

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Wireless Telecommunications Bureau Seeks) WT Docket No. 16-137
Comment on the State of Mobile Wireless)
Competition)
)

REPLY COMMENTS OF COMPETITIVE CARRIERS ASSOCIATION

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Competitive Carriers Association (“CCA”) hereby submits the following reply to comments filed in response to the Federal Communications Commission’s (“FCC” or “Commission”) Public Notice seeking comment on the state of competition in the mobile wireless marketplace.¹

I. INTRODUCTION AND SUMMARY.

As evidenced by opening comments in this proceeding, the Commission should decline to find that the commercial mobile radio services (“CMRS”) marketplace is effectively competitive. While there are positive consumer trends in the retail mobile market, the ever-expanding market power of AT&T and Verizon continues to dilute the competitive landscape of the input market making it harder to sustain new innovative offerings. As AT&T and Verizon increase their dominance and foreclose opportunities for smaller rivals, the Commission must reexamine whether its rules and policies are promoting effective competition. The Commission should engage in tailored reforms to render competition possible by: (1) creating flexible spectrum policies; (2) fixing the broken business data services (“BDS”) market; (3) fostering

¹ *Wireless Telecommunications Bureau Seeks Comment on the State of Mobile Wireless Competition*, Public Notice, WT Docket No. 16-137, DA 16-450 (rel. Apr. 29, 2016) (“Public Notice”).

equitable Universal Service Fund (“USF”) and infrastructure reforms; and, (4) implementing policies that inspire sensible roaming arrangements and reasonable access to content to satisfy consumers and facilitate competitive opportunities for all providers.

II. THE RECORD SHOWS THE DUOPOLY CONTINUES TO STIFLE THE CMRS MARKET.

As noted in CCA’s opening comments, and as highlighted in the record throughout this proceeding, the current market cannot be considered effectively competitive in light of ongoing, excessive concentration by AT&T and Verizon.² AT&T touts that competition is evidenced by the “many” choices offered to consumers when it comes to wireless services, yet only provides examples for areas where consumers have the choice between “three” or “four” providers.³ This simplification of market trends and data does not refute the fact that the wireless industry is highly concentrated, which imposes formidable structural barriers to competition in the marketplace.

In fact, since filing opening comments in this proceeding, AT&T has proposed four more low-band spectrum transactions that trigger either the FCC’s “enhanced” factor or “super enhanced” factor standards of review.⁴ In just the past year, AT&T has proposed, been granted,

² See Comments of Competitive Carriers Association, WT Docket No. 16-137 at 3-5 (filed May 31, 2016) (“CCA Comments”); Comments of California Public Utilities Commission, WT Docket No. 16-137 (filed May 31, 2016) (“CPUC Comments”); Comments of NTCA – The Rural Broadband Association, WT Docket No. 16-137 (filed May 31, 2016) (“NTCA Comments”); Comments of the Rural Wireless Association, WT Docket No. 16-137 (filed May 31, 2016) (“RWA Comments”); Comments of Sprint Corporation, WT Docket No. 16-137 (filed May 31, 2016) (“Sprint Comments”); Comments of T-Mobile USA, Inc., WT Docket No. 16-137 (filed May 31, 2016) (“T-Mobile Comments”); Comments of US Cellular Corporation, WT Docket No. 16-137 (filed May 31, 2016) (“US Cellular Comments”).

³ Comments of AT&T, WT Docket No. 16-137 at 3 (filed May 31, 2016) (“AT&T Comments”).

⁴ See, FCC, ULS Application No. 0007257866, FCC Form 603 at Ex. 1, *Description of Transaction and Public Interest Statement* (application of AT&T Mobility Spectrum LLC (an indirect wholly-owned subsidiary of AT&T Inc.) and Eastern Colorado Wireless, LLC for consent to assignment of a Lower 700 MHz C Block license); FCC, ULS Application No. 0007216619, FCC Form 603 at Ex. 1, *Description of Transaction and Public Interest Statement*

or consummated *twenty-three* transactions involving well over one-hundred licenses for low-band spectrum resources.⁵ As a direct result of this market concentration, competitive carriers

(application of AT&T Mobility Spectrum LLC and New Cingular Wireless PCS, LLC (indirect wholly-owned subsidiaries of AT&T Inc.) and USCOC of Central Illinois, LLC, Indiana RSA No. 4 Limited Partnership, United States Cellular Operating Company of Chicago, LLC, Oregon RSA #2, Inc., USCOC of Richland, Inc., and USCOC of Greater North Carolina, LLC (collectively, “U.S. Cellular”) for consent to assign Lower 700 MHz B and C Block licenses); FCC, ULS Application No. 0007156616, FCC Form 603 at Ex. 1, *Description of Transaction and Public Interest Statement* (application of AT&T Mobility Spectrum LLC and Fuego Wireless LLC for consent to the assignment of Lower 700 MHz B and C Block licenses); FCC, ULS Application No. 0007137968, FCC Form 603 at Ex. 1, *Description of Transaction and Public Interest Statement* (application of AT&T Mobility Spectrum LLC and Rainbow Telecommunications Association, Inc. for consent to assignment of a partitioned portion of a Lower 700 MHz C Block license) (this transaction could trigger “super enhanced” factor review, as AT&T’s low-band holdings in the implicated county would increase from 68 MHz to 80 MHz)). See also *Policies Regarding Mobile Spectrum Holdings; Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions*, WT Docket No. 12-269, GN Docket No. 12-268, Report and Order, 29 FCC Rcd 6133, 6240 ¶¶ 279-289 (2015) (“*Mobile Spectrum Holdings Report and Order*”).

