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October 21, 2019

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

**Re:    *Written Ex Parte Communication***

**GN Docket No. 18-122, *Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band***

Dear Ms. Dortch:

There is widespread agreement regarding the importance of making spectrum in the 3.7-4.2 GHz band (the “C-band”) available to help secure U.S. leadership in the race to fifth generation wireless (“5G”) technology.<sup>1/</sup> But just making *some* C-band spectrum available, or some available now and some available later, based on the self-interested discretion of current license holders will imperil the Nation’s ability to win that race. Accordingly, any plan adopted by the Commission should –

- Provide a minimum of 300 megahertz of spectrum for mobile broadband and provide certainty regarding the amount and timing of the spectrum made available through a single Commission-conducted public auction rather than sequential auctions, a private auction, or both. Auctioning spectrum in tranches creates exposure risks and is contrary to established economic principles and Commission precedent.

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<sup>1/</sup> See, e.g., Letter from Gregory M. Romano, Federal Regulatory and Legal Affairs, Verizon, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Oct. 9, 2019) (“Verizon Oct. 9 *Ex Parte* Letter”) (noting that “there are significant economic benefits at stake, and any unnecessary delay in unleashing C-band spectrum for 5G will have big negative impacts for the United States”); Comments of CTIA, GN Docket No. 18-122, at 3-4 (filed Aug. 7, 2019) (“CTIA Comments”) (noting that the C-band is “integral to U.S. leadership on 5G” and that such spectrum “has the potential to have a dramatic impact on American consumers and businesses, the U.S. economy, our global competitiveness, and whether the U.S. will continue to lead the world in wireless”); Reply Comments of T-Mobile USA, Inc., GN Docket No. 18-122, at 7 (filed July 19, 2019) (pointing out the “broad support in the record” for the idea that repurposing the maximum amount of C-band spectrum possible is necessary if the U.S. “seeks to maintain its leadership in the race to 5G”); Letter from Grant B. Spellmeyer, Vice President – Federal Affairs & Public Policy, U.S. Cellular, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, *et al.*, at 1 (filed Sept. 25, 2019); Comments of AT&T, GN Docket No. 18-122, *et al.*, at 4 (filed Aug. 7, 2019) (“AT&T Comments”); Comments of Qualcomm Incorporated, GN Docket No. 18-122, *et al.*, at 1 (filed Aug. 7, 2019) (“Qualcomm Comments”).

- Maximize the amount of spectrum that can be made available by recognizing the opportunity for incumbent users to move their operations to fiber. Numerous end users have expressed an interest in using alternative technologies and encouraging them to do so will not only clear additional spectrum, but promote broadband deployment more broadly.<sup>2/</sup>

### ***There is No Meaningful Difference in Speed for a Private Auction Versus a Public Auction***

The only advantage the C-Band Alliance (“CBA”) claims for a private auction versus a public auction is that a private auction can be conducted faster. But there is no evidence that conducting a private auction will result in spectrum being made available any more quickly than would a Commission-conducted auction. To the contrary, there is currently no proposal for a private auction on the record that has parties’ support. The CBA’s Flexible Use and Efficient Licensing (“FUEL”) proposal has been correctly intensely criticized by almost every party commenting on it other than the CBA itself.<sup>3/</sup> The Commission cannot simply hope that the CBA will get it right the next time. Accordingly, for the Commission to proceed with a private auction, it would necessarily be required to initiate a Further Notice of Proposed Rulemaking or similar administrative process to develop reasonable, procompetitive rules governing timing, application processes, payment requirements, and bidding – procedures and processes that the Commission has perfected and refined with its decades of experience – all of which lead to sufficient spectrum being reallocated in a reasonable timeframe.

Even after rules for a private auction are developed, appropriate Commission oversight will be required to ensure its integrity and fairness. The Commission’s auction rules have been developed over the past approximately 25 years and address, among other things, potential collusion among bidders, failure to provide accurate information regarding applicant qualifications, and payment obligations and deadlines. Even if a private entity were able to create similar rules quickly, it would have no authority to enforce them, unlike the Commission, whose authority is derived from the Communications Act. The need for fundamental rules and oversight to ensure a fair auction that provides a level playing field and furthers competition is not theoretical. The Commission has been required to police bidders that have tried to

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<sup>2/</sup> See, e.g., Verizon Oct. 9 *Ex Parte* Letter at 3 (noting that “[f]iber is fast becoming an efficient, scalable delivery medium for linear video distribution. . . . As a result, the transition away from satellite service for content delivery is already underway in some respects and will increase over time.”); CTIA Comments at 7 (“Any repurposing of the C-Band should recognize that fiber can and does provide programming connectivity, and that not all traffic currently delivered via C-band satellites needs to be delivered via satellite in perpetuity.”); Letter from Ross Lieberman, Senior Vice President, Government Affairs, ACA Connects – America’s Communications Association, *et al.*, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed July 9, 2019) (providing a comprehensive third-party study which details the transition from C-band to fiber for content delivery).

