



WBU Position on the Continued Use of C-Band Spectrum for the Fixed Satellite Services

• ABU

ASIA-PACIFIC BROADCASTING UNION
- Kuala Lumpur, Malaysia

• AIR/IAB

INTERNATIONAL ASSOCIATION OF
BROADCASTING
- Montevideo, Uruguay

• ASBU

ARAB STATES BROADCASTING UNION
- Tunis, Tunisia

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- Geneva, Switzerland

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NORTH AMERICAN
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- Toronto, Canada

C-Band¹ spectrum for Fixed-Satellite Service (FSS) has been in widespread use around the world for approximately fifty years. It has become the international work-horse for the distribution of Television, Radio and other content by broadcasters and other media industries, with millions of professional downlinks and corresponding uplinks in use nationally and internationally and over one hundred million C-Band TV receive only antennas in use worldwide (including B2B, internet and direct-to-home satellite)².

While improvements in satellite technology have made the use of C-Band spectrum by broadcasters more efficient and effective for both content collection and distribution, there has been real C-Band traffic growth over the years which makes this spectrum as crucial to broadcasters today as it was fifty years ago.

C-Band spectrum is unique in that both uplinks and downlinks can be engineered to provide long-term, high-availability, high-reliability service, even with links compromised by adverse atmospheric conditions, noise or interference, as compared with other FSS spectrum options. Neither fibre connectivity nor Ku-Band spectrum provide equivalent performance or the proven reliability of C-Band spectrum. Further, C-Band spectrum provides critical newsgathering services for broadcasters in times of severe weather (hurricanes, typhoons, etc.) where alternate technologies (fibre, Ku-Band, etc.) cannot operate. C-Band is critical for satellite services not only in in tropical regions but also now in the northern hemisphere where raining statistics have dramatically worsened with global warming.

The recent regulatory Inquiries by the U.S. Federal Communications Commission (FCC) on the potential reallocation of some of the existing C-Band downlink allocation (for 5G services) is a concern for the members of the WBU. Given the ubiquitous use of C-Band spectrum around the world and its potential to provide new services, such U.S. regulatory activity will likely be pursued by other Administrations. Any subsequent proposals to globally harmonize the use of these frequencies above 3600 MHz for IMT, argued for on the basis of national reallocations, do not reflect the realities of global satellite service usage.

Without sufficient C-Band spectrum remaining available for broadcasters' use, existing distribution and collections systems operating both domestically and internationally may be compromised. This will be especially acute in countries with equatorial geography and high rainfall. In such cases, there are no viable FSS spectrum alternatives providing the same high levels of system performance. Some Direct-to-Home services employing C-Band in these regions will also be affected.

In addition, in the event some of the downlink C-Band spectrum is reallocated, the associated "twinned" uplink C-Band frequencies may eventually be reallocated to other services. Over time, such a reallocation might further increase pressure on the remaining uplink band, further limiting its use. In all likelihood, harm will be done to existing C-Band users and the solutions will compromise service reliability and increase the costs to the broadcast community.

The WBU contends that any consideration of reallocating C-Band spectrum is a serious issue with technical, economic and service implications. Detailed impact studies involving all stakeholders need to be undertaken to fully understand the consequences before such a reallocation takes place.

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¹ 3625 MHz – 4200 MHz downlink and 5850 MHz – 6425 MHz uplink in North America, for example.

² As per AVIA's study, AVIA being the Asia Video Industry Association, formerly known as CASBAA.