



October 29, 2019

Hon. Michael F. Doyle
Chairman
Subcommittee on Communications &
Technology
U.S. House of Representatives
Washington, DC 20515

Hon. Robert E. Latta
Ranking Member
Subcommittee on Communications &
Technology
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Doyle and Ranking Member Latta:

As the Executive Vice President, Advocacy & Government Relations of the C-Band Alliance (CBA), I write to give this Subcommittee an update on the extraordinary efforts the C-band satellite operators are taking to free up mid-band spectrum for 5G while meeting the government's twin goals of speed and security.

First, the CBA announced on October 28, 2019 in an updated proposal to the Federal Communications Commission (FCC) that it will commit to clear 300 megahertz of C-band spectrum, inclusive of a 20 megahertz guard band, to support 5G wireless deployment throughout the continental United States. The CBA will make 100 megahertz of spectrum available in 46 of the top 50 metropolitan areas within 18 months of an FCC Order and 280 MHz throughout the continental United States within 36 months from a CBA-led auction. Our letter to the FCC is attached.

Advanced compression technology, as well as other technologies, would be employed to increase the amount of spectrum to be cleared under the CBA transition plan. The CBA proposal commits to implement these technology upgrades at no cost to satellite customers employing these upgrades. The CBA remains committed to ensuring that existing customers continue to enjoy the quality of service they experience now, with no interference from 5G services deployed in the future. The CBA also remains committed to covering all other costs of the transition, including the required filtering of earth stations.

Second, the CBA, AT&T, Verizon, U.S. Cellular, Bluegrass Cellular, and Pine Belt Wireless have written an important letter identifying key principles that should govern any bidding of C-band spectrum in a CBA-led auction. This joint letter from industry stakeholders demonstrates broad support for an open private auction with procedural guardrails to ensure a fair and transparent outcome. The CBA endorses these key bidding principles, and stakeholder alignment paves the way for an expeditious sales process that is fair, transparent, well understood by potential buyers, and consistent with FCC process. By facilitating the expeditious clearing and assigning of C-band spectrum for the 5G services, the agreed-upon principles represent a huge win for all concerned—most importantly, for consumers, workers and businesses across the U.S. The joint letter is attached.

In short, it still remains the case that the CBA's proposal is the best plan to help bring the C-band most quickly to market and help win the global race to 5G while protecting the video and radio transmission services upon which nearly 120 million American household currently rely.



Thank you in advance for your consideration of our views. I ask that this letter be submitted into the record. Please contact me with any questions.

Respectfully submitted,

/s/ Peter Pitsch

Peter Pitsch
Executive Vice President, Advocacy & Government
Relations
C-Band Alliance

Enclosures



October 28, 2019

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: *Ex Parte Submission*, GN Docket No. 18-122

Dear Ms. Dortch:

The C-Band Alliance (“CBA”) files this letter to update its proposal in support of the FCC adopting a market-based approach to clear 300 MHz of C-band spectrum, inclusive of a 20 MHz guard band. More specifically, the CBA proposes to make more spectrum available for terrestrial 5G use—100 MHz of spectrum in 46 of the top 50 PEAs within 18 months of an FCC Order and 280 MHz throughout CONUS within 36 months from a CBA-led auction.

The member companies of the CBA have been working with their customers to ensure that sufficient C-band spectrum remains available for continued content distribution, while maximizing the portion repurposed for terrestrial 5G use within 18-36 months of an FCC Order and auction. These efforts have led the CBA to be able to increase from 180 MHz to 280 MHz the amount of spectrum available for terrestrial 5G use via its market-based approach; a 20 MHz guard band is retained to protect on-going satellite operations in the band.