<sup>3/</sup> See Letter from Steve B. Sharkey, Vice President, Government Affairs Technology and Engineering Policy, T-Mobile USA, Inc., to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed July 12, 2019); Letter from Elizabeth Andrión, Senior Vice President, Regulatory Affairs, Charter Communications, Inc., to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Sept. 17, 2019).

manipulate the auction process or have cheated during an auction.<sup>4/</sup> For a private entity to establish these oversight rules and mechanisms, an additional layer of review and complexity will need to be added, meaning that a private auction could take even longer than a public auction.

Further, once the service rules and auction processes are established, the Commission is fully capable of moving quickly to conduct the auction, negating claims that a private auction could occur more quickly. For example, on June 27, 2013, the Commission adopted service rules for the H Block (1915-1920 and 1995-2000 MHz) and began the H Block auction, Auction 96, on January 22, 2014 – less than seven months later.<sup>5/</sup> Similarly, shortly after the Commission adopted service rules for AWS-3 spectrum in the 1695-1710 MHz, 1755-1780 MHz and 2155-2180 MHz bands on March 31, 2014, it commenced Auction 97, auctioning off that spectrum, on November 13, 2014 – less than eight months later.<sup>6/</sup> For the AWS-1 band at 1710-1755 MHz

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<sup>4/</sup> See 47 C.F.R. § 1.2105(c); *AT&T Services, Inc.*, Notice of Apparent Liability for Forfeiture, DA 19-785 (rel. Sept. 6, 2019); *AMG Technology Investment Group, LLC*, Notice of Apparent Liability for Forfeiture, DA 19-783 (rel. Sept. 6, 2019) (imposing monetary forfeitures against AT&T and AMG Technology for engaging in prohibited communications, including discussing bidding results and strategies, and failing to report those communications to the Commission); *Cascade Access, L.L.C.*, Forfeiture Order, 28 FCC Rcd 141 (2013) (imposing a monetary forfeiture for communicating bidding strategies to a competing bidder while an auction is in progress); see also 47 C.F.R. § 1.2110; *Northstar Wireless, LLC, SNR Wireless LicenseCo, LLC, Applications for New Licenses in the 1695-1710 MHz, 1755-1780 MHz and 2155-2180 MHz Bands*, Memorandum Opinion and Order, 30 FCC Rcd 8887 (2015); *Northstar Wireless, LLC, SNR Wireless LicenseCo, LLC, Applications for New Licenses in the 1695-1710 MHz, 1755-1780 MHz and 2155-2180 MHz Bands*, Order on Remand, 33 FCC Rcd 231 (2018); *Northstar Wireless, LLC, SNR Wireless LicenseCo, LLC, Applications for New Licenses in the 1695-1710 MHz, 1755-1780 MHz and 2155-2180 MHz Bands*, Memorandum Opinion and Order, 33 FCC Rcd 7248 (2018) (finding that two entities in Auction 97, Northstar and SNR, were not eligible for \$3.3 billion in bidding credits as designated entities because they were controlled by DISH); *Vermont Telephone Company, Inc.; Participant in Auction No. 86*, Forfeiture Order, 29 FCC Rcd 16052 (2014) (imposing a penalty against Vermont Telephone Company, Inc. for failing to submit accurate gross revenue information in connection with the bidding credit it received through its participation as a designated entity in Auction 86). As an example, the Commission’s rules have evolved based on, among other things, its problematic use of installment payments. A private auction would not take advantage of this experience, potentially developing flawed mechanisms and lacking any effective means to address issues that develop. Any private auction would also necessarily be designed to accomplish one thing – maximizing the return for current licensees. Indeed, the corporate holders of existing licenses are obligated to do just that. In contrast, the Commission is required to adhere to the requirements of Section 309 of the Act, which requires that the Commission generally “protect the public interest” and provides detailed guidance on how to achieve that result. 47 U.S.C. § 309.

<sup>5/</sup> *Service Rules for Advanced Wireless Services H Block—Implementing Section 6401 of the Middle Class Tax Relief and Job Creation Act of 2012 Related to the 1915-1920 MHz and 1995-2000 MHz Bands*, Report and Order, 28 FCC Rcd 9483 (2013) (establishing H block service rules); *Auction for H Block Licenses in the 1915-1920 MHz and 1995-200 MHz bands rescheduled for January 22, 2014*, Public Notice, 28 FCC Rcd 14529 (2013).