⁵ See *id.*; See also *Application of AT&T Mobility Spectrum LLC and Club 42CM Limited Partnership*, WT Docket No. 14-145, Memorandum Opinion and Order (rel. Nov. 10, 2015) (“AT&T/Club 42 Order”); *Applications of AT&T Inc., Plateau Telecommunications, Inc., et al.*, WT Docket No. 14-144, Memorandum Opinion and Order, FCC 15-53 (rel. May 8, 2015) (“AT&T/Plateau Order”); *New Cingular Wireless PCS, LLC and QUALCOMM Incorporated*, WT Docket No. 16-75, Public Notice, DA 16-420 (rel. Apr. 18, 2016); *Application of New Cingular Wireless, PCS LLC and Farmers Telecommunications Corporation*, WT Docket No. 15-271, Memorandum Opinion and Order (rel. Mar. 28, 2016); *AT&T Mobility Spectrum LLC and Data-Max Wireless LLC*, WT Docket No. 16-59, Public Notice, DA 16-308 (rel. Mar. 24, 2016); *AT&T Mobility Spectrum LLC and West Carolina Communications LLC*, WT Docket No. 15-313, Public Notice, DA 16-232 (rel. Mar. 2, 2016); *Applications of AT&T Mobility Spectrum LLC and East Kentucky Network, LLC*, WT Docket No. 15-79, Memorandum Opinion and Order (rel. Jan. 29, 2016); *Applications of New Cingular Wireless PCS, LCC, Bluegrass Cellular, Inc. and Bluegrass Wireless LLC*, WT Docket No. 15-225, Memorandum Opinion and Order (rel. Jan. 29, 2016); *Applications of AT&T Inc. and Cellular Properties, Inc.*, WT Docket No. 15-78, Memorandum Opinion and Order (rel. Jan. 28, 2016); *Application of AT&T Mobility Spectrum LLC and Texas RSA 7B3, L.P., d/b/a People’s Wireless Services*, WT Docket No. 15-267, Memorandum Opinion and Order (rel. Jan. 14, 2016); *Application of AT&T Mobility Spectrum LLC and Agri-Valley Communications, Inc.*, WT Docket No. 15-181, Memorandum Opinion and Order (Dec. 30, 2015); *Application of New Cingular Wireless PCS, LLC and NEP Cellcorp, Inc.*, WT Docket No. 15-221, Memorandum Opinion and Order (rel. Dec. 30, 2015); *Applications of AT&T Inc. and Pine Cellular Phones, Inc.*, WT Docket No. 15-13, Memorandum Opinion and Order (rel. Dec. 21, 2015); *AT&T Mobility Spectrum LLC and Blanca Telephone Company*, WT Docket No. 15-270, Public Notice, DA 15-1267 (rel. Nov. 6, 2015); *AT&T Mobility Spectrum LLC and Tampnet Licensee LLC, Broadpoint License Co., LLC, and Broadpoint Wireless License Co., LLC*, WT Docket No. 15-255, Public Notice, DA 15-1211 (rel. Oct. 23, 2015); *Application of AT&T Mobility Spectrum LLC and Consolidated Telephone Company*, WT Docket No. 14-254, Memorandum Opinion and Order (rel. Sept. 2, 2015);

struggle to obtain critical spectrum resources, funding for and access to infrastructure, reasonable rates for critical wireline services, and access to the content and roaming agreements that will enable competitive carriers to participate in the development of the Internet of Things (“IoT”) and deployment of next generation technologies. In its comments, T-Mobile USA, Inc. (“T-Mobile”) recognizes, “the markets for several inputs such as spectrum and infrastructure remain uncompetitive and there is significant risks that the largest incumbent carriers will leverage their dominant positions to foreclose access to these critical inputs.”⁶ Sprint echoes this assertion that “the lack of competition in the provision of BDS ... ha[s] a direct impact on wireless competition.”⁷ At the same time, NTCA – The Rural Broadband Association (“NTCA”) acknowledges several “severe competitive disadvantages” currently faced by competitive carriers, including negotiating reasonable roaming agreements, that hinder their ability to provide wireless services to consumers.⁸

Therefore, CCA echoes other commenters in commending the Commission for its continued attention to ensuring competitive opportunities for carriers in the wireless ecosystem. CCA recommends the Commission employ flexible policies to ameliorate this divide and foster competitive opportunities to obtain additional spectrum, improve infrastructure and funding

Applications of AT&T Mobility Puerto Rico Inc. and Worldcall Inc., WT Docket No. 14-206, Memorandum Opinion and Order (rel. Aug. 31, 2015); *Applications of AT&T Mobility Spectrum LLC and KanOkla Telephone Association*, WT Docket No. 14-199, Memorandum Opinion and Order (rel. Aug. 27, 2015); *Application of AT&T Mobility Spectrum LLC and Kaplan Telephone Company, Inc.*, WT Docket No. 14-167, Memorandum Opinion and Order (rel. Aug. 26, 2015)).

⁶ T-Mobile Comments at 4.

⁷ Sprint Comments at 6.

⁸ NTCA Comments at 3-4 (attaching “NTCA 2015 Wireless Survey Report”) (“NTCA Survey”).

barriers, and facilitate reasonable sharing arrangements for wireline and wireless resources, as discussed below.

III. THE COMMISSION MUST ENSURE COMPETITION BY FOCUSING ON FLEXIBLE SPECTRUM POLICIES.

Competitive carriers continuously struggle to obtain critical spectrum resources, both at auction and on the secondary market. To facilitate expeditious access to low-band spectrum, the Commission must conclude the 600 MHz Incentive Auction broadcaster relocation transition in accordance with the 39-month timeline.⁹ Competitive carriers must put forth significant upfront payments before acquiring spectrum won at auction, which could place these smaller providers at a competitive disadvantage if they are unable to meet these demands or must wait longer than the 39-month period to employ the spectrum.¹⁰ As T-Mobile states, “[e]conomists estimate the annual loss of consumer surplus for delayed access to spectrum is roughly equivalent to auction revenue, which in the case of the 600 MHz band may translate to approximately \$40-80 billion for each year of delay.”¹¹ The record also reiterates the importance of low-band spectrum to

⁹ See CCA Comments at 12-13 (citing *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report & Order, 29 FCC Rcd 6567, 6796-802 ¶¶ 559-73 (2014) (“Incentive Auction Order”) (establishing a 39-month post-auction transition period for broadcasters that are assigned new channels in the repacking process, which includes a three-month period during which broadcasters will complete and file their construction permit applications followed by a 36-month period consisting of varied construction deadlines)); see also T-Mobile Comments at 7-9.

¹⁰ See CCA Comments at 12-14 (citing Peter Cramton, Hector Lopez, David Malec and Pacharasut Sujarittanonta, Design of the Reverse Auction in the Broadcast Incentive Auction, attached to *Ex Parte* Letter from Preston Padden, Executive Director, Expanding Opportunities for Broadcasters Coalition to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268, AU Docket No. 14-252 (filed June 15, 2015)). See also T-Mobile Comments at 8; Comments of CTIA, WT Docket No. 16-137 at 90 (filed May 31, 2016) (“CTIA Comments”).

