

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
Procedures to Govern the Use of Satellite Earth)
Stations on Board Vessels in the 5925-6425) IB Docket No. 02-10
MHz/3700-4200 MHz Bands and 14.0-14.5)
GHz/11.7-12.2 GHz Bands)

To: The Commission

COMMENTS OF BROADBAND MARITIME, INC.

Broadband Maritime, Inc. (“Broadband Maritime”), by its attorneys and pursuant to Section 1.415 of the Commission’s rules,¹ hereby files its comments in the captioned docket regarding procedures to govern the use of satellite earth stations on board vessels (“ESVs”). The Commission issued a Notice of Proposed Rulemaking (“NPRM”), FCC 03-286, on November 24, 2003. The NPRM was published in the Federal Register on January 22, 2004.²

I. Broadband Maritime

Broadband Maritime has been operating a network of ESVs using the 5925-6425 MHz/3700-4200 MHz band (“C-Band”) on board foreign-registered commercial ships pursuant to No. 4.4 of the Radio Regulations of the International Telecommunications Union (“ITU”) for approximately one year. The operations are controlled by hubs located in New Jersey, the state of Washington and Switzerland. All operations within 300 kilometers of the United States are controlled by the New Jersey and Washington hubs. At this time, Broadband Maritime is

¹ All references to the Commission’s rules shall be to 47 C.F.R. §§ 0.1 *et seq.*

² 69 Fed. Reg. 3056 (Jan. 22, 2004).

operating ESVs on approximately six ships. These ships are dependent upon Broadband Maritime's service to plan and coordinate the loading and unloading of cargo, maintain contact between the ships and their home offices, and in general provide for voice and data communications capability for the crew for both company and personal matters.

II. ESV Licensing Issues

A. C-Band Licensing

Broadband Maritime strongly supports Commission authorization of C-Band operations. Broadband Maritime operates its ESVs exclusively in the C-Band and does not use the Ku-Band because the Ku-Band is not feasible for the types of operations provided by Broadband Maritime. Specifically, Broadband Maritime places its ESVs on ocean going commercial ships that travel to ports all over the world. Ku-Band is simply not available over most ocean areas.³ Since its availability is limited to certain coastline areas, the Ku-Band is of little use to Broadband Maritime. Nor is it practical or financially feasible for Broadband Maritime to switch to Ku-Band operations as its ESVs approach the ports in the United States. Shutting down the C-Band operation to repoint the ESV to another satellite and switch to Ku-Band would not only cause an interruption of service, but would require a person skilled in this aspect of ESV operations to be on the ship. The time period when the ship is approaching port is a very critical time for communications—and this would be the very time when the ESV would be shut down as it is switched from C-Band to Ku-Band operations.

³ ITU Resolution 902 *considering e)* states:

e) that, with respect to the bands considered in this Resolution, global coverage is only available in the band 5 925-6 425 MHz and that only a limited number of geostationary FSS systems can provide such global coverage. . . .

The ESV business is very competitive and as a result operates on thin margins. The cost of adding Ku-Band capability would include Ku-Band transponder leases, changing out the C-Band ESVs for dual band ESVs, and training crew members of each ship to learn the procedures for switching satellites. Furthermore, adding Ku-Band capability would not reduce any C-Band costs. Therefore, requiring Ku-Band operations as the ships approach port would add substantial costs with no offsetting benefits. These added costs could easily make the difference between a profitable and a losing operation.

B. Non-Coordination Approach

Because Broadband Maritime's ESVs are on ocean going commercial ships that travel all over the world, and these ships do not generally frequent particular ports, it would be very costly and therefore not practical to coordinate frequency usage at each possible port in the United States. Therefore, Broadband Maritime would need to utilize the Commission's proposed Non-Coordination Approach for C-Band licensing to the extent Broadband Maritime places any of its ESVs on United States-registered ships. Broadband Maritime supports licensing on a non-harmful interference basis for vessels 300 gross tons or larger while within 300 kilometers of the United States coastline.

However, Broadband Maritime would support a licensing term longer than the two-year terms proposed in the NPRM. There is really no need to subject ESV operators to the trouble and expense of constantly applying for license renewal. Since operations are subject to non-harmful interference and can be shut down in the event of harmful interference to FS operations, FS operators are protected. Broadband Maritime would suggest ten-year license terms. However, if the Commission's concern is the establishment of a responsible operating history by each ESV operator prior to the issuance of a ten-year license, perhaps the first license term for

each operator could be two years, the second license term could be five years, and each successive term could be ten years.