<sup>6/</sup> *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands*, Report and Order, 29 FCC Rcd 4610 (2014); *Auction*

and 2110-2155 MHz, the Commission released the final revisions to the service rules on August 15, 2005, and Auction 66 of AWS-1 spectrum began just under a year later, on August 9, 2006.<sup>7/</sup>

### ***A Rush to Auction Only 180 Megahertz of Spectrum Greatly Reduces Benefits***

Among others, Verizon claims that it is important that the Commission act quickly to make C-band spectrum available, noting the significant economic benefits that come from creating access to mobile broadband spectrum.<sup>8/</sup> T-Mobile strongly agrees that the Nation's economy benefits by carriers having access to spectrum. Indeed, CTIA reports that reallocating additional spectrum for commercial use by the U.S. wireless industry "will add nearly \$400 billion to the U.S. economy and create over 1.8 million new jobs."<sup>9/</sup> But, in suggesting that a private auction would better achieve that result, Verizon misses several key points.

If there was a speed advantage to a private auction, that advantage would be massively overwhelmed by the limited amount of spectrum that a private auction would make available.<sup>10/</sup> The CBA has said that it will make only 180 megahertz of C-band spectrum available for mobile broadband.<sup>11/</sup> But a public auction of additional spectrum will more than compensate for any

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*of Advanced Wireless Services (AWS-3) Licenses Scheduled for Nov. 13, 2014*, Public Notice, 29 FCC Rcd 8386 (2014).

<sup>7/</sup> *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, Order on Reconsideration, 20 FCC Rcd 14058 (2005); *Auction of Advanced Wireless Services Licenses Rescheduled for August 9, 2006*, Public Notice, 21 FCC Rcd 5598 (2006).

<sup>8/</sup> See Verizon Oct. 9 *Ex Parte* Letter at 1-3.

<sup>9/</sup> See CTIA, *A National Spectrum Strategy to Lead in 5G*, at 4 (Apr. 2019), <https://api.ctia.org/wp-content/uploads/2019/04/A-National-Spectrum-Strategy-to-Lead-in-5G.pdf> (citing David W. Sosa and Greg Rafert, *The Economic Impacts of Reallocating Mid-Band Spectrum to 5G in the United States*, ANALYSIS GROUP, at 1 (Feb. 2019), <https://api.ctia.org/wp-content/uploads/2019/02/The-Economic-Impacts-of-Reallocating-Mid-Band-Spectrum-to-5G-1.pdf>).

<sup>10/</sup> The difference in spectrum, and the associated economic value lost by not auctioning more spectrum, is not the only problem with a private auction. T-Mobile and others have demonstrated that a private auction violates the Communications Act, makes too little spectrum available to support multiple providers, usurps the role of the Commission, and lacks transparency. See Letter from Russell H. Fox, Mintz, Counsel to T-Mobile USA, Inc., to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Mar. 4, 2019). And there is strong bi-partisan, bi-cameral opposition to conducting a private auction. See Letter from Sen. John Kennedy to The Honorable Ajit Pai, Chairman, FCC (dated Mar. 14, 2019); Letter from Rep. Doris Matsui to The Honorable Ajit Pai, Chairman, FCC (dated Oct. 16, 2019); Letter from Rep. Greg Gianforte and Sen. Steve Daines, to The Honorable Ajit Pai, Chairman, FCC (dated July 25, 2019).

<sup>11/</sup> It is unclear why the CBA cannot make additional spectrum available. As members of the CBA and Eutelsat have demonstrated, satellite usage of the C-band is intermittent, leaving portions of the spectrum inefficiently underutilized. See, e.g., Letter from Michele C. Farquhar, Hogan Lovells, Counsel to SES, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at Attachment at 3 (filed Sept. 9, 2019) (analogizing satellite use of the C-band akin to a "hotel room" and explaining that "[i]f a customer has purchased the right to use an amount of spectrum . . . , that capacity is not available to be resold or otherwise reused even if the customer chooses not to use that capacity for a period of time"); Letter from Kathryn Dickerson, Wiley Rein, Counsel to Intelsat License LLC, to Ms. Marlene H.

perceived delay from such an auction. Indeed, Verizon notes that making C-band spectrum available would lead to more than \$154 billion on infrastructure spending, 1.3 million new jobs, and \$274 billion added to America's gross domestic product ("GDP").<sup>12/</sup> *But, contrary to the CBA's plan, that is only if 400 megahertz of mid-band spectrum is made available.* The CBA has said that it can make 180 megahertz available within three years, but has made no commitment as to when any additional spectrum may be made available – leaving all the potential economic benefits of converting additional spectrum unrealized.

Using the metrics that Verizon cites on a per-megahertz basis, an FCC-run auction could provide significantly greater benefits. For example, even if an FCC-led process transitions only 100 megahertz of spectrum more than the CBA proposes, the gain would still be over \$68 billion directly added to America's GDP, with indirect benefits likely many times larger. Similarly, the CBA's proposal would contribute only \$69 billion to infrastructure spending, whereas \$107 billion would be contributed to infrastructure spending if another 100 megahertz was reallocated for mobile broadband and \$154 billion if, as Verizon notes, 400 megahertz is made available.<sup>13/</sup>

The record is clear that well over the 180 megahertz proposed by the CBA is necessary to support competition. Countries around the world are making on the order of 100 megahertz available per carrier, and the record supports similar needs in the U.S. as a starting point.<sup>14/</sup>

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Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Sept. 9, 2019); Letter from Joseph A. Godles, Goldberg, Godles, Wiener & Wright, Counsel to Telesat Canada, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Sept. 9, 2019); Letter from Bruce A. Olcott, Jones Day, Counsel to Eutelsat S.A., to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Sept. 11, 2019).