¹¹ T-Mobile Comments at 8-9 (citing GREENHILL & CO., LLC, INCENTIVE AUCTION OPPORTUNITIES FOR BROADCASTERS 2 (Oct. 2014) (estimates that forward auction proceeds could approach \$45 billion); and KAGAN MEDIA APPRAISALS, CAN THE FCC ATTRACT A FULL HOUSE FOR THE 2016 BROADCAST INCENTIVE AUCTION? 8 (Feb. 11, 2015) (“Our analysis assumes the receipts from all bidders in the 600 MHz auction could well

facilitate 5G deployment.¹² As such, CCA supports a regional repacking approach like T-Mobile has proposed that initiates the clearing of less populated markets simultaneously with more populated markets.¹³ It is imperative that the Commission remain focused on implementing a post-auction transition that is expeditious, efficient and safe to benefit carriers and consumers alike.

While CCA echoes support for the Commission’s “enhanced” and “super enhanced” factor standards of review for secondary market transactions dealing with low-band spectrum resources, CCA urges the FCC to give some teeth to the rules.¹⁴ The record emphasizes that obtaining low-band spectrum in the wake of the 600 MHz Incentive Auction will be limited to acquisition through secondary market transactions, which could place competitive carriers at a significant disadvantage if dominant providers continue to aggregate spectrum resources. As T-Mobile aptly states, “[t]he growth and development of 5G – combined with the limited availability of low-band spectrum following the 600 MHz Incentive Auction – makes the risk of anti-competitive foreclosure even more likely because potential competitors to the dominant carriers will need a mix of low-, mid- and high-band spectrum.”¹⁵ As a result, it is critical that

be in the \$60 billion-\$80 billion range, depending on how many megahertz are being sold once the final stage of the auction is reached”).

¹² *See id.* at 8.

¹³ CCA Comments at 12 (citing *Ex Parte* Letter from Trey Hanbury, Counsel to T-Mobile USA, Inc. to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268 (filed May 11, 2016); *see also Ex Parte* Letter from Steve Sharkey, Vice President, Government Affairs, T-Mobile USA, Inc. to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268 (filed Feb. 18, 2016); T-Mobile USA, Inc., Broadcaster Repacking Proposal, attached to *Ex Parte* Letter from Trey Hanbury, Counsel to T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268 (filed Mar. 4, 2016); *Ex Parte* Letter from Trey Hanbury, Counsel to T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268 (filed Mar. 3, 2016) (attaching Broadcaster Repacking Proposal) (“T-Mobile Repacking Proposal”).

¹⁴ *See Mobile Spectrum Holdings Report and Order* ¶¶ 279-289. *See also* CCA Comments at 5, 8-12; T-Mobile Comments at 13.

¹⁵ *Id.*

the Commission continue to monitor these transactions to prevent further consolidation of spectrum resources and provide a foothold for competitive carriers to compete in the deployment of 5G technology.¹⁶

In addition to smart auction policy and monitoring spectrum transactions, the Commission must seize the opportunity to implement flexible policies for high-band spectrum resources. CCA and others commend the Commission for its work to free-up spectrum resources in the *Spectrum Frontiers* and *3.5 GHz* proceedings.¹⁷ Indeed, the record is replete with recognition of the importance of utilizing higher frequency bands as carriers will need to access low-, mid-, and high-band spectrum to deploy 5G networks.¹⁸ The Commission therefore must take steps to ensure flexible licensing policies allow for widespread use of mid- and high-band spectrum.

Since the close of the comment period in the *Spectrum Frontiers* proceeding, and in light of the Chairman's statements to release an order in the proceeding by the end of the summer,¹⁹ CCA encourages the Commission to focus on combatting aggregation of high-millimeter wave ("mmW") spectrum by implementing a spectrum screen on a per-band basis.²⁰ More specifically the Commission should employ at two-tiered screen: (1) a one-third screen for all mmW

¹⁶ *Id.* at 13-14.

¹⁷ CCA Comments at 15-17; Comments of Mobile Future, WT Docket No. 16-137 at 15 (filed May 31, 2016) ("Mobile Future Comments"); T-Mobile Comments at 11.

¹⁸ *See* CCA Comments at 15-17; CTIA Comments at 86; T-Mobile Comments at 9.

¹⁹ *See Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, Notice of Proposed Rulemaking, GN Docket No. 14-177, FCC 15- 138, 30 FCC Rcd. 11,878, (rel. Oct. 23, 2015) ("*Spectrum Frontiers NPRM*" or "*NPRM*"); *see also* Monica Allevan, Wheeler: U.S. will allocate 5G spectrum 'faster than any nation on the planet,' FIERCE WIRELESS TECH (Mar. 2, 2016), available at <http://www.fiercewireless.com/tech/story/wheeler-us-will-allocate-5gspectrum-faster-any-nation-planet/2016-03-02>.

²⁰ *See* Reply Comments of Competitive Carriers Association, GN Docket No. 14-177, et al., at 13-15 (filed Feb. 26, 2016).

spectrum, and (2) a one-half screen for spectrum in a particular band.²¹ The Commission must prevent anticompetitive practices by the largest carriers, who are positioned to be among the first to develop the technologies for these higher frequency bands, from aggregating this spectrum to the detriment of competition and consumers. This approach therefore would facilitate the use of critical mmW spectrum resources, while simultaneously protecting these assets from aggregation that could hinder or impair 5G deployment for all carriers.

As also reflected throughout the record in the *Spectrum Frontiers* proceeding, the Commission should implement small geographic license areas to allow smaller providers the opportunity to utilize spectrum that matches their existing territories.²² CCA similarly agrees that the Commission should auction spectrum that is currently available as soon as possible, to facilitate competitive opportunities for smaller providers and “promote investment and allow for the timely deployment of next-generation data services.”²³

The FCC also should create a hybrid regime of licensed and unlicensed allocations in these higher frequency spectrum bands, and facilitate policies that encourage carriers to test unlicensed technologies and new innovations, including LTE-U and successor technologies.²⁴ Specifically, the Commission’s “permissionless innovation” policy has inspired several developments through testing of unlicensed resources. For example, T-Mobile has created its

²¹ See *Ex Parte* Letter from Rebecca Murphy Thompson, EVP & General Counsel, CCA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177 et al. (filed June 15, 2016).

