



**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of:	)	
	)	
Expanding Flexible Use of the	)	GN Docket Nos. 18-122, RM-11791,
3.7 to 4.2 GHz Band	)	RM-11778
	)	

**Comments of the North American Broadcasters Association**

The North American Broadcasters Association (NABA)<sup>1</sup> respectfully submits the following comments in response to the Commission’s Public Notice, “Wireless Telecommunications Bureau, International Bureau, Office of Engineering and Technology, and Office of Economics and Analytics Seek Focused Additional Comment in 3.7–4.2 GHz Band Proceeding.”<sup>2</sup> NABA urges that the Commission reject the deeply-flawed proposal by the ACA Connects Coalition (ACA Proposal) as inapposite to the preservation of cross-border trade in North America. Further, NABA continues to urge the Commission to reject any proposals for co-frequency sharing in satellite downlink spectrum as untimely.

**1. North American Regional Trade Relies on the Unique Properties of C-Band**

The economic challenges for broadcast content collection and distribution that would ensue with the major loss of C-Band spectrum proposed in the ACA Proposal are significant. While C-Band is the most important mechanism for distribution of programming to MPVDs in Canada, the U.S., and Mexico, cross-border content delivery to individual broadcast stations also happens every day when those countries’ broadcasters purchase rights for content.

For example, in Canada, up to 50% of the prime-time schedules of commercial broadcast television networks contain non-Canadian content and 95% of that content is from the U.S. In addition, there are many U.S.-based pay and specialty channels that are licensed

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<sup>1</sup> The North American Broadcasters Association (NABA) is a non-profit association of the most influential broadcasting organizations in North America committed to advancing the interests of broadcasters at home and internationally, and to identify and take action on technical, operational and regulatory issues affecting North American broadcasters. Both public and private network broadcasters in Canada, Mexico and the United States, work together to provide a common voice for the North American broadcast community. As a member of the World Broadcasting Unions (WBU), NABA creates the opportunity for its members to share information, identify common interests and reach consensus on issues of an international nature.

<sup>2</sup> Public Notice, GN Docket Nos. 18-122, DA 19-678 (July 19, 2019) (Public Notice)

for delivery in Canada or partner with Canadian license holders and distributors. This programming is delivered daily via C-Band and, in the case of live sports, is delivered in real time to Canadian and Mexican networks. Likewise, advertising is also delivered cross-border to Mexico and Canada for insertion into networks and regional programs. In other words, the economic impact of disrupting C-Band distribution will be felt across the entire North American broadcast and MVPD ecosystems. In particular, the ACA Proposal to redirect that distribution to fiber will be highly diminutive to U.S. studios who will bear unnecessary cost and lose flexibility in product delivery to foreign customers.

A decision made in the U.S. to repurpose a portion of the C-Band spectrum currently used for the Fixed Satellite Service (FSS) content distribution would disrupt the harmonized spectrum use beyond U.S. borders – in particular, within Canada and Mexico. Regional FSS operators in Canada and Mexico would thus need to account for the change in U.S. spectrum use and modify their use in order to avoid negative service impacts, especially near the border regions. Such a modification to FSS operations in Canada and Mexico may include C-Band repurposing to reflect unilateral U.S. actions in order to restore regional harmonization of spectrum use. NABA believes that, if 200 MHz (from 3.7 to 3.9 MHz, including a guard band) of the C-Band is repurposed from FSS in the U.S., as has been proposed by the C-Band Alliance, the continued regional FSS distribution of programming in the remaining bandwidth would be difficult, including an increased risk of interference, but may be possible within Canada and Mexico. However, if a substantially greater amount of spectrum is repurposed, as ACA Connects proposes, the radio and TV FSS distribution system in the C-Band will no longer be usable.

## **2. A Repurposing of Such a Large Portion of the Band from C-Band Satellite Spectrum Will Reduce the Diversity of Voices Available**

Launching and operating satellites is an expensive proposition; costs are relatively insensitive to the bandwidth offered. That is: the cost of building and launching a satellite to orbit is about the same whether that satellite carries 500 MHz or 100 MHz of bandwidth. Similarly, the need for a satellite operator to staff and operate a control center to manage the satellite does not change with bandwidth. With these relatively fixed capital and operating costs spread over less bandwidth, the cost per capacity available for lease to generate necessary revenue can be expected to increase. It can be expected to jump dramatically under the ACA Proposal to repurpose 370 to 400 MHz of the band. While broadcasters presently provide a diversity of content spread over the 500 MHz of C-Band, NABA believes that many of those voices will fall silent in the face of dramatically increased satellite distribution costs.