<sup>12/</sup> See Verizon Oct. 9 *Ex Parte* Letter at 1.

<sup>13/</sup> None of these calculations account for the significant benefit to rural America that will result from the increased fiber buildout that converting more spectrum to mobile broadband will produce.

<sup>14/</sup> See, e.g., David Abecassis *et al.*, *Global Race to 5G – Update*, ANALYSYS MASON, at 1, 66 (Apr. 2019), <https://api.ctia.org/wp-content/uploads/2019/03/Global-Race-to-5G-Update.pdf> (finding that although the US has moved up in 5G readiness since the last report, “there is still more to be done to ensure that the US retains its leadership position and . . . that a key short-term goal for the US to maintain its leading position is improving availability of mid-band spectrum” and comparing countries’ overall 5G readiness scores); David Abecassis *et al.*, *Mid-band Spectrum Global Update*, ANALYSYS MASON at 1 (Nov. 2018), <https://api.ctia.org/wp-content/uploads/2018/12/Analysys-Mason-Mid-Band-Spectrum-Global-Update.pdf> (finding that since April 2018, Japan, South Korea, Spain, the UK, Germany, and Australia have auctioned or assigned mid-band spectrum, and that by the end of 2020, an average of nearly 300 megahertz of mid-band spectrum will be available per country); Juan Pedro Tomás, *South Korea Completes 5G Spectrum Auction*, RCR WIRELESS NEWS (June 20, 2018) <https://www.rcrwireless.com/20180620/5g/south-korea-completes-5g-pectrum-auction-tag23>; Douglas Busvine, *Explainer: Germany, At Last, Launches 5G Spectrum Auction*, REUTERS (Mar. 8, 2019) <https://www.reuters.com/article/us-germany-telecoms-explainer/explainer-germany-at-last-launches-5g-spectrum-auction-idUSKCN1QZ1YN>. See also, e.g., Reply Comments of T-Mobile USA, Inc., GN Docket No. 18-122, at 3-4 (filed Aug. 14, 2019) (“T-Mobile Second Supplemental Reply Comments”) (explaining that the Commission should make the greatest amount of C-band spectrum possible available for 5G wireless services); CTIA Comments at 3-6 (noting that the C-band is “integral to U.S. leadership on 5G” and that such spectrum “has the potential to have a dramatic impact on American consumers and businesses, the U.S. economy, our global competitiveness, and whether the U.S. will continue to lead the

Providing sufficient spectrum to support competition will drive quicker deployment of spectrum and new services along with other benefits of competition. Therefore, in the unlikely event that there is a small delay in a Commission-run process, the additional benefits of making additional spectrum available will swamp the losses from any potential delay.

Verizon references a Brattle Group paper in a similar attempt to support a private auction. But the Brattle Group paper proves just the opposite – that an FCC-run auction would be better for the public. The Brattle Group asserts that a one-year delay in making C-band spectrum available for mobile broadband would reduce the spectrum’s value by between seven percent and 11 percent.<sup>15/</sup> In addition, Verizon notes that economists estimate that the social value of spectrum is 10 to 20 times its economic value. As a result, the Brattle Group paper claims that a delay relative to the CBA’s proposal would be very costly. However, based on the Brattle Group paper’s own analysis, it is clear that even an unlikely delay of six to 24 months to conduct a Commission-run process that would lead to more efficient spectrum reallocation while protecting incumbents would yield social *benefits* of at least 28 percent to 40 percent *more* than the limited amount of spectrum the CBA would sell through a private auction, and possibly much more if the spectrum remains deployed for inefficient satellite use for the longer term. This difference, based on the Brattle Group’s average valuations for the C-band, would cost the country up to \$11 billion in foregone auction revenues and \$114 billion in social welfare.<sup>16/</sup>

### ***Fiber is a Superior Option for Delivering Services and Offers Numerous Advantages Over Satellite***

Support continues to build for Commission recognition that fiber can accommodate the needs now being satisfied by satellite receive stations using the C-band. The record already contains strong evidence submitted by T-Mobile and the ACA Connects Coalition that fiber is a suitable, if not superior, substitute for the C-band,<sup>17/</sup> and multiple other parties have noted the broad

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world in wireless” and emphasizing the importance of clearing a significant amount of C-band spectrum in order to accommodate 5G networks); AT&T Comments at 4 (pointing out that “a substantial amount of mid-band spectrum [is needed] in the near term” for 5G); Qualcomm Comments at 1 (supporting designating the entire 500 megahertz of C-band spectrum to support 5G deployment in the U.S.); Scott Bergmann and Kelly Cole, *More Mid-Band Spectrum is Key to U.S. 5G Leadership*, CTIA (Feb. 5, 2019), <https://www.ctia.org/news/more-mid-band-spectrum-is-key-to-u-s-5g-leadership>.