²² See *Ex Parte* Letter from Rebecca Murphy Thompson, EVP & General Counsel, CCA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177 et al. (filed June 7, 2016); and CTIA Comments at 88. See also *Applications Filed for the Transfer of Control of XO Communications, LLC to Verizon Communications, Inc.*, Public Notice, DA 16-393, WC Docket No. 16-70 (rel. Apr. 12, 2016) (“Verizon-XO transaction”).

²³ See T-Mobile Comments at 10.

²⁴ See CCA Comments at 18-20; CTIA Comments at 22-23, 39; NTCA Comments at 5; RWA Comments at 12; T-Mobile Comments at 10.

“Personal Cellspot,” which provides customers the ability to use the power of a T-Mobile tower in a variety of locations.²⁵ More recently, Sprint utilized mmW spectrum for a 5G demonstration at the Copa América Centenario soccer tournament in Santa Clara, California. The demonstration delivered peak download speeds of more than two gigabits per second during the tournament and displayed a live streaming virtual reality system that capitalized on the low latency of higher-band spectrum.²⁶ As a final example, US Cellular recently joined Sprint and T-Mobile as a Project Fi partner, which seeks to provide consumers with reliable connections through Wi-Fi signals and on partner networks.²⁷

Similarly, as noted by CCA’s opening comments and echoed by several participants in this proceeding, the Commission should continue to grant Special Temporary Authority (“STAs”) to allow carriers the opportunity to test the breadth of unlicensed spectrum resources and manage consumer broadband demand.²⁸ As the industry moves toward 5G development, it is critical that the Commission continue pursuing its goal of “permissionless innovation” through spectrum policies that prevent dominant providers from continued aggregation of this critical input, and inspire robust use of limited spectrum resources.²⁹

²⁵ T-Mobile Comments at 15.

²⁶ See Sprint Newsroom, “Sprint Demonstrates 5G at Copa América Centenario” (June 3, 2016), available at http://newsroom.sprint.com/article_display.cfm?article_id=12237.

²⁷ See Android, Official Blog, “More speed and coverage with U.S. Cellular – now part of Project Fi” (June 8, 2016), available at <https://android.googleblog.com/2016/06/more-speed-and-coverage-with-us.html>.

²⁸ See CCA Comments at 21; CTIA Comments at 25; T-Mobile Comments at 16.

²⁹ See *id.* at 14.

IV. THE RECORD HIGHLIGHTS THE IMPORTANCE OF FIXING THE BROKEN BUSINESS DATA SERVICES MARKET.

Industry agrees that consumer demand for mobile wireless services continues to grow.³⁰

T-Mobile notes that “[w]ireless data use has grown 35-fold since 2009, and use is projected to increase another six-fold by the end of the decade.”³¹ Similarly, CTIA highlights “the demand for and use of 4G LTE networks, wireless devices, and wireless functionality continues to grow unabated.”³² And Mobile Future commented that “the average ... wireless customer uses 4GB of cellular data each month.”³³ As a result of this growth, carriers must continue to expand their networks, which is impossible to accomplish without critical inputs and resources like BDS. Indeed, BDS backhaul is a significant component of wireless carriers’ ability to transfer voice and data traffic from cellular towers to networks, making it a key aspect of a providers’ ability to offer adequate wireless service.³⁴

³⁰ See CCA Comments at 2; CTIA Comments at 6; Mobile Future Comments at 14; RWA Comments at 8; Sprint Comments at 1-2; T-Mobile Comments at 22; Comments of the Wireless Infrastructure Association, WT Docket No. 16-137 at 4-4 (filed May 31, 2016) (“WIA Comments”).

³¹ T-Mobile Comments at 22 (citing Brad Gillen, Policymakers Across the Board Agree: It’s Time to Refuel the Spectrum Pipeline, CTIA LATEST (Jul. 31, 2015), *available at* <http://bit.ly/1TFyr7S>).

³² CTIA Comments at 6.

³³ Mobile Future Comments at 14 (citing U.S. Wireless Market Update 2015, at slide 7, Chetan Sharma Consulting (March 2016), *available at* http://www.chetansharma.com/US_Wireless_Market_2015_Update_Mar_2016_Chetan_Sharma_Consulting.pdf).

³⁴ See *Business Data Services in an Internet Protocol Environment*, Tariff Investigation Order and Further Notice of Proposed Rulemaking, WC Docket Nos. 16-143, et al. ¶ 5 (2015) (“*BDS Order and BDS FNPRM*”) (noting that wireless backhaul, a form of BDS, “is critical to the ability of wireless carriers to expand and operate their networks today and will be even more critical as the advent of 5G wireless drives the creation of the dense thicket of cell sites that will be needed to deliver high bandwidth wireless services”).

Despite importance of BDS assets, however, the record demonstrates that competition in the BDS market is skewed,³⁵ and competitive carriers continue to struggle to obtain the critical infrastructure necessary to build a robust wireless network. Specifically, AT&T and Verizon continue to be the two largest wireless service providers and providers of BDS, giving them leverage to charge supracompetitive rates that exclude competitive providers from these resources and stifle buildout of other networks.³⁶ As Sprint highlights, “95.8% of census blocks have only one or two BDS competitors.”³⁷ Recent transactions also threaten to reduce the number of BDS providers. As noted, the proposed transaction between Verizon and XO Communications (“XO”) will increase Verizon’s control in the BDS marketplace by acquiring XO’s wireline assets and eliminating yet another competitive wireline provider from the marketplace.³⁸ This lack of competition in the BDS market has a direct impact on competition throughout the wireless ecosystem as a whole.³⁹

CCA and others therefore applaud the Commission’s recent efforts to facilitate access to competitive backhaul through regulation of supracompetitive pricing practices.⁴⁰ Specifically, the Commission’s *BDS Tariff Investigation Order and Further Notice of Proposed Rulemaking*

³⁵ See Sprint Comments at 5; T-Mobile Comments at 23.