This increase in the amount of spectrum proposed by the CBA to be cleared for 5G use is made possible by technologies such as advanced modulation, single format transport, and advanced video compression, including High Efficiency Video Coding (“HEVC”). Each of these technologies improves the efficiency of satellite video delivery, allowing the same video content to be transmitted over less spectrum. In fact, a number of video content distributors have already adopted or are in the process of adopting these technologies, including HEVC. The CBA’s market-based plan makes it economically viable for those required to reduce their bandwidth usage to employ these technology upgrades because the CBA will pay the costs incurred by those customers adopting such technologies. The implementation costs related to the clearing of this increased amount of spectrum are expected to be between \$2.5 billion and \$3.5 billion.

Importantly, the CBA is committed to ensuring that all C-band satellite customers enjoy continued access to C-band satellite spectrum in an interference-free environment before, during, and after the transition of 300 MHz of C-band spectrum. The CBA member companies will retain all current C-band customer services and maintain the value and capability of C-band video distribution neighborhoods. In addition, the companies have provided updated, specific transition plans to their largest customers.

The CBA is committed to taking steps such that satellite operator customers enjoy continued access to 200 MHz of C-band satellite spectrum in an interference-free environment before, during, and after the transition of 300 MHz (including the 20 MHz guard band) of C-band spectrum. To that end, the CBA makes the following commitments:

- If deemed necessary by the CBA to clear 300 MHz, specific technology choices (e.g., HEVC, AVC), operating parameters (e.g., channel bit rates or modulation roll-off), and the selection of



equipment manufacturers for the purpose of clearing the 300 MHz shall be at the sole discretion of the programmer in every case;

- The CBA shall be fully responsible for all costs necessary to implement the reallocation of 300 MHz of spectrum, including, but not limited to, costs related to technology upgrades (e.g., HEVC, encoding systems, IRDs) for those customers identified by the CBA for such upgrades, antennas, filters, systems design and integration, and logistics, including payments to third-party service providers if needed;
- The CBA shall submit in the record of this proceeding an overall customer-anonymized fleet loading plan, a firm commitment to launching and deploying certain replacement satellites and the estimated dates by which such satellites will be in service, an updated customer commitment letter for those customers identified by the CBA for technical upgrades, and a transition plan describing how the transition will unfold and providing estimated costs and timelines;
- The transition plan will require the CBA to fulfill all deliverables necessary to implement the reallocation of 300 MHz of spectrum in accordance with agreed-upon timetables;
- The CBA agrees that the FCC must retain oversight and enforcement authority over the transition to ensure that the transition is prompt and that the CBA lives up to its customer commitments, and that use of the spectrum occurs in accordance with all applicable FCC rules and policies;
- The CBA shall make available to customers and their affiliates, at the CBA's cost, facilities at one or more of the grandfathered TT&C/Gateway locations, as needed, to downlink any transmissions in the 300 MHz cleared spectrum from satellites viewable from those TT&C/Gateway locations that customers or affiliates require access to in order to have comparable service as today. The CBA shall, at the CBA's cost, backhaul those downlinked transmissions to the customer or affiliate location that is currently downlinking those transmissions;
- The CBA continues to work with the FCC, C-band users, and other parties to develop technical solutions that allow for mobile production of C-band contribution and the downlinking of C-band confidence transmissions in 5G congested areas;
- The CBA commits to continue working with the FCC and industry stakeholders to develop rules for terrestrial 5G operations that minimize the likelihood that 5G transmissions will individually or in the aggregate create harmful impairments to FSS earth stations or to the services they convey. The CBA further commits to working with the FCC and industry stakeholders to develop effective interference prevention, detection, mitigation and enforcement procedures and rules for the benefit of satellite operator customers. The CBA further commits to working with customers to identify, document and attempt to resolve instances of harmful interference impacting video quality as may be relevant to enforcement efforts;
- The CBA continues to commit to its previous representations in the record of this proceeding concerning customer and user protections and interference rules.

October 29, 2019

VIA ELECTRONIC FILING

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

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

Dear Ms. Dortch:

The undersigned parties have a deep interest in a timely, fair process for reallocating C-Band spectrum for terrestrial mobile use. As a result of ongoing discussions, and in an effort to highlight areas of consensus, we submit the attached set of principles upon which we agree regarding a reasonable process for auctioning off terrestrial rights to C-Band spectrum. These principles should help guide an auction, regardless of the ultimate outcome of this proceeding, as the Commission moves to repurpose this critical piece of mid-band spectrum as quickly as possible.