<sup>15/</sup> See Verizon Oct. 9 *Ex Parte* Letter at 2.

<sup>16/</sup> Coleman Bazelon, *Maximizing the Value of the C-Band: Comments on the FCC’s NPRM to Transition C-Band Spectrum to Terrestrial Uses*, BRATTLE GROUP, at 14, Table 3 (“Brattle Group Paper”), attached to Joint Comments of Intel Corp., Intelsat License LLC and SES Americom, Inc., GN Docket No. 18-122, *et al.* (filed Oct. 29, 2018).

<sup>17/</sup> See Letter from Steve B. Sharkey, Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Oct. 2, 2019) (“T-Mobile Oct. 2 *Ex Parte* Letter”); T-Mobile Second Supplemental Reply Comments at 4-13; Letter from Steve B. Sharkey, Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed June 21, 2019) (“T-Mobile June 21 *Ex Parte* Letter”); Letter from Ross Lieberman, Senior Vice President, Government Affairs, ACA Connects – America’s Communications Association, *et al.*, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed July 9, 2019) (“ACA July 9 *Ex Parte* Letter”);

availability and robust capabilities of fiber.<sup>18/</sup> The support of so many parties for the potential use of fiber, including both rural video and broadband providers whose businesses are built on the reliable delivery of satellite signals, should nullify the continued self-serving claims to the contrary of the CBA and others. The recent *ex parte* letter submitted by Verizon supports the conclusion that current satellite operations can be moved to fiber. As Verizon observes, “reliance on fiber delivery for video services is growing”, and “content providers are increasingly using fiber to distribute content.”<sup>19/</sup> The reason for that growth, according to Verizon, is that “[f]iber is fast becoming an efficient, scalable delivery medium for linear video distribution. And fiber delivery is also particularly suited for the increase in over-the-top content because a pure IP delivery solution thrives with the increased bandwidth and low latency that fiber provides.”<sup>20/</sup> Accordingly, Verizon concludes that “the transition away from satellite service for content delivery is already underway . . . .”<sup>21/</sup>

The ability of current C-band users to transition to fiber means that the Commission must reject the assertions of the CBA and others that only 180 megahertz of C-band spectrum can be made available for mobile broadband use and that the CBA is the sole entity that can oversee the clearing of spectrum. While, as T-Mobile has observed,<sup>22/</sup> there may be some markets, like Alaska, where the use of fiber presents unique challenges, fiber is otherwise widely available, even in rural locations. And where it is not available today, the record demonstrates that it will likely be available soon.<sup>23/</sup> Even where the Commission wishes to continue to permit satellite earth station use of the C-band, to support operations like Verizon’s “super head-ends,” it can auction the use of the spectrum for mobile broadband subject to reasonable protection requirements.<sup>24/</sup> Moreover, a Commission-led process that promotes fiber use will spur more rural fiber deployment in a short period of time, supporting a key social goal.

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Cartesian, *C-band Spectrum Clearing Plan*, at 8 (July 8, 2019), *attached to* ACA July 9 *Ex Parte* Letter; Letter from Ross Lieberman, Senior Vice President, Government Affairs, ACA Connects – America’s Communications Association, *et al.*, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 4 (filed July 2, 2019).

<sup>18/</sup> See, e.g., Comments of NTCA – The Rural Broadband Association, GN Docket No. 18-122, *et al.*, at 3 (filed Aug. 7, 2019); Comments of the Church of Jesus Christ of Latter-day Saints, GN Docket No. 18-122, *et al.* (filed Aug. 7, 2019); Letter from John B. Simpson, Consultant to RIDE TV, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, *et al.*, at 1 (filed Sept. 25, 2019); *see also* T-Mobile Oct. 2 *Ex Parte* Letter at 2-5; T-Mobile Second Supplemental Reply Comments at 5.

<sup>19/</sup> Verizon Oct. 9 *Ex Parte* Letter at 3.

<sup>20/</sup> *Id.*

<sup>21/</sup> *Id.*

<sup>22/</sup> See T-Mobile Second Supplemental Reply Comments at 7.

<sup>23/</sup> See Press Release, *New Study Finds All-Fiber Deployments to 90% of Households Achievable in Next Decade* (Sept. 10, 2019), [https://www.fiberbroadband.org/blog/new-study-finds-all-fiber-deployments-to-90-of-households-achievable-in-next-decade?utm\\_source=sendgrid&utm\\_medium=email&utm\\_campaign=Newsletters](https://www.fiberbroadband.org/blog/new-study-finds-all-fiber-deployments-to-90-of-households-achievable-in-next-decade?utm_source=sendgrid&utm_medium=email&utm_campaign=Newsletters); Letter from Lisa R. Youngers, President and CEO, Fiber Broadband Association, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 1 (filed Sept. 13, 2019).