³⁶ See *id.*; CCA Comments at 6; T-Mobile Comments at 23. See also *Ex Parte* Letter from Rebecca Murphy Thompson, EVP & General Counsel, CCA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177 et al. (filed June 7, 2016); and *Ex Parte* Letter from Jennifer P. Bagg, Counsel to Sprint Corporation, Harris Wiltshire & Grannis, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 at 1 (filed May 26, 2016) (describing a Sprint-initiated Ethernet pricing model to evaluate offers for fiber-based BDS backhaul to cellular sites, and finding that the pricing model “clearly establish[es] that competition is not adequately disciplining incumbent prices for Ethernet-based BDS at and above 50 Mbps, and illustrat[es] how the broken marketplace for BDS diminishes wireless competition...”).

³⁷ Sprint Comments at 6.

³⁸ See *supra*, note 22.

³⁹ See *id.*

⁴⁰ See *BDS Order* ¶ 78.

(“*BDS Order*” or “*BDS FNPRM*”), identifies certain terms, conditions, and tariff pricing that “decreas[ed] competition and inhibit[ed] the transition to new technologies.”⁴¹ In condemning these practices, Chairman Wheeler acknowledges that “backhaul is important to the buildout of wireless networks, to investment in wireless networks and to the creation of 5G – the next step in wireless innovation.”⁴² As a result, CCA agrees with commenters who encourage the Commission to ensure that the BDS market remains competitive and facilitates opportunities for all carriers to access critical wireline assets.⁴³ Access to reasonable prices for BDS services is critical to competitive carriers’ ability to respond to increasing consumer demands and participate in the buildout of next generation technologies.

V. INDUSTRY AGREES THE COMMISSION MUST PRIORITIZE THE IMPLEMENTATION AND USE OF ACCURATE DATA COLLECTION PRACTICES.

CCA applauds the Commission’s desire to identify precise data collection methods that more accurately depict the state of the wireless ecosystem. Specifically, the Commission invites comment on “alternative ways” to analyze market concentration,⁴⁴ and based on initial comments industry agrees that current network coverage and speed metrics are inaccurate and present a skewed representation of the CMRS marketplace.⁴⁵ First, data extracted from the Commission’s Measuring Broadband America (“MBA”) program should not be used in the upcoming *Nineteenth Mobile Competition Report*, nor as a representation of mobile broadband service provided throughout the country. As noted in AT&T’s comments, the FCC’s intent to

⁴¹ *Id.* ¶ 5 (2015). *See also* T-Mobile Comments at 23.

⁴² *See BDS Order*, Statement of Chairman Tom Wheeler at 1 (2016).

⁴³ *See* T-Mobile Comments at 23; Sprint Comments at 5.

⁴⁴ *See* Public Notice at 4.

⁴⁵ *See* AT&T Comments at 23; CPUC Comments at 9; US Cellular Comments at 2.

automatically collect data from Android users, while simultaneously recognizing that data collected from iPhones must be manually executed, misrepresents the state of current wireless service and places certain carriers with a large iPhone base at a disadvantage for speed tests collected.⁴⁶ The Commission also should consider allowing carriers to access this data before it becomes public to correct potential inaccuracies and provide carriers' the opportunity to offer feedback on ways to identify and ameliorate potential flaws in the collection process.⁴⁷

Similarly, the Commission's use of mobile MBA program data as the sole means of securing a safe harbor for actual network performance, pursuant to the *2015 Open Internet Order*,⁴⁸ is problematic, particularly for rural and regional carriers.⁴⁹ The recently-released Guidance on Open Internet Transparency Rule Requirements ("2016 Guidance") established the mobile MBA program data as the only safe harbor for the disclosure of actual network performance metrics ("actual download and upload speeds, actual latency, and actual packet loss of service"), derived from a "national sample size" of data, divided by each cellular market area ("CMA") where a carrier's services are offered.⁵⁰ To be clear, this safe harbor for actual network performance metrics is available only if the results of the Mobile MBA program "satisfy

⁴⁶ AT&T Comments at 26.

⁴⁷ *See id.* at 25-26.

⁴⁸ *See Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Report and Order on Remand, 30 FCC Rcd 5601, 5673-75, ¶166 (2015) ("*2015 Open Internet Order*").

⁴⁹ *See Guidance on Open Internet Transparency Rule Requirements*, Public Notice, GN Docket No. 14-28, I.B. (rel. May 19, 2016) ("2016 Guidance"). Note the 2016 Guidance also addresses a separate safe harbor for form of disclosure of transparency requirements, referring to the Broadband Consumer Disclosure labels ("disclosure labels") released on April 4, 2016. *Id.* at II. It appears a carrier, in order to take advantage of both safe harbors provided, would need to use Mobile MBA data in a disclosure label format; still, the Commission should clarify their intent. CCA notes that the disclosure labels, like the 2016 Guidance, cannot be completed without the disclosure of both original and enhanced transparency requirements; since exempt carriers are not required to disclose enhanced transparency requirements, the very design of the Commission's safe harbor bars small carriers from comfortably taking advantage of this safe harbor.

⁵⁰ 2016 Guidance at II.

the [national] sample size criteria and if the MBA program has provided CMA-specific network performance metrics of the service in CMAs with an aggregate population of at least one-half of the aggregate population of the CMAs in which the service is offered.”⁵¹ This would exclude regional and mid-sized carriers who are not exempt, yet do not provide nationwide coverage. The Commission should reform this exclusionary safe harbor in recognition that any safe harbor should be available to all carriers.

Further, CCA and other industry representatives have reason to doubt the quality of the data belying the mobile MBA program, as many CMAs served by rural and regional members may not be covered by the data released. Accordingly, some rural and regional members who do not qualify as exempt providers, yet are non-nationwide carriers, will be excluded from the mobile MBA safe harbor, full stop. This is an unacceptable outcome. Any safe harbor established should be clearly written,⁵² and accessible to mobile carriers of all sizes. The Commission should not construct a safe harbor around likely unhelpful, incomplete MBA program data to the exclusion of other accepted, superior data sources.⁵³

Industry also is concerned with the Commission’s use of Form 477 data.⁵⁴ This data is submitted by individual carriers, without uniform standards indicating whether coverage is

⁵¹ *Id.*

⁵² CCA also notes the 2016 Guidance largely ignores exempt providers, conflating enhanced transparency requirements with transparency requirements applicable to those exempt providers with fewer than 100,000 connections, aggregated over affiliates. Additionally, the 2016 Guidance casts uncertainty over how any carrier might comply with the point of sale requirement piece of transparency disclosures, and further entrenches the faulty Consumer Broadband Labels as a safe harbor in terms of disclosure format. *See* 2016 Guidance at 10.