Broadband Maritime already engages in real-time tracking of vessel locations and would be willing to provide to fixed service (“FS”) operators access to real-time tracking data on a secure basis. Broadband Maritime is willing to make available 24 hours a day and seven days a week a point of contact and the names of the ESV operators associated with its network that are potentially causing interference. For competitive reasons, Broadband Maritime would be unwilling to make public the list of vessels on which its ESVs are located, but would be willing to supply such information to FS operators on a protected, confidential basis. Similarly, Broadband Maritime would be willing to make available to FS operators on a secure basis the frequencies, bandwidths and satellites that its ESVs are using. It is not feasible to provide the itinerary of each vessel, as the itineraries of commercial vessels are constantly changing to adjust to shipping demands. However, as mentioned earlier, Broadband Maritime is willing to make available to FS operators its real-time tracking data on a secure basis. Broadband Maritime supports providing the various data discussed in this paragraph to a third party point of contact for the FS operators, provided that such information is securely protected as confidential proprietary business information. In particular, Broadband Maritime needs absolute protection from such information falling into the hands of competitors or potential competitors.

As mentioned earlier, Broadband Maritime controls all of its ESV operations within 300 kilometers of the United States from hubs in New Jersey and Washington. Broadband Maritime can thus ensure that its operations comply with all of the regulations and policies of the Commission. Broadband Maritime is capable of shutting down any ESV from its hub location. In addition, crew members of each ship are trained to shut down an ESV in the event of an

emergency, and ESVs automatically shut down if they lose their lock on the satellite. Therefore, there are multiple ways to protect FS operations and other satellite operations in the event of a malfunction or harmful interference.

Broadband Maritime supports the NPRM proposal for the ESV and FS points of contact to attempt to resolve interference issues prior to the FS operator filing a complaint with the Commission. The atmosphere for resolving an interference problem is more friendly and conducive to resolution if a complaint is not on file with the Commission. Broadband Maritime understands the need to cease operations on a particular frequency at a particular location while an interference claim is being resolved. However, it would be unfair and potentially injurious to the ESV operator's business if the ESV operator were required to shut down in the face of a frivolous complaint of interference. Therefore, the Commission should permit an ESV operator to continue operations when in the best reasonable judgment of the ESV operator the complaint is frivolous.

C. Licensing of Antennas and Use of Satellites

Broadband Maritime supports CSAT licensing for ESV networks. It agrees with the NPRM proposal for a lead application that would identify the scope and nature of the service to be provided and gives the technical details of each representative type of small antenna that would operate within the network.

The Commission rules call for routine licensing of C-Band antennas that are 4.5 meters in diameter or larger. Since ESV C-Band antennas are typically 2.4 meters in diameter,⁴ and Annex 2 to ITU Resolution 902 permits 2.4 meter antennas in the C-Band, Broadband Maritime

⁴ The limited availability of deck space on board any ship makes the use of 4.5 meter antennas impractical for any ESV. Broadband Maritime is unaware of any ESV greater than 2.4 meters in diameter.

supports licensing of 2.4 meter antennas, provided that the applicant can provide a technical demonstration that transmissions using the 2.4 meter antenna will not cause harmful interference to adjacent satellites. Broadband Maritime proposes that a technical demonstration that the antenna and other technical specifications comply with Annex 2 of ITU Resolution 902 should be sufficient to demonstrate no harmful interference. The technical requirements of Annex 2 were adopted by the ITU after considerable vetting to ensure that ESV operations would not cause harmful interference to adjacent satellites. Therefore, compliance with Annex 2 should be enough for the Commission to conclude that there will be no resulting harmful interference to adjacent satellites.

Broadband Maritime supports ALSAT authority. ESV operators need the flexibility to renegotiate transponder leases and change satellite providers as necessary so that they can obtain transponder capacity at market prices. Requiring ESV operators to file an application every time they want to change satellites is burdensome and the time delays would make it difficult to obtain transponder capacity at the best available price. So long as the ESV operator can demonstrate that its antennas will not cause adjacent satellite interference, there is no reason why ALSAT authority should not be available.

III. Vessels of Foreign Registry

The NPRM seeks comment on

[W]hether U.S.-licensed ESV hub operators should only be authorized to communicate with ESVs on (a) U.S.-licensed vessels in the Ku-band and C-band (either under the Coordinated or Non-Coordinated Approach); (b) vessels of foreign registry that are licensed by that nation, that have been the subject of an agreement between that nation and the United States per the WRC-03 decision, and that are real-time tracked; and (c) vessels of foreign registry that have been authorized by foreign administrations to operate on a strictly non-harmful interference basis within the minimum distance, provided that all of the Commission's technical rules are met where there is no bilateral agreement with a particular foreign nation.

NPRM at para. 100.