<sup>24/</sup> See Verizon Oct. 9 *Ex Parte* Letter at 3; T-Mobile Oct. 2 *Ex Parte* Letter at 6-11.

### ***An FCC-Run Relocation Process Can Make Spectrum Available Faster than a Private CBA-Run Process***

An important Commission goal in this proceeding is the speed by which spectrum will be deployed for broadband service to consumers – not how quickly it can be auctioned. A process that includes fiber for relocation is the fastest path to that result.

The broad availability of fiber means that relocation can occur quickly, easily, and without the CBA's control of the process. If the Commission facilitates and encourages existing entities to replace satellite capacity with fiber, the relocation can occur much more quickly than the CBA's proposal, which relies on the launch of multiple new satellites and the reconfiguration of assets in an otherwise unsuccessful business model.<sup>25/</sup> While the CBA claims that a single private entity must oversee all aspects of a relocation for it to occur quickly, that is not the case. A relocation to fiber under the Commission's watch can happen quickly.

*First*, there is extensive access to fiber so that many, if not the majority, of current earth station locations already have access to fiber. And those that do not will be quickly served by new fiber so that users can migrate services to fiber.<sup>26/</sup>

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<sup>25/</sup> See Letter from Jennifer D. Hindin, Counsel, C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Apr. 9, 2019) (discussing details regarding the CBA's Transition Implementation Process, which includes the launch of several new satellites, providing new filters, etc.).

<sup>26/</sup> See Verizon Oct. 9 *Ex Parte* Letter at 3 (“We are currently deploying roughly 1,400 route miles per month in more than 60 markets outside of our traditional landline footprint.”); Letter from Joseph C. Cavender, Vice President & Assistant General Counsel, Federal Regulatory Affairs, CenturyLink, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 1-2 (filed Sept. 23, 2019) (“CenturyLink Vyvx Linear Channel Distribution service today provides programmers and distributors the ability to deliver channels across a variety of platforms, including directly over fiber to many MVPDs as well as over-the-top video providers . . . . CenturyLink's extensive U.S. fiber network already reaches many programmers, data centers, and MVPDs, and CenturyLink continues to invest billions of dollars of capital each year, with a key priority to deploy more fiber and reach more enterprise destinations every year—in fact, CenturyLink put almost 10,000 buildings on its fiber network in just the first 6 months of 2019.”); Letter from Paul Jamieson, Vice President, Government Affairs & Policy, Altice, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 4 (filed Aug. 15, 2019) (“In much of its Optimum service territory in the New York Metropolitan Area (‘NYMA’), Altice USA receives and transports video through direct fiber connections with programmers . . . . This method has proven highly reliable in providing consistent delivery of video service to customers, which is critical in a hypercompetitive market like the Optimum footprint.”); see also T-Mobile Second Supplemental Reply Comments at 3 (citing Comcast's announced substantial expansions of its fiber-based network in California, Connecticut, Maryland, Michigan, Virginia, and Washington, laying several miles of fiber and connecting thousands of homes and businesses); Press Release, *Spectrum Enterprise to Invest \$1 Billion to Increase the Density of its National Fiber Network and Transform its Approach to the Client Experience* (May 14, 2018), <https://newsroom.charter.com/press-releases/spectrum-enterprise-to-invest-1-billion-to-increase-the-density-of-its-national-fiber-network-and-transform-its-approach-to-the-client-experience/> (explaining that Charter has been investing billions of dollars in new fiber infrastructure to increase the density of its national fiber network); Letter from Jason E. Rademacher and Christina Burrow, Cooley, Counsel for The Church of Jesus Christ of Latter-day Saints, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No.



*Second*, a prompt relocation to fiber can be managed by the Commission. For example, in the broadcast incentive auction, the Commission continues to manage the reconfiguration of the 600 MHz band in a quick and orderly fashion.<sup>27/</sup> Despite the dire predictions of a 10-year plus relocation process, the relocation of broadcast facilities is happening on or ahead of schedule and is ultimately on track to be completed within the 36-month schedule adopted by the Commission. There is no evidence that a private entity attempting to launch multiple satellites and reconfigure all existing earth stations would accomplish relocation any more quickly than a Commission process – particularly if incumbent users are transitioned principally to fiber. T-Mobile recognizes that, in the past, the Commission has permitted third parties to manage spectrum transitions and does not object to the Commission electing that option here.<sup>28/</sup> But allowing a third party to manage a Commission-mandated transition, *after spectrum is auctioned by the Commission*, does not mean that a third party will be able to permit, from start-to-finish, quicker access to the spectrum for mobile broadband.

