

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In re	)	
	)	
Application of	)	FCC File No. 0100-EX-RR-1999
Maritime Telecommunications	)	
Network, Inc. For Renewal of	)	
Experimental Authorization,	)	
Call Sign K12XEE	)	
	)	

**PETITION TO DENY APPLICATION**

The Association of American Railroads ("AAR"), and Consortium Digital Microwave System ("CDMS"), by their attorneys, hereby jointly petition the Commission to deny the above-captioned application of Maritime Telecommunications Network, Inc. ("MTN") filed on January 22, 1999.<sup>1/</sup> In support of this petition, AAR and CDMS hereby state as follows:

1. AAR and CDMS, through their members, operate point-to-point microwave communication systems in the Fixed Service in the same frequency bands in which MTN seeks renewal for its experimental authorization, i.e., 5924-6425 MHz, in the vicinity of the port and coast areas where MTN's customers operate ships equipped with MTN's shipboard earth stations ("SEs"). In this regard, AAR and CDMS both

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<sup>1/</sup> As part of its application for renewal of its experimental authorization, MTN reiterated a request that the Commission act favorably on its pending "Petition for Partial Reconsideration" of the Commission's denial on November 21, 1997, of MTN's request for authority to expand the number of Shipboard Earth Stations (SEs) from 45 to 250. In a separate filing, AAR and CDMS are opposing MTN's "Petition for Partial Reconsideration."

filed petitions to deny MTN's 32 applications for permanent authority for "Fixed" SES operation at dockside locations in 17 port cities in the U.S.<sup>2/</sup> AAR and CDMS hereby incorporate by reference their petitions to deny the MTN applications for permanent authority.

2. MTN's SES facilities currently operate pursuant to the experimental and special temporary authorizations issued pursuant to delegated authority by the Commission's staff to MTN's predecessor, Crescomm Transmission Services, Inc. (see Order released April 29, 1996, 11 FCC Rcd 10944 (OET, IB 1996), hereafter "Crescomm"). In allowing MTN's predecessor to conduct experimental operations in this band, the Commission specifically noted that "private operational fixed and commercial microwave services" operate in this band, and that these services "carry myriad public and private business communications, and cannot tolerate harmful interference from MSS earth stations." Crescomm, supra at 10948. The staff also noted specifically that "the mobile nature of MSS stations makes it extremely difficult to prevent harmful interference and to identify the interference source," noting in particular "the potential for harmful interference from the shipboard uplink transmissions to fixed stations on land." Id. at 10949. To ensure that the MTN operations protect existing users in the band, the Commission imposed a requirement "that the MSS applicants cooperate in establishing interference assessment and prevention procedures." Importantly, the grant was conditioned upon those requirements. Id. at 10949.

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<sup>2/</sup> AAR and CDMS Petitions to Deny, filed on December 18, 1998 and March 5, 1999 (File Nos. SES-LIC-19980911-01272, et al. seq.) Copies of the March 5 Petitions are attached hereto as Attachments A and B.

3. Experimental authorizations are, of course, secondary in nature, which means that they may not cause interference to primary stations in the band. In order for that prohibition to be meaningful, it is necessary that interference from the MTN ESV operations be identifiable. Given the moving nature of the ship-based transmitters, this is not easily achieved, as has been recognized by the Commission previously. In its applications for permanent authority and in its "Petition for Partial Reconsideration," MTN claims that there have been "no reports of harmful interference" due to MTN's operations.<sup>3/</sup> However, this is a hollow claim because it is virtually impossible to detect whether or not SES operations are responsible for interference events unless the FS system operators know in advance where the ships will be and when they will be there. When a moving ESV transmitter causes interference to a Fixed Service link, the FS operator has no recourse unless it can be detected or identified as the source of the harmful interference.<sup>4/</sup> The ESV transmitter moves on, never to be identified as the source of the harmful interference.

4. FS interference events have occurred to licensees in the 5924-6425 MHz and at several coastal and port locations during the previous experimental license term. When reported to equipment vendors, these events have been found not to be due to internal causes such as equipment failure, mis-installation, or emissions from

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<sup>3/</sup> See, e.g., MTN Petition for Partial Reconsideration in File No. 5633-EX-PL-97, filed December 19, 1997, at 3.