⁵³ For example, Rootmetrics, OOKLA, and Mosaik are highly-regarded commercial data sources in the telecommunications industry. *See* CCA Comments at 6.

⁵⁴ *See* RWA Comments at 2-4; US Cellular Comments at 3-8.

robust or scant in an area, which is problematic to obtaining consistent coverage results.⁵⁵ This data also is consistently overstated compared with consumer experience.⁵⁶ For example, the California Public Utilities Commission’s (“CPUC”) independent analysis of the FCC’s mobile speed metric of 25 Mbps down and 3Mbps up shows “no California households with access to th[is] service.”⁵⁷ As a result, Form 477 data may indicate that a carrier is providing service in certain areas but does not distinguish factors that affect the *quality* of service in that area, such as signal strength and distance from a cell tower.⁵⁸

As another example, CTIA cites the statistic that 99% of the population had access to LTE service;⁵⁹ however, as demonstrated by gaps in current data, this statistic does not mean that the nation is adequately served with mobile coverage.⁶⁰ Indeed, the Commission explicitly notes in the *Eighteenth Report* that these numbers do not accurately reflect coverage throughout the United States and in fact “likely result in an overstatement of the extent of mobile coverage.”⁶¹ Carriers and consumers, and particularly those in rural areas, are therefore detrimentally affected by inaccurate, misleading, and underrepresented data sets.

When looking at alternatives, it also is imperative that the Commission use a measurement methodology that depicts served versus unserved areas in the United States, and

⁵⁵ See *id.* at 6; RWA Comments at 2.

⁵⁶ See CPUC Comments at 2.

⁵⁷ *Id.* at 4.

⁵⁸ See RWA Comments at 3.

⁵⁹ CTIA Comments at 8.

⁶⁰ See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Eighteenth Report, 30 FCC Rcd 14515 ¶ 38 (2015) (“*Eighteenth Report*”). See also CCA Comments at 27; US Cellular Comments at 4.

⁶¹ *Eighteenth Report* ¶ 38

the discrepancy in rural, remote, and hard to reach areas that continue to lack adequate mobile broadband coverage.⁶² Again, CPUC’s independent analysis shows substantial differences in quality of service in urban versus rural locations. With regard to two-way video conference quality, CPUC’s data highlights a decrease by 10-20% in call quality between urban and rural areas, and notes that “[a] rural user attempting a two-way video session would be less likely to have HD or SD quality, and even less likely if the distance to the called party were large.”⁶³ As a result of this discrepancy, CCA similarly agrees with US Cellular that the Commission should retire its use of the centroid method, which treats an entire census block as being “covered” if the center point of the area has coverage. Like Form 477 data, there is a risk that the centroid method “overstates coverage because oftentimes less than 100% of a [c]ensus [b]lock is actually covered by mobile broadband service, especially in rural areas where [c]ensus [b]locks are larger than urban areas.”⁶⁴ In fact, despite the Commission’s attempts to measure coverage across the United States through any of the above-mentioned methods, “Western States to Appalachia remain largely cut off from 3G and 4G mobile data services.”⁶⁵

⁶² See US Cellular Comments at 12 (citing Competitive Carrier Association (“CCA”) Reply Comments, WT Docket No. 15-125 (filed July 14, 2015) at 5-6 (footnotes omitted) (“urg[ing] the Commission to scrutinize exaggerated claims that 98 percent of Americans have access to 4G LTE networks and to refrain from relying on this coverage estimate in assessing competition in the mobile wireless marketplace. This inordinately high coverage calculation is unsupported by the realities in service availability, particularly in rural areas. Studies commissioned by CCA indicate that there are significant gaps in population coverage at the county and sub-county levels, particularly in rural areas”)).

⁶³ CPUC Comments at 9-10.

⁶⁴ US Cellular Comments at 5.

⁶⁵ See Markie Britton, WirelessWeek, “Seeking New Solutions for Rural Access” (May 24, 2016), available at <http://www.wirelessweek.com/article/2016/05/seeking-new-solutions-rural-access>.

CCA commends the Commission for recognizing the potential inaccuracies in this data in the *Eighteenth Report* and *2016 Broadband Progress Report*.⁶⁶ While Form 477 data is a robust source of information, the Commission should pursue alternative ways to measure mobile broadband coverage that more accurately reflect the current landscape of the nation’s wireless services. As commenters recognize, the Commission’s policies in regards to spectrum allocation, data roaming, and USF funding must be informed by reliable data that paints an accurate picture of mobile broadband coverage offered throughout the country.⁶⁷ CCA therefore encourages the Commission to ameliorate this divide and continue to reform data collection practices that present an accurate representation of the current marketplace.

VI. FOSTERING UNIVERSAL SERVICE FUND AND INFRASTRUCTURE REFORMS WILL INSPIRE COMPETITION AND BENEFIT THE WIRELESS ECOSYSTEM.

A. The Record Reflects the Need for Reform of Universal Service Fund Policies.

The record highlights the importance of USF funding to inspire network maintenance and expansion, particularly in rural and hard to reach areas, which will continue to intensify as the industry moves toward 5G.⁶⁸ Yet competitive carriers struggle to obtain funds to expand their networks as dominant providers continue to be the main recipients of federal high-cost USF funds. In 2015 alone, the incumbent local exchange carriers (“ILECs”) including AT&T, elected

⁶⁶ See CCA Comments at 27; and *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 2016 Broadband Progress Report, GN Docket No. 15-191 ¶ 22 (rel. Jan. 29, 2015) (acknowledging limitations that prevent the Commission from accurately reporting geographic areas that lack advanced mobile services) (“2016 Broadband Progress Report”).

⁶⁷ See US Cellular Comments at 9.