### ***All Spectrum Should be Auctioned Together***

The significant infirmities in the CBA plan are not cured by promises to potentially make more spectrum available later. Providers can only engage in network planning and auction preparation if they are aware, with certainty, of the supply of spectrum and when it will be made available

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18-122, at 1 (filed July 9, 2019) (indicating that the Church of Jesus Christ of Latter-day Saints “could be open to transitioning to the Ku-band, installing a fixed terrestrial solution such as fiber, or implementing some combination of options”); Letter from John B. Simpson, Consultant to RIDE TV, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, *et al.*, at 1 (filed Sept. 25, 2019) (explaining that RIDE TV believes video programming can be transported reliably over fiber optic networks and that it has no objection to an expedited migration of its video programming transport to fiber); BridgeWave Communications, *Blackfoot Extends Fiber Network with BridgeWave MultiGigabit, High Value, and Low-Cost Systems* (June 12, 2018), <https://bridgewave.com/blackfoot/>; Blackfoot, *Blackfoot and T-Mobile to Bring the Un-Carrier to More Montana and Wyoming Customers* (Oct. 9, 2017), <https://www.blackfoot.com/news/blackfoot-t-mobile-bring-un-carrier-montana-wyoming-customers/> (discussing Blackfoot’s rapid expansion of its fiber backbone, in partnership with T-Mobile).

<sup>27/</sup> *Incentive Auction Task Force and Media Bureau Report on the Status of the Post-Incentive Auction Transition and Reimbursement Program; Announce a Further Allocation From the Relocation Fund; and Announce Procedures for Eligible Entities to Close Out Accounts in the Fund*, Public Notice, 34 FCC Rcd 304, ¶¶ 12-13 (2019) (explaining that “as of February 11, 2019, 172 of the total 987 repacked stations have successfully vacated their pre-auction channel, representing over 17 percent of the total after the completion of only the first of the 10 phases” and that the Commission is “optimistic that the stations in upcoming phases will similarly be able to meet their phase completion dates”).

<sup>28/</sup> *See, e.g., Improving Public Safety Communications in the 800 MHz Band*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, 19 FCC Rcd 14969, ¶ 191 (2004) (determining that the 800 MHz Transition Administrator should be “an independent party with no financial interest in any 800 MHz licensee.”); *Amendment of the Commission’s Rules to Establish New Personal Communications Services* (Clas No. 930516), Second Report and Order, 8 FCC Rcd 7700, ¶ 88 (1993) (appointing an independent, non-governmental entity – UTAM – as the coordinating body to oversee the transition from fixed microwave operations to Unlicensed PCS and to manage the transition to full band clearing).

for use. In the broadcast incentive auction, for example, bidders knew the maximum amount of spectrum that would be available in a particular auction stage and the fact that the spectrum would be available at the end of the mandatory repacking period.<sup>29/</sup> That ability to plan would be defeated by the *potential* for more spectrum later without knowledge of the amount or when it would be cleared.

Moreover, an auction of some spectrum now and some later, particularly if the amount and timing is controlled by the CBA, would result in a manipulation of pricing. For example, auctioning a limited amount of spectrum now would artificially suppress supply, driving up prices. Then later, when the CBA elects to make more spectrum available, pricing would be based on those artificially inflated prices. Indeed, as the Brattle Group recognizes, the Italian auction of C-band spectrum may have overstated the value of the band “because the regulator offered just a ‘few tranches of frequency and no visibility on when further packages might become available,’ leaving the carriers little option but to pay top dollar for the current offering.”<sup>30/</sup> Worse, creating inflated prices now will mean that only entities with the deepest pockets will have access to the spectrum. Creating an interval between the initial and subsequent auction would only provide those entities with an opportunity to re-fill their coffers and bid on artificially inflated prices later. That outcome will have a devastating impact on competition and access to spectrum. Artificially high prices are in the CBA’s interest, not in the public interest. In contrast, if all spectrum were auctioned together, with bidders having full knowledge of supply and timing of availability, pricing will more closely resemble the value of the spectrum.

The Commission has recognized the economic efficiency of auctioning substitutes and complements together, a rationale that disfavors dividing the C-band into different tranches for auction, because different licenses within the C-band could be either complements or substitutes. For instance, the Commission has stated that “[g]rouping interdependent licenses together and putting them up for bid at the same time will facilitate awarding licenses to bidders who value them the most highly by providing bidders with information about the prices of complementary and substitutable licenses during the course of an auction.”<sup>31/</sup> As Professor Paul Milgrom, who helped the Commission design spectrum auctions, has consistently observed over 25 years, the main benefit of offering licenses simultaneously “is that it develops and displays substantial information to bidders about license prices before requiring the bidders to make their final

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<sup>29/</sup> See *Clearing Target of 84 Megahertz Set for Stage 4 of the Broadcast Television Spectrum Incentive Auction; Stage 4 Bidding in the Reverse Auction will Start on December 13, 2016*, Public Notice, 31 FCC Rcd 12846, ¶ 3 (2016); *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567, ¶ 11 (2014) (“No station will be allowed to operate on a channel that has been reassigned or repurposed more than 39 months after the repacking process becomes effective. In other words, the repurposed spectrum will be cleared no later than 39 months after the effective date.”) (internal citations omitted).

