

# CBA Proposes Clearing 300 MHz of C-Band Spectrum – Fact Sheet



## **The CBA Increases Its FCC Proposal to 300 MHz for Spectrum Repurposing in the U.S.**

In 2018, the C-Band Alliance (CBA) filed a proposal with the FCC to voluntarily clear a significant part of the C-band spectrum in the continental U.S., which is currently used to provide nearly 120 million American households with TV and radio content. The original proposal focused on repacking existing services in their current format to the upper portion of the band.

Over the last several months, the CBA, in consultation with industry experts and customers, has analyzed, applied, and tested compression software and related signal enhancements, which can improve the efficiency of transmitting broadcast video signals over satellite. Having confirmed customer willingness to deploy these techniques, the CBA now proposes to clear 300 MHz (inclusive of a 20 MHz guard band) of the C-band in the continental U.S., or 60% of the total of 500 MHz allocated to satellite operations today, to enable a fast, nationwide roll-out of 5G.

Further enhancing its plan to clear spectrum quickly, the CBA proposes to make available for 5G use 100 MHz in 46 top metropolitan areas within 18 months of an FCC order, and 280 MHz throughout the continental U.S. within 36 months from a CBA-led auction.

## **The CBA Will Protect the Existing C-Band Video Ecosystem**

In seeking to balance the need to clear a maximum of spectrum rapidly to enable the rollout of 5G with the need to protect the existing C-band video ecosystem, the CBA has worked closely with U.S. broadcasters and programmers that serve nearly 120 million American homes via the C-band. 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 to be deployed in the future. The CBA member companies will retain all current C-band customer services and maintain the value and capability of C-band video distribution neighborhoods.

## **The CBA's Proposal is in the Public Interest of the U.S.**

The CBA and its member companies have invested significant effort in recent months toward making these improvements viable. They also have engaged in extensive discussions with their customers to explore and accommodate each customer's specific needs. The CBA's proposal, grounded in the rapid application of technological innovation in the video transmission space, will benefit both the customers who will receive next-generation technologies and the mobile phone operators who will be able to deploy 5G services in a short timeframe. Finally, the speed with which the CBA's plan will enable the rollout of 5G will allow the U.S. to begin experiencing the economic benefits 5G is expected to bring.

## **The CBA's New Proposal Is Enabled by Advanced Compression Technology and Other Techniques**

Advanced video compression technologies increase the efficiency of video transmission via satellite.

- Video signals by design carry redundant information. The Advanced Video Coding (AVC) and High Efficiency Video Coding (HEVC) technologies decrease the amount of information that needs to be transmitted by reducing the redundant information in the pictures, without degrading the overall video quality.
- A compression upgrade requires changes on both the encoder and the cable headend decoder via the installation of new hardware and/or software. Because the CBA will cover all costs associated with hardware and software upgrades, the C-band spectrum clearing proposed by the CBA will benefit content providers by delivering the latest video compression technologies at no cost to them.

Beyond compression upgrades, further efficiency in spectrum use can be achieved through additional techniques.

- Satellite modulation and coding improvements will be combined with improved coverage of the continental U.S. on the new satellites that Intelsat and SES will launch—if the CBA proposal is adopted—to improve spectrum efficiency and signal quality.
- The CBA will work with customers to encourage them to provide a single High Definition signal to a receive site, which will free up significant satellite transponder capacity by eliminating simultaneous satellite transmissions of the same video signal in several different formats (i.e., SD MPEG-2, SD AVC, HD MPEG-2, HD AVC).

While the new proposal will be more complex to implement, the C-Band Alliance will serve as the transition coordinator, bringing additional efficiency to the process.

### **Q&A**

#### **Is compression technology taking a risk with the content delivery ecosystem?**

- No. Many of the largest users of satellite capacity adopt advanced compression technologies over time as part of their technology enhancements. The CBA proposal merely accelerates those decision points, made possible by the CBA's agreement to fully compensate the ecosystem for its compression costs.

#### **What is the cost estimate to clear the spectrum?**

- The total is now estimated at \$2.5 billion to 3.5 billion.

#### **How many satellites will be built to clear 300 MHz?**

- The new proposal requires eight satellites in total to supplement the capacity in the continental U.S. arc serving the existing media neighborhoods.



*The C-Band Alliance (CBA) is composed of leading global satellite operators Intelsat (NYSE: I), SES (Euronext Paris: SESG), and Telesat. The role of the CBA is to implement the safe and efficient clearing and repurposing of mid-band spectrum in the U.S., accelerating the deployment of 5G services and innovation, serving all Americans. The CBA is designed to act as a facilitator as described in the companies' breakthrough, market-based proposal to clear a portion of C-band spectrum under a U.S. Federal Communications Commission (FCC) proceeding. Follow our mission...visit [www.c-bandalliance.com](http://www.c-bandalliance.com). Follow us on Twitter at [@cbandalliance](https://twitter.com/cbandalliance) and on LinkedIn at [C-Band Alliance](https://www.linkedin.com/company/c-band-alliance).*