<sup>4/</sup> This is because the FS operator would have to shut down his transmitter in order to "listen" with the receiver to ascertain the source of the interfering signal. Obviously, railroad, public safety and other critical operations cannot be shut down for those purposes.

collocated facilities or nearby fixed sources. However, for reasons explained below, it was not possible to identify the actual sources of the interference.

5. Recent events have come to light indicating that MTN has not abided by the requirements and conditions imposed in the initial grant to its predecessor, Crescomm and that it has no intention of doing so in the future. Efforts by the railroad industry to obtain information deemed critical for purposes of identifying ESV operations as the source of interference events have not succeed. See exchange of correspondence between counsel for AAR and counsel for MTN, dated February 8, 1999, March 4, 1999 and March 5, 1999 (attached to AAR's March 5 Petition to Deny; see Attachment A hereto). In order to appreciate the importance of the information sought by AAR, it is necessary to understand the nature of Fixed Service operations and the manner in which a particular interference source is identified. Typically, when a point-to-point microwave link ceases to operate properly, the first procedure is to check all equipment to ensure that the outage is not caused by an equipment failure. Often this will involve contact with the equipment vendor (or vendors). If all of the equipment checks out as satisfactory, then the microwave operator undertakes a search for an external interference source. Of course, this involves shutting down FS operations so that the FS operator can "listen" for the interference source with a spectrum analyzer. During this time, routine operational transmission on the link must cease which, in the case of the railroads, translates directly into train stoppages and train delays, and, in the case of off-shore petroleum and pipeline operations, translates directly into compromised operational safety. Only after a period of such monitoring can identification of an

external interference source occur, following which the microwave operator will either contact the frequency coordinating organization or the FCC to address and resolve the interference problem.

6. The challenge of the foregoing procedure is exacerbated greatly if the source of the interference is mobile in nature. Because of the mobility of the SES terminals, a shipboard transmitter in the 6 GHz band coming into a port under very low speed may be the cause of a nearby microwave link outage today, only to be completely undetectable tomorrow because the vessel would have moved to another location. Under these circumstances, it is absolutely vital for the FS community to be knowledgeable of the schedules and routes of all SES-equipped vessels in advance so that they can better correlate link outages with the presence of SES-equipped vessels in the vicinity. In the absence of such information, any such correlation is impossible, and, therefore, any claim by MTN that it has not caused any interference to existing FS operations is utterly meaningless.

7. MTN has essentially denied AAR's request for such information, claiming that assembling it would be "time consuming, burdensome and not productive."<sup>5/</sup> MTN's proposed solution is for the FS operators to provide information to MTN if they are experiencing unidentified sources of interference, whereupon MTN claims that it will be "willing to investigate to see if any of the SES's have caused such interference."<sup>6/</sup> Of

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<sup>5/</sup> MTN Consolidated Opposition to Petitions to Deny, filed March 18, 1999, at 29.

<sup>6/</sup> Id.

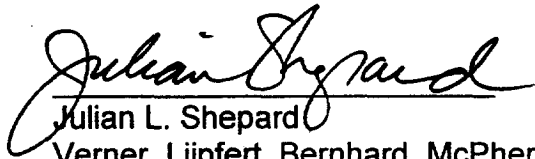
course, MTN has absolutely no incentive whatsoever to admit that its operations were the cause of interference, and its proposed solution is tantamount to appointing the fox as the guardian of the chicken coop. In this regard, MTN appears to be unaware that, in its capacity as an experimental licensee, its operations are secondary and that it bears the burden of cooperation with primary status licensees and the burden of proof with respect to its experiment, i.e., that it can conduct its operations without causing harmful interference to existing users. For MTN to complain that these requirements are "unreasonably burdensome" and "onerous" constitutes clear and convincing evidence that MTN is not entitled to hold an experimental license issued by this agency. Accordingly, its renewal application should be denied.

8. A final reason why the MTN experimental license should not be renewed is that the 100 km restriction established in paragraph 11 of the Crescomm decision is inadequate for protecting Fixed Service receivers. As demonstrated in the Engineering Statement attached hereto as Attachment C, there is insufficient technical support to rely on a 100 km distance to ensure the interference protection for Fixed Service stations pursuant to Section 101.105 of the Commission's rules. In short, the "blanket restriction" adopted in 1996 which prohibits MTN's SES transmitters from operating without prior coordination when they are within 100 km of land is insufficient for purposes of preventing the risk of harmful interference to FS stations.