<sup>30/</sup> Brattle Group Paper at 12 (internal citations omitted).

<sup>31/</sup> *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Third Report and Order, 9 FCC Rcd 2941, ¶ 25 (1994); see also *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Fifth Report and Order, 9 FCC Rcd 5532, ¶ 36 (1994).

commitments.”<sup>32/</sup> In contrast, conducting multiple auctions of the same spectrum requires bidders to buy licenses in an initial auction without knowing when a second auction will occur or the licenses that will be sold in that auction, creating potentially significant exposure risk.

That is why the Commission routinely auctions spectrum bands in the same service together, particularly when, as would be the case with C-band spectrum, more spectrum would potentially create contiguous spectrum and greater bandwidths for 5G. For example, the Commission decided to auction the Upper 37 GHz and 39 GHz bands together because their proximity to one another creates efficiencies, and they together provide the largest amount of contiguous spectrum in the millimeter wave bands for flexible-use wireless services.<sup>33/</sup> It similarly chose to auction the 47 GHz band along with the Upper 37 GHz and 39 GHz bands (rather than along with the 24 GHz band) because it offered more “synergies” with those bands.<sup>34/</sup> In addition, even though the AWS-3 bands (the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz bands) did not contain contiguous paired spectrum,<sup>35/</sup> it chose to auction the 1695-1710 MHz band on an unpaired basis, rather than wait to auction those frequencies on a paired basis with another spectrum band,<sup>36/</sup> further demonstrating that the Commission prefers to auction frequencies that are in the same service together.

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<sup>32/</sup> See Letter from Paul Milgrom, Shirley and Leonard Ely Professor of Economics, Stanford University, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-354, at 3-4 (filed Aug. 7, 2017); see also Paul Milgrom, *Putting Auction Theory to Work*, at 246 (2004), <https://web.stanford.edu/~milgrom/publishedarticles/Putting%20Auction%20Theory%20to%20Work.pdf> (“When the licenses are mutual substitutes for all bidders, not only is it true that equilibrium prices exist, but straightforward, ‘myopic’ bidding in the auction leads bidders to prices and an allocation that are close to competitive equilibrium.”); David Warsh, *When Auction Theory Was Put to Work*, ECONOMIC PRINCIPLES (May 21, 2006), <http://www.economicprincipals.com/issues/2006.05.21/200.html> (explaining that “the Federal Communications Commission hired Stanford University’s Paul Milgrom and Robert Wilson to design an auction to sell off rights to a portion of the electromagnetic spectrum in the United States” and that Milgrom has recognized “the issue of whether some licenses might be substitutes for one another and others be complements (that is, more valuable when owned in combination[])”).

<sup>33/</sup> See *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Fourth Report and Order, 33 FCC Rcd 12168 (2018); *Auctions of Upper Microwave Flexible Use License for Next Generation Wireless Services; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auctions 101 (28 GHz) and 102 (24 GHz)*, Public Notice, 33 FCC Rcd 7575, ¶ 12 (2018) (“*Auctions 101 and 102 Procedures Public Notice*”) (“[T]he 37 GHz band is adjacent to the 39 GHz band, so to maximize the efficiency of deployment in these two bands (and the allocation of spectrum across these bands), we conclude that it is appropriate to auction them off together.”).

<sup>34/</sup> See *Auctions 101 and 102 Procedures Public Notice* ¶ 13.

<sup>35/</sup> See *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands*, Report and Order, 29 FCC Rcd 4610 (2014).

<sup>36/</sup> See *id.* ¶ 29. While the Commission had a statutory mandate to auction the AWS-3 bands by a certain date, it was not required to auction them together.

The Nation's ability to lead in the race to 5G will depend on access to mid-band spectrum, and the ability to use mid-band spectrum cannot depend on the CBA. Its interests are not the public interest. The Commission should therefore recognize that most of today's C-band earth station traffic can be handled by fiber without requiring costly investment in new satellites to perpetuate an unsuccessful business plan (with the added benefit of using that fiber to extend broadband to unserved and underserved areas) and ensure that the maximum amount of C-band spectrum is designated for mobile broadband use. There will be no delay in a public auction of C-band spectrum, and even if a public auction takes modestly longer than a private auction, the economic value of that delay will be significantly outweighed by the economic value of the additional spectrum that a public auction will produce. Finally, all C-band spectrum should be auctioned together, consistent with sound economic principles and settled Commission practice.

Pursuant to Section 1.106 of the Commission's rules, a copy of this letter has been submitted in the record of the above-referenced proceeding. If there are any questions regarding the foregoing, please contact the undersigned.

Respectfully submitted,

/s/ Steve B. Sharkey

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