

ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Allocation of the)
219-220 MHz Band for Use by)
the Amateur Radio Service)

ET Docket No. 93-40
RM-7747

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To: The Commission

PETITION FOR RECONSIDERATION

Fred Daniel d/b/a Orion Telecom (Orion), by his attorneys, respectfully requests that the Commission reconsider its Report and Order (FCC 95-113 Released March 17, 1995) (Report and Order) in the above captioned matter. In support of its position, Orion shows the following.

The Geographic Separation Adopted Is Insufficient To Prevent Harmful Interference

The geographic separation standard chosen by the Commission was inconsistent with the defined nature of the proposed Amateur service. The Commission repeatedly made clear its intention that Amateur activities would be permitted on only a secondary basis to Automated Maritime Telecommunications System (AMTS) operations. However, the Commission failed to adopt rules which are sufficient to support its determination that Amateur activities shall be secondary to AMTS operations.

The Commission expressed the belief that Orion's "proposed notification distance of 575 miles is excessive and unnecessary," Report and Order at para. 30. However, in the

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next sentence the Commission acknowledged that there were known circumstances under which a lesser separation would result in interference between Amateur and AMTS operations. If Amateur use of the 219-220 MHz band is to be secondary to AMTS operations and if AMTS operators are to be able to rely on interference-free operation, then, logically, the Commission should adopt rules which are consistent with its intention and which are adequate to protect AMTS operations under all reasonably foreseeable propagation circumstances. To assure that AMTS operations do remain primary to Amateur activities under all conditions of which the Commission is currently aware, the Commission should reconsider its action and should adopt the geographic separation standard which Orion proposed, because Orion's proposal is the only one of record which can reasonably be said to be sufficient.

The issue of geographic separation between Amateur and AMTS operations goes to the heart of the instant proceeding. Orion acknowledges that spectrum shortages exist for Amateurs, but the Commission appears not to have analyzed sufficiently the geographic distribution of the demand for additional spectrum. The Commission may take administrative notice that the greatest demand for additional spectrum is in urbanized areas. Of the nation's 100 most urbanized areas, the following 38 are within 50 miles of a coast, or are within 50 miles of the Mississippi/Missouri/Ohio River system:

New York	Los Angeles	Philadelphia	Boston
San Francisco	Washington	Houston	St. Louis
Miami	Baltimore	Minneapolis	San Diego
Seattle	Tampa	Cincinnati	Kansas City
San Jose	New Orleans	Portland	Hartford
Memphis	Providence	Bridgeport	Norfolk

New Haven	Honolulu	Jacksonville	Worcester
Wilmington	West Palm Beach	Tacoma	Mobile
Charleston	San Juan	Davenport	Jackson
Newport News	Corpus Christi		

Any one of these major metropolitan areas is so large and so well known that it is not necessary to give the name of the state (or states) within which each lies to recognize the area and its size. The urbanized parts of seven of these major cities are not even confined to one state, but spill across two or more state lines. The above listing shows that, of the Top 15 urbanized areas, 11 are coastal or near a coast or are on the major inland waterway.

The significance of the coastal and river-hugging nature of the nation's major urban areas is that the relief which the Report and Order would appear to provide for Amateurs is unavailable where relief is said to be needed most. Stated another way, the Commission's action was not reasonable because it would not meet the objectives stated at paragraph six of the Report and Order.¹ The Commission's action will not relieve the congestion that exists in the most populous areas of the nation, and will not provide a regional or nationwide network that can be used for emergency and national defense communications purposes.

¹ At paragraph six of the Report and Order the Commission stated that its action would serve the public interest by:

- 1) relieving congestion that exists in the 222-225 MHz band in certain geographic areas; 2) encouraging the development and implementation of a regional and/or nationwide digital message forwarding system network that can be used for emergency and national defense communications purposes; 3) facilitating connection of local packet nodes to form such regional and nationwide networks; and 4) providing spectrum for exploration of new technology related to these purposes.

With particular respect to Orion's AMTS system and the major urban areas, the Report and Order provides no additional spectrum to the Amateurs of Los Angeles, Seattle, Portland, and Tacoma, because Orion is currently operating stations in those areas. Orion has already proposed additional AMTS facilities at New York, Miami, Baltimore, and Tampa, among the above-referenced major cities, as well as at other, less-populous sites. It is probably not coincidental that, of the twelve persons or entities associated with the Amateur community filing comments in the instant proceeding, six can be seen, either by their mailing addresses or by their names, to be located in areas in which the Report and Order does not provide any frequency relief.

Regardless of the geographic separation which the Commission ultimately requires, the protection of AMTS systems needs to extend to authorized remote receive sites, as well to authorized base stations. As the Commission is aware, Orion has co-located some of its AMTS base stations with Broadcast Television stations operating on Channel 13. However, the level of noise produced by the television transmitters, operating fully in compliance with the Commission's Rules, is sufficiently high that Orion must turn to the use of remote receivers, removed by several miles from the television transmitter, to be able to receive ship station signals reliably. Because it is reception of the AMTS ship station signals which are at risk from Amateur use of the band, all AMTS receivers should be protected from harmful interference by the Commission's Rules.

Orion respectfully submits that a more searching analysis of the needs of Amateurs and a more careful balancing of the needs of Amateurs and the maritime public should lead the Commission to determine that the small benefit which the Commission's action would provide to the inland Amateur community is not worth the level of risk which its action would impose on public maritime users of AMTS service along the nation's coasts and major river systems.

The Rules Adopted Are Insufficient In View Of The Acknowledged Risk

The Part 97 Rules adopted by the Commission fail to follow the factual findings of the Report and Order. Therefore, they do not provide the extent of protection to AMTS systems which the Report and Order stated would be required.