Broadband Maritime supports the above proposal with the following modifications and clarifications. There are a number of nations that do not prohibit ESV operations on board its vessels of registry, provided that the ESV operations comply with all ITU requirements. In other words, so long as the ESV operations comply with ITU Resolution 902 and its Annexes, operation is not prohibited by certain countries even though no license is issued. This situation seems to be covered by alternative (c) in the quoted portion above, provided that the operations comply with the Commission's technical rules. To the extent that the Commission permits operations using antennas that comply with Annex 2 of Resolution 902 with no further requirements, this would not be a problem.

However, as discussed above, ESVs typically utilize 2.4 meter antennas for C-Band operations, and the Commission routinely authorizes antennas with diameters of 4.5 meters or greater in the C-Band and requires a showing for antennas that are less than 4.5 meters in diameter. *See* Section 25.212(d) of the Commission's rules. If the Commission decides to require that an ESV operator must make a non-interference showing acceptable to the Commission in order for the ESV operator to be able to utilize 2.4 meter antennas in the C-Band, then the Commission would need to establish a procedure whereby an operator with ESVs on board foreign ships can also make a showing to the Commission in order to obtain consent to utilize 2.4 meter antennas.

Such a procedure would not be inconsistent with Section 306 of the Communications Act of 1934, as amended (the "Act"),⁵ because it would not be considered the issuance of a license. Rather, it would be a Commission acknowledgment that the use of the 2.4 meter antenna would

⁵ 47 U.S.C. § 306.

not be prohibited under the Commission's authority pursuant to Section 306 to enact ". . . regulations designed to prevent interference. . . ." In other words, rather than issuing a license (which the Commission is not authorized to do pursuant to Section 306 of the Act), the Commission would simply be making a finding that an operator's use of 2.4 meter antennas for C-Band use on foreign vessels within 300 kilometers of the coastline is not inconsistent with the Commission's regulations and requirements designed to prevent interference. Of course there would be no need for such a procedure if the Commission were to make a general finding permitting the use of all ESV antennas that comply with the technical requirements of Annex 2 to ITU Resolution 902.

The Commission is also proposing to permit operations of ESVs on foreign ships within 300 kilometers of the United States under alternative (b) above if the ESVs are licensed by the foreign nation and are the subject of an agreement between that nation and the United States. That alternative is also too restrictive if read literally, but would be workable with modification. Specifically, as mentioned earlier, there are countries that do not license ESV operations on board ships registered to the country, but do not prohibit such operations if they comply with ITU requirements. In addition, Annex 1 of ITU Recommendation 37 specifically contemplates that the ESV licensing administration *or the license holder* may contact the concerned administration to work out the agreements necessary for the operation of ESVs within the minimum distance (300 kilometers in the case of C-Band) of the territory of the concerned administration. This recommendation was adopted because of concerns expressed that certain administrations that register ships (in other words certain licensing administrations) may not have the inclination or the resources to engage in the discussions necessary to reach agreements with the concerned administrations.

By providing the option to ESV operators to work out agreements directly with the concerned administrations (without involvement by the ESV operator's licensing administration), Recommendation 37 resolves this problem. To buttress the authority of the concerned administrations, Section 10 of Annex 1 to ITU Resolution 902 specifically provides that concerned administrations have the authority to “. . . request the ESV to comply with such terms or cease operation immediately. . .” when ESVs operating within the minimum distance fail to comply with the requirements of the concerned administration. Moreover, Section 9 of Annex 1 resolves the logistical issues by requiring each ESV operator to provide to the concerned administration a point of contact for the purpose of reporting interference problems. In other words, Annex 1 of ITU Resolution 902 specifically requires operators of ESVs on foreign ships to provide their contact information to the concerned administration and provides the concerned administration with the authority to order the shut down of any ESV causing harmful interference within the minimum distance.⁶ Therefore, alternative (b) should be revised to permit operation of ESVs on:

(b) vessels of foreign registry whose operations (i) comply with the technical requirements of Annex 2 to ITU WRC-03 Resolution 902, (ii) are not prohibited by that nation, (iii) have been the subject of an agreement between either that nation or the ESV operator and the United States per the WRC-03 decision, and (iv) are real-time tracked. . . .

IV. Conclusion

Broadband Maritime, Inc. strongly encourages the Commission to adopt regulations for the operation of ESVs in the C-Band on a non-coordinated non-interference basis and that provide a mechanism for operators of ESVs on board foreign ships that comply with the

⁶ In addition, in instances where the ESV operator has its hub located in the United States, the Commission has licensing authority over the hub earth stations and can order the hub operator to shut-down any ESV controlled by that hub.

technical requirements of ITU WRC-03 Resolution 902 to operate within 300 kilometers of the United States coastline. In particular, Broadband Maritime, Inc. urges that the Commission routinely authorize operation of ESVs in the C-Band with 2.4 meter diameter antennas that are in compliance with the technical requirements of Annex 2 to ITU WRC-03 Resolution 902.

Respectfully submitted,

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