of 5G, coupled with the density of the network, will enable these billions of devices and ensure that every user – from those streaming videos to those accessing immersive new applications – has a seamless experience. Moreover, as 5G connectivity seeps further into key sectors like healthcare, the knock-on benefits to consumers will be profound. Consider the "Internet of medical things" that is expected to emerge once 5G is deployed at scale:

> "With its superfast connectivity, intelligent management, and data capabilities, the 5G network enables new possibilities in terms of health care including imaging, diagnostics, data analytics, and treatment. Part of the so-called "internet of medical things," it includes devices such as clinical wearables and remote sensors as well as many other devices that monitor and electronically transmit medical data such as vital signs, physical activity, personal safety, and medication adherence. These devices will provide never before seen telemedicine diagnosis and treatment services as well as high resolution video conferencing, all the while delivering quality care at affordable prices.
>
> "These devices and capabilities generate better data and more precise analytics providing greater context for interpreting information. Some mission-critical medical functions require high reliability and availability with latency intervals that are down to a few milliseconds. 5G will make this possible and bring consistent, reliable user experiences to improve medical care. Today, there are a number of health applications that will benefit an array of industries that require high bandwidth and reliable connectivity, and these applications are part of the emerging 5G test case."[146]

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https://www.mckinsey.com/~/media/mckinsey/industries/capital%20projects%20and%20infrastructure/our%20insights/smart%20cities%20digital%20solutions%20for%20a%20more%20livable%20future/mgi-smart-cities-full-report.ashx.

[145] *See* John O'Malley, *The Internet of Things Will Thrive on 5G Technology,* June 12, 2018, Verizon, https://www.verizon.com/about/our-company/5g/internet-things-will-thrive-5g-technology.

[146] *See* Darrel M. West, *How 5G Technology Enables the Health Internet of Things,* p. 6, Brookings Institute (July 2016), https://www.brookings.edu/wp-content/uploads/2016/07/How-5G-tech-enables-health-iot-west.pdf.

These kinds of benefits are expected to be reaped most immediately by communities of color and low-income households – user groups that are currently among the most intensive wireless users.[147] The ability to achieve such beneficial outcomes will be greatly bolstered by the proposed merger.

The 5G network that will be deployed post-merger is also being positioned as a viable competitor in the market for in-home broadband. New T-Mobile "intends to directly and aggressively compete against conventional in-home wired broadband products, providing consumers with an attractive high-speed broadband alternative to the wired incumbent."[148] This represents a response to efforts already under way to alter the "conventional" way in which broadband has long been delivered into homes (*i.e.,* via a wire). For example, in promoting its forthcoming 5G Home product, Verizon has said that "customers should expect typical network speeds around 300 Mbps and, depending on location, peak speeds of nearly 1 Gig, with no data caps," making it "*ideal for consumers looking to "cut the cord"* or upgrade from their current cable service."[149]AT&T has also experimented with a fixed 5G offering capable of similar speeds.[150] The competitive impact of these efforts on incumbent cable providers is already evident in the "concern" expressed by "telecom investment analysts," who see "5G fixed wireless broadband as the biggest existential threat to broadband providers."[151]

Detractors have attempted to argue that these clear consumer gains are outweighed by harms that will arise as a result of the merger. A major focus of theirs is the market for prepaid wireless service. Their argument is that the merger will result in harmful consolidation in the prepaid market, depriving consumers, particularly people of color and low-income individuals, of choice and raising prices.[152] Such concern is misplaced. The "naive notion that high concentration *a fortiori* equals market power in communications markets" is countered by numerous compelling factors, including "economic theory, antitrust, and even the FCC's own precedent [which] make clear that

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[147] *See, e.g.,* Yosef Getachew et al., *5G, Smart Cities & Communities of Color,* Joint Center for Political and Economic Studies (June 2017), https://jointcenter.org/sites/default/files/Joint%20Center%205G%20Smart%20Cities%20And%20Communities%20of%20Color_Final%206.9.17.pdf.

[148] *T-Mobile Public Interest Statement* at p. 58.

[149] *See 5G is Here* (emphasis added).

[150] *See, e.g.,* Corinne Reichert, *AT&T Trials Fixed-Wireless 5G in Indiana,* June 29, 2018, ZDNet, https://www.zdnet.com/article/at-t-trials-fixed-wireless-5g-in-indiana/.

[151] *See* Daniel Frankel, *Comcast and Charter Brace for Fixed 5G AT&T-Verizon Showdown in Indy,* Aug. 31, 2018, Multichannel News, https://www.multichannel.com/news/comcast-and-charter-brace-for-fixed-5g-at-t-verizon-showdown-in-indy (quoting an analysis by Cowen).

[152] *See, e.g.,* Comments of Kim Keenan; Comments of Debra Berlyn.

[data regarding market concentration] is not the end of the analysis—it is merely the beginning."[153]

Moreover, the distinction between prepaid and postpaid continues to blur to the point where both options provide consumers with nearly identical offerings. This trend was noted by the FCC in its most recent wireless competition report:

> "As postpaid offerings have shifted away from term contracts and equipment subsidies, service providers have adopted pricing plans and promotions for their high-end prepaid monthly service offerings that are similar to those they have for postpaid offerings."[154]

Increasingly, the only difference that remains between the two service options is the timing of monthly payments. In a market characterized by the entrance of new rivals and fierce competition on price and customer service by a range of MVNOs, it is unlikely that the proposed merger will unilaterally alter these dynamics.

4. CONCLUSION

The proposed merger of T-Mobile and Sprint is a reasonable response to the competitive forces reshaping the rapidly converging wireless sector and broader digital ecosystem. The transaction thus represents a sensible business strategy by two firms that wish to retain relevance in this new world. Once combined, New T-Mobile will be able to deploy a more robust and widespread 5G network than either of the merging parties standing alone would be able to construct. Guided by T-Mobile's "Un-Carrier" ethos and its commitment to serving as the sector's wily disrupter, New T-Mobile will be well positioned to deliver significant consumer welfare gains – benefits that far outweigh any harms that might arise.

Respectfully submitted,

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[153] *See* T. Randolph Beard et al., *Wireless Competition Under Spectrum Exhaust,* 65 Fed. Comm. L. J. 79, 85-86 (2013), http://phoenix-center.org/FCLJSpectrumExhaust.pdf.

[154] *20th Wireless Competition Report* at ¶54.