A substantial increase in the number of C-Band satellites serving North America will have detrimental consequences for broadcasters and MVPDs. While the increased costs to satellite operating companies of launching and maintaining many more satellites in orbit seem obvious, the increased cost to end-users of modifying the associated ground

segment may not be so obvious. Presently, broadcast content contribution and distribution are concentrated on a few satellites that are clustered in “neighborhoods” in the orbital arc. This arrangement allows for most end-users to have one or a few earth stations. Spreading that content out over many satellites across the orbital arc would require end-users to install many additional new earth stations in thousands of locations. In many cases, end-users will not have lines of sight to all these new satellites, and will not have the real estate (including roof rights) available to construct additional dish antennas. The costs to acquire the necessary additional real estate will be prohibitive in many cases. The economics and the technical feasibility of such a dramatic expansion of the ground segment are impractical and certainly not considered in the ACA Proposal.

### **3. Fiber Should Be Considered Only an Effective Complement to C-Band, Rather Than a Full Replacement**

While the ACA Proposal envisions fiber as a replacement for C-Band, there are several reasons why this solution is not feasible. The ACA Proposal contemplates creating a funding pool to compensate for the transition from C-Band to fiber but the actual costs for this transition are unknown and the estimates provided will almost certainly be inadequate. Even assuming that the costs of a fiber transition are fully quantified and covered under the ACA Proposal, it is unknown to what extent the ACA Proposal would cover C-Band transition to fiber in regions outside the U.S. Further, the reliability of fiber networks depends on the availability of redundant network components, which would add substantial cost to the transition and which are also currently unquantified. While a diversity of networks and providers may exist in large urban centers, the lack of such diverse systems in small and rural communities threatens the availability and stability of programming to a large segment of the North American population. Finally, it is expected that transitioning C-Band to fiber will take a long time, which is at odds with the Commission’s desire to move quickly in the face of pressure to transition to 5G. There are simply too many unknowns in the ACA Proposal to justify deployment of fiber as a universal satellite replacement. At the present time, NABA believes that it would be best to continue to advocate for fiber’s use as an effective terrestrial option to augment and complement C-Band transmission as is done today.

### **4. Co-Frequency Sharing with Satellite Should not be Permitted**

NABA continues to urge the Commission to reject proposals to allow shared co-frequency use in the portion of the C-Band that is not reallocated for wireless use in this proceeding. Additional uses, including point-to-multipoint in the spectrum used for satellite downlinks, will complicate an already complicated transition and will practically preclude new or modified C-Band operations, which are an important component of broadcast distribution systems. There are occasional satellite failures and interference problems, which necessitate the flexibility that full-band “ALSAT” protection provides. As we have already seen in the U.K., any sharing arrangement in FSS downlink spectrum necessitates

eliminating that flexibility by effectively “freezing” the operating parameters (specifically, transponder frequencies and satellites to those presently in use, with future changes necessitated by satellite failures or other reasons becoming impossible due to the need to protect terrestrial uses.<sup>3</sup>

## **Conclusion**

It is imperative that the Commission protect the C-Band downlink spectrum from the potential of significant harm to existing satellite users. For the reasons stated herein, NABA urges the Commission to protect the present and future use of FSS in C-Band to distribute content throughout North America by limiting the amount of spectrum reallocated for terrestrial use. Any newly introduced service in repurposed C-Band spectrum should have operational requirements that are determined by rigorous and careful interference testing and conditions that protect incumbent users. And, any repurposing of C-Band spectrum from FSS should carefully consider cross-border implications.

While North American broadcasters make use of fiber where it is available, it is not a substitute for C-Band as a reliable distribution system. NABA urges the Commission to decide that new services should not operate unrestricted in any portion of the C-Band that becomes repurposed from FSS, nor should they operate co-frequency in any portion of C-Band that remains for use by FSS. Because FSS content distribution depends on a carefully designed network requiring a clean RF environment, any decision to repurpose C-Band spectrum from FSS must include a phased transition plan where each successive phase is contingent upon meeting milestones and commitments of a preceding phase. A pragmatic phased approach would benefit all stakeholders.

Respectfully submitted,



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<sup>3</sup> See: [https://www.ofcom.org.uk/consultations-and-statements/category-1/enabling-opportunities-for-innovation?utm\\_medium=email&utm\\_campaign=Airwaves%20opened%20up%20to%20support%20wireless%20revolution&utm\\_content=Airwaves%20opened%20up%20to%20support%20wireless%20revolution+CID\\_78934390d35feef9c625ce562f5b46a6&utm\\_source=updates&utm\\_term=following%20a%20decision%20by%20Ofcom](https://www.ofcom.org.uk/consultations-and-statements/category-1/enabling-opportunities-for-innovation?utm_medium=email&utm_campaign=Airwaves%20opened%20up%20to%20support%20wireless%20revolution&utm_content=Airwaves%20opened%20up%20to%20support%20wireless%20revolution+CID_78934390d35feef9c625ce562f5b46a6&utm_source=updates&utm_term=following%20a%20decision%20by%20Ofcom)