⁶⁸ See CCA Comments at 25-27; RWA Comments at 10.

to receive over \$1.5 billion in annual support.⁶⁹ As a direct correlation, these high-cost subsidies make available extra funds for AT&T's wireless entity, which bolsters AT&T wireless entity's competitive advantage over other providers who do not have the benefit of diverting these resources.⁷⁰ Indeed, in its acceptance of Connect of America Fund Phase II support, AT&T noted that funds would be used for "a mix of network technologies, including through the deployment of advanced wireless technologies as a mix of wireless and wireline technologies."⁷¹ Meanwhile, in Mobility Fund Phase I, wireless eligible telecommunications carriers without ILEC affiliates were forced to compete for a mere \$300 million through a reverse auction. Wireless carriers' bids far exceeded the available Phase I funding, and at the end of the reverse auction, the Commission allocated the \$300 million to thirty-three wireless carriers.⁷² Making matters worse, a significant amount of Mobility Fund I funds have yet to be dispersed.⁷³

CCA agrees that the disparity in high-cost support given to ILECs is stark compared to that allotted to mobile and competitive carriers, which disrupts the competitive balance of the wireless industry.⁷⁴ As evidenced throughout the record in this proceeding, and in recent reports filed by the Universal Service Administrative Company ("USAC"), the majority of these high-cost funds are collected as contributions from wireless carriers who receive only a small amount

⁶⁹ See FCC, "Carriers Accept Over \$1.5 Billion in Annual Support from Connect America Fund to Expand and Support Broadband for Nearly 7.3 Million Rural Consumers in 45 States and One Territory" (Aug. 27, 2015), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-335082A1.pdf.

⁷⁰ See Sprint Comments at 9.

⁷¹ See *Ex Parte* Letter from James Cicconi, Senior Executive Vice President – External and Legislative Affairs, AT&T Services, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 (filed Aug. 27, 2015).

⁷² See FCC Auctions, "Auction 901: Mobility Fund Phase I Results" (Apr. 29, 2013), available at http://wireless.fcc.gov/auctions/default.htm?job=auction_factsheet&id=901.

⁷³ See *id.*; CCA Comments at 26.

⁷⁴ See Sprint Comments at 5-10.

of the payback.⁷⁵ CCA therefore continues to encourage the Commission to act on contribution reform.⁷⁶

CCA also recommends that the Commission prioritize funds for wireless carriers and their networks to entice the wireless industry to move toward IoT development and deployment of premier technologies. Indeed, a recent study found that users will increase use of mobile technology to access the web by 27.7 percent this year while usage of every other media platform will decline by 3.4 percent.⁷⁷ Given the increased reliance on mobile services, the Commission must ensure that any reform to the Mobility Fund II program does not jeopardize funding for existing networks, nor hamstring carriers from deploying networks in response to consumer expectations and industry demands.⁷⁸ To better promote competition and extend broadband service to all Americans, updates to USF programs should take into account the skyrocketing consumer demand for wireless services and incorporate parity among allocation policies.

⁷⁵ *Id.* at 10; CCA Comments at 29-30 (citing Universal Service Administrative Company, Contribution Factors 2016, available at <http://usac.org/cont/tools/contribution-factors.aspx>).

⁷⁶ *See id.*

⁷⁷ *See* Colin Gibbs, FierceWireless, “Zenith: Mobile web usage to rise while all other platforms slide in 2016” (June 13, 2016), available at <http://www.fiercewireless.com/story/zenith-mobile-web-usage-rise-while-all-other-platforms-slide-2016/2016-06-13>.

⁷⁸ *See Ex Parte* Letter from Rebecca Murphy Thompson, General Counsel, CCA, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 10-208 (filed Nov. 16, 2015); *see also Ensuring Intermodal USF Support for Rural America Before the S. Comm. on Commerce, Sci., and Transp. Subcomm. on Commc’ns, Tech., Innovation, and the Internet*, 114th Cong. (2016) (statement of Steven K. Berry, CEO & President of Competitive Carriers Association).

B. The Commission Should Initiate an Overhaul of Infrastructure Application Procedures and Siting Policies.

As evidenced by the record in this proceeding, competition in the industry will be fueled by much needed infrastructure policy and tower siting reform.⁷⁹ CCA and others applaud the Commission's attempts to streamline siting policies, such as the use of shot clocks and the recent Notice of Proposed Rulemaking seeking comment on proposed amendments to the Nationwide Programmatic Agreement for the collocation of wireless antennas ("Collocation NPRM").⁸⁰ Indeed, upgrades to IoT and 5G technologies will continue to compress networks as they adapt to connect a myriad of devices and machine-to-machine ("M2M") connections.⁸¹ This will inspire progress in areas such as precision agriculture, telehealth, and a variety of other advancements like connected cars.⁸² As industry moves toward deployment of next generation technologies, therefore, physical infrastructure on which to base these advancements is critical.

Although physical infrastructure is paramount to providing consumers with reliable wireless service, network capacity is increasingly strained.⁸³ To remedy this, the Commission should continue to inspire the use of other structures such as small cells and distributed antenna systems ("DAS").⁸⁴ The Commission also must pursue additional tower siting reforms, and

⁷⁹ See CTIA Comments at 63; Mobile Future Comments at 14; T-Mobile Comments at 25; WIA Comments at 1.

⁸⁰ T-Mobile Comments at 26; WIA Comments at 3; *Wireless Telecommunications Bureau Seeks Comment on Proposed Amended Nationwide Programmatic Agreement for the Collocation of Wireless Antennas*, Public Notice, WT Docket No. 15-180 (rel. May 12, 2016) ("Collocation NPRM").

⁸¹ See CCA Comments at 21; WIA Comments at 5.

⁸² See *id.*; CCA Comments at 21; CTIA Comments at 56.

⁸³ Although AT&T argues competition in the market is evidenced by carriers' "aggressive deployment" of their networks, competitive carriers are continuously strained by AT&T and Verizon's market dominance, lack of availability of spectrum and network resources and funding, and burdensome siting policies. See AT&T Comments at 4.

⁸⁴ See CTIA Comments at 69; T-Mobile Comments at 26; WIA Comments at 2, 11.

adopt streamlined procedures as proposed in the recent Collocation NPRM. In addition, the FCC should encourage the use of an effective complaint process, and streamline review under the National Environmental Protection Act and National Historic Preservation Act to ensure efficient siting, including on Tribal lands.⁸⁵

CCA also reiterates support for legislative efforts to remove barriers to network deployment.⁸⁶ For example, S. 2555, “MOBILE NOW Act,” is currently pending consideration before the Senate and could streamline and add certainty to procedures for deploying facilities. Because federal agencies are not bound to follow the FCC shot clock timelines when considering an application, the review process can last multiple years, if not longer. Adding a shot clock and other legislative initiatives will focus resources and increase certainty for carriers attempting to deploy or upgrade facilities.