At paragraph 12 of the Report and Order, the Commission found that "we believe that by using directional antennas, frequency separation, cross polarization of signals, and other interference avoidance techniques, amateurs will be able to establish interference free operations." Since, as was made clear at paragraph 12, the Commission found that the use of directional antennas, frequency separation, cross polarization of signals, and other interference avoidance techniques would be necessary to avoid causing harmful interference to AMTS stations, it was incumbent upon the Commission to adopt rules specifying the use of directional antennas, frequency separation, cross polarization of signals, and other interference avoidance techniques.

Orion is not unmindful of the experimental and developmental nature of the Amateur service. However, when the Commission has acknowledged the necessity of certain limitations to protect primary commercial operations, the Commission would appear to be under a duty to adopt rules which will establish the limitations which are required to accomplish the intended objectives. To adopt sufficient rules, the Commission should have an adequate record to support the level of limitations that it imposes. If the record is not adequate, the public interest would not be well served by the Commission's simply disregarding the necessity of limitations.

Although the Commission did acknowledge the use of some techniques which would be necessary for Amateurs to use, the Commission failed to consider the advisability of requiring the use of type accepted Amateur equipment in the band. AMTS operators are required to use type accepted equipment to assure that their operations do not afflict other users of the spectrum. It is clear that the Commission's focus on secondary use of the band by Amateurs is on operation, rather than on design and construction of equipment, *see, e.g.*, Section IV of the Report and Order. There is much that the Amateur community may be able to contribute to development of efficient digital transmission systems, and much scientific and engineering progress in the field can be made without the necessity of Amateurs' designing and constructing transmitters. Because the band is already used for commercial Maritime communications, requiring Amateur equipment for secondary use of the band to be type accepted would provide a reasonable measure of protection for commercial users, without imposing any undue limitation on the Amateur community.

Given the Commission's factual finding regarding the necessity of directional antennas, frequency separation, cross polarization of signals, and other interference avoidance techniques, the record in the instant proceeding is not sufficient to allow the Commission to adopt the rules necessary to specify the interference avoidance techniques which all Amateur operators shall use. Until such time as the proponents of the Amateur use proposed in the instant proceeding provide the Commission with sufficient engineering data to allow the Commission to adopt rules mandating the nature and extent of the necessary interference avoidance techniques, the Commission should reconsider and reverse its action.

Rules Requiring Meaningful Notifications Are Necessary

Although the Commission recognized the necessity of Amateurs' using certain techniques to avoid interference to AMTS systems, the Rules which the Commission adopted failed to require an Amateur proposing to operate a station in the 219-220 MHz band to provide either the Amateur Radio Relay League (ARRL) or affected AMTS operators with any specific technical information. Only by requiring that certain minimum technical information be provided to AMTS operators in an Amateur's notification can the Commission make the notification requirement meaningful. In view of the Commission's finding concerning the necessity of using certain interference avoidance techniques, the Commission, at the least, should have adopted rules specifying the technical information which an Amateur operator must provide to ARRL and to affected AMTS operators.

At the least, for an Amateur operator to make a meaningful notification, the notification should be required to specify the center frequency of the proposed channel, the effective radiated power in the direction of the AMTS station, a plot of the horizontal radiation pattern of the proposed antenna, the height of the proposed antenna above ground, the height of the proposed antenna above average terrain, a description of the proposed emission, and a telephone number at which the Amateur operator can be reached at any time during the Amateur's operation of a station in the band. Without these technical parameters, Amateur operators would not be able to assess the effect of existing and proposed Amateur stations on one another and an AMTS operator would not be able to evaluate the risk of harmful interference to communications from ships. Without a reliable means of contacting the Amateur, the AMTS operator would not be able to act to request an immediate cessation of interfering transmissions.

Although the text of the Commission's Report and Order stated that "amateurs will be required to resolve immediately any complaint of interference to an AMTS station or, alternatively, to cease operation," Report and Order at para. 31, the codified Part 97 Rules which the Commission adopted failed to include that requirement. It is improbable that a substantial percentage of the Amateur community will have ready access to and actual knowledge of the terms of the Report and Order. It is far more likely that an Amateur operator will have access to the Commission's codified Rules. Therefore, to reduce the potential for a long-running disputes between an AMTS operator and an Amateur operator concerning their respective rights and responsibilities, the Commission should codify a Rule

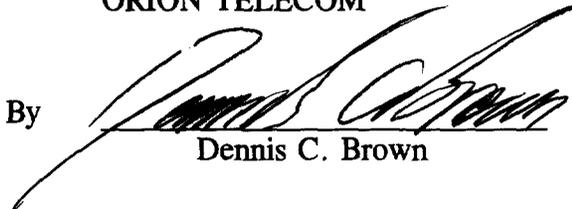
which sets forth the requirement for immediate resolution or cessation of interfering operations by an Amateur operator.

Conclusion

For all the foregoing reasons, Orion respectfully requests that the Commission reconsider its Report and Order in accord with the relief requested herein.

Respectfully submitted,
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By



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CERTIFICATE OF SERVICE

I hereby certify that on this seventeenth day of April, 1995, I served a copy of the foregoing Petition for Reconsideration on each of the following persons by placing a copy in the United States Mail, first class postage prepaid:

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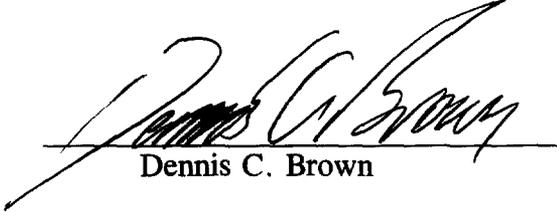
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