While we may not agree on all facets of how this proceeding should be resolved, there is strong consensus that all potential, qualified bidders should be welcome to participate and have clarity on the rules and procedures that will govern the sales and licensing process. Openness and transparency are critical to achieving a successful transition for all interested parties. We urge the Commission to use the principles set forth below to give certainty to interested stakeholders through a swift resolution to this proceeding.

Sincerely,

_____/s/
Hank Hultquist
Vice President of Federal Regulatory
AT&T Services, Inc.

_____/s/
Ron Smith
President and CEO
Bluegrass Cellular

_____/s/
Peter Pitsch
Vice President
Advocacy & Government Relations
C-Band Alliance

_____/s/
John C. Nettles
President
Pine Belt Wireless

Marlene H. Dortch
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_____/s/_____
Grant Spellmeyer
Vice President - Federal Affairs & Public Policy
U.S. Cellular

_____/s/_____
William H. Johnson
Senior Vice President -- Federal
Regulatory & Legal Affairs
Verizon

Attachment

FCC Guidance for a 3.7-4.2 GHz Auction

- Prior to any spectrum auction, the following should take place:
 - Auction procedures made public and transparent with FCC oversight
 - Reasonable bidder education efforts held consistent with prior spectrum auctions
- Joint bidding agreements prohibited and ownership and agreement disclosures made public. The auction should be open to all qualified bidders consistent with FCC practice
- The band plan should consist of at least 280 MHz of interoperable spectrum, divided into 20 MHz blocks based on PEAs
- To ensure an efficient auction that is familiar and fair to all participants:
 - The bidding process must be transparent:
 - No sealed bids at any point in the auction
 - No combinatorial or package bidding
 - Release of bid data round-by-round consistent with recent FCC auction information practice
 - Use of the FCC's limited information disclosure procedures to safeguard against anticompetitive conduct
 - The auction should include all proposed cleared spectrum regardless of clearing timing or tranche
 - The auction should use a multi-round ascending clock auction format conducted by an experienced and qualified auctioneer that offers substantially the same online functionality as FCC Auction 102
 - The clock phase should be followed by a traditional assignment phase with substantially the same bid assessment formula as Auction 102
 - The auction should be conducted expeditiously with a speedy rounds-per-day schedule to ensure rapid completion
 - The auction should have enforceable penalty provisions to address winning bidder or seller defaults following completion of the auction
 - An assignment phase, with a format similar to Auction 102, shall determine final block assignments. The algorithm for final assignments shall ensure contiguity of block assignments for any bidder winning multiple blocks in a license area. Provisional assignment of spectrum cleared in any early tranche shall be made proportionally based on total blocks with winning bids, with licensees moving to final assignment positions at the end of the transition period, when all spectrum is available.
- All applicants must agree to be bound by the FCC's prohibited communication rules, including reporting obligations to, and enforcement by, the FCC
- A reasonable aggregate reserve price should be set that will ensure that the sale of repurposed spectrum will generate enough revenue to (1) recoup the costs of conducting the auction, and (2) fairly compensate incumbent satellite providers authorized to use the C-Band as well as effectuate reasonable relocation/reconfiguration/modification costs for

themselves and all C-Band earth station users (including reimbursing programmer costs associated with procuring, testing, and installing new encoders)

- A portion of auction proceeds, in excess of those needed to cover the costs for the auction and the transition of the spectrum, should be returned to the U.S. Treasury
- The auction process must be completed expeditiously, with all spectrum subject to the auction cleared for use by winning bidders with any early tranche of spectrum cleared within 18 months of the FCC order and all spectrum cleared within 36 months from the time of the auction. Auction final payments should be reasonably timed to balance the provision of sufficient funding for clearing the C-Band with enforceable penalties for lack of timely completion.