Disparate and complicated siting policies are a significant barrier to network deployment, which inhibits carriers’ ability to meet consumer demand for wireless services. Competitive carriers are increasingly strained and must utilize significant capital and other resources to deploy infrastructure to rural and remote areas.⁸⁷ As a result, siting barriers affect the entire competitive landscape of the market and preclude providers from building out next generation networks.⁸⁸ The Commission should ensure carriers are adequately equipped to pursue widespread network enhancements and deploy premier next generation technologies.

⁸⁵ See CCA Comments at 30-31; CTIA Comments at 71; Mobile Future Comments at 15; T-Mobile Comments at 27; WIA Comments at 11.

⁸⁶ See CCA Comments at 31; WIA Comments at 13.

⁸⁷ See CTIA Comments at 73; RWA Comments at 7.

⁸⁸ See US Cellular Comments at 9-13; WIA Comments at 4.

VII. THE FCC MUST IMPLEMENT POLICIES THAT INSPIRE COMPETITION THROUGH IoT DEVELOPMENT AND THE DEPLOYMENT OF NEXT GENERATION TECHNOLOGIES.

A. Competitive Carriers Need Reasonable Roaming Arrangements to Buildout Their Networks.

Carriers must have reasonable, flexible policies to enter into data roaming arrangements.⁸⁹ As T-Mobile aptly summarizes, “[d]ata roaming is critical to promoting competition and providing consumers with ubiquitous mobile broadband services.”⁹⁰ Despite the significance of roaming arrangements, AT&T and Verizon continue to exploit their market dominance to establish unreasonable roaming rates, which diminishes competitive carriers’ ability to provide consumers with quality service and dilutes competition in the market.⁹¹ Indeed, more than a third of participants in NTCA’s Survey agreed that negotiating and implementing roaming agreements “remains a major area of concern” and a barrier to competitive arrangements.⁹² The Commission therefore should ensure that carriers are able to engage in data roaming agreements that offer reasonable terms, conditions, and prices.⁹³ The Commission also must address stagnant roaming complaints that have gone unaddressed for over half a decade.⁹⁴

B. The Commission Should Implement Creative, Flexible Access to Content Policies that Inspire the Development of 5G Networks.

In addition to access to spectrum, a competitive BDS landscape, and sound infrastructure siting policies, the development of the IoT will hinge upon competitive carriers’ ability to access

⁸⁹ See RWA Comments at 7.

⁹⁰ T-Mobile Comments at 24.

⁹¹ See *id.*; RWA Comments at 7.

⁹² NTCA Comments at 4 (citing 2015 Wireless Survey Report at 3).

⁹³ See T-Mobile Comments at 22.

⁹⁴ See CCA Comments at 32-33.

video and audio content demanded by consumers. Increased consumer expectations to stream content over mobile devices is prevalent throughout the record.⁹⁵ At the same time, however, the record demonstrates that AT&T and Verizon continue to consume the majority of quality video content, which puts competitive carriers at a significant disadvantage when attempting to quench consumer demand.⁹⁶ And as AT&T points out, “[s]tudies show that customers...are more likely to consume content that does not count against their data allowance.”⁹⁷ While it’s clear many zero-rating policies benefit consumers, not all carriers have the ability or resources to float the capital needed to maintain this type of business plan. In light of this consumer preference, small carriers continue to struggle to obtain the newest content and offer it at a rate that does not negatively impact consumer pricing, placing them at a severe competitive disadvantage.⁹⁸

Despite its laudable efforts, the Commission must continue to intervene in transactions that threaten to create monopolies of video and audio content.⁹⁹ As CCA and others noted in opening comments in this proceeding, AT&T’s acquisition of DirecTV and Verizon’s acquisition of AOL have significantly diluted the market by stifling other providers’ ability to offer a wide variety of service packages to consumers.¹⁰⁰ Similarly, AT&T and Verizon recently announced

⁹⁵ See AT&T Comments at 20; CCA Comments at 3, 36-37; T-Mobile Comments at 22.

⁹⁶ See Mobile Future Comments at 6 (“Free data offerings allow consumers free access to certain online services and content. Verizon’s Free Bee Data and AT&T’s Sponsored Data21 programs allow consumers to access specific content without using their data allowance”).

⁹⁷ AT&T Comments at 22 (citing Doug Brake, *Mobile Zero Rating: The Economics and Innovation Behind Free Data*, at 11-12 (May 2016), available at <http://www2.itif.org/2016-zero-rating.pdf?ga=1.74098001.2147111963.1464102863> (last visited May 27, 2016)).

⁹⁸ See CCA Comments at 36-37; NTCA Comments at 3; T-Mobile Comments at 27.

⁹⁹ See Sprint Comments at 4; T-Mobile Comments at 28.

¹⁰⁰ See *id.*; CCA Comments at 36-37.

their intent to bid on Yahoo to obtain its advertising technology and mobile video assets.¹⁰¹ Because the majority of content is – and could continue to be – wholly dominated by the duopoly, the Commission should monitor these transactions and take reasonable steps to ensure all wireless operators have the opportunity to access video content through reasonable prices, terms and conditions.¹⁰² Implementing flexible, technologically neutral policies will inspire competition and ultimately promote the development of the IoT and deployment of 5G technologies.

¹⁰¹ See Greg Roumeliotis, Reuters, “AT&T seeks to top Verizon as Yahoo reviews new bids: sources” (June 9, 2016), available at <http://www.reuters.com/article/us-yahoo-m-a-verizon-idUSKCN0YV1S4>.

¹⁰² See CCA Comments at 36; T-Mobile Comments at 28.

VIII. CONCLUSION.

As the record reflects, the Commission should decline to find effective competition in the CMRS marketplace. To ameliorate the competitive divide, the Commission should facilitate opportunities for all carriers by fostering access to a variety of spectrum resources, fixing the broken BDS market, ensuring sufficient USF and infrastructure reforms, and allowing a wide variety of providers to access content and other critical variables needed to meet consumer demands and participate in the deployment of next generation technologies. The FCC must continue to monitor developments in the wireless ecosystem to identify and remove structural barriers to competition.

Respectfully submitted,

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