9. In conclusion, because MTN has not provided the FS community with the information necessary to enable detection and prevention of interference from its SES operations, and because of the inadequacy of the 100 km offshore restriction imposed as part of MTN's original experimental license, MTN's renewal application should be denied.

Respectfully submitted,

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March 24, 1999

Attachments (3)

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554

**RECEIVED**  
MAR - 5 1999  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of	)	File Nos.
	)	
Applications of	)	SES-LIC-19980911-01272;
Maritime Telecommunications	)	SES-LIC-19980911-01275 to 01286;
Network, Inc. For Authority	)	SES-LIC-19980911-01289;
to Operate Shipboard Satellite	)	SES-LIC-19980911-01291 to 01297;
Earth Stations	)	SES-LIC-19980911-01299 to 01306;
	)	SES-LIC-19981019-01468

**PETITION TO DENY**

The Association of American Railroads ("AAR"), by its undersigned counsel, hereby petitions the Commission to deny the above-captioned applications of Maritime Telecommunications Network, Inc. ("MTN"), announced by Public Notice, Report No. Report No. SES-00049, released February 3, 1999. In further support of this petition, AAR refers to the petition in this matter filed today on behalf of the Fixed Wireless Communications Coalition ("FWCC"), of which AAR is a member; AAR incorporates herein by reference the FWCC petition.

**I. INTRODUCTION AND SUMMARY**

The MTN applications should be denied for three reasons. First, they propose to use the Fixed Satellite Service and Fixed Service ("FS") frequencies for mobile operations, a use that is inconsistent with the Commission's regulations. Second, MTN has not demonstrated that its use of the frequencies in the manner proposed will protect FS receivers from interference. And third, MTN's proposal will have the serious adverse



effect of precluding migration of 2 GHz incumbent FS operators into the 5925-6425 MHz band.

The MTN applications propose to operate C-band fixed shipboard earth stations at dockside locations in numerous U.S. coastal ports and to provide mobile and fixed services<sup>1/</sup> by means of these shipboard satellite earth stations. Each shipboard earth station ("SES") will operate in the earth-to-space direction in the band 5925-6425 MHz. According to its applications MTN is requesting permanent authority to operate SES facilities on board ships at the 31 sites in the following 17 U.S. coastal ports: Miami, FL; Fort Lauderdale, FL; Tampa, FL; Key West, FL; Everett, WA; Bremerton, WA; Ketchikan, AK; Juneau, AK, Skagway, AK; Los Angeles, CA; New Orleans, LA; San Juan, P.R.; St. Thomas, U.S. V.I.; Norfolk, VA; San Diego, CA; Mayport, FL; and Port Canaveral, FL.<sup>2/</sup>

AAR and its member railroads have a direct and vital interest in this matter because of their use of the 5925-6425 MHz band for Fixed Service point-to-point microwave communications links which support railroad operations. For example, the Union Pacific Railroad is the licensee of fixed microwave facilities near Tacoma, Washington, which operates at 5945.2 MHz in the vicinity of two of the SES facilities proposed by MTN (Bremerton and Everett, Washington). In addition, AAR's member railroads operate FS links in the 2 GHz band, which are subject to relocation for PCS and Mobile Satellite Service (MSS) operation in that band. For example, Union Pacific

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<sup>1/</sup> Public Notice, Report No. SES-00049, released February 3, 1999; see also MTN's Application, "Summary of Nature of Services to be Provided."

<sup>2/</sup> MTN Application, Summary of Nature of Services to be Provided, at p. 1.

Railroad operates FS links at 2199.5 MHz, 2134.8 MHz, 2141.5 MHz and 2149.5 MHz near Los Angeles, another port city targeted by MTN.<sup>3/</sup> In this regard, when the Commission first set out to consider the microwave relocation rules in ET Docket 92-9 (PCS relocation and MSS relocation), the Commission's Office of Engineering and Technology identified the 5925-6425 MHz band as one of the relocation bands for the displaced 2 GHz incumbents.<sup>4/</sup> In fact, in its Second Report and Order in the "Emerging Technologies" proceeding (ET Docket No. 92-9), the Commission identified the 6 GHz band as "the primary relocation band for 2 GHz licensees . . ."<sup>5/</sup>

**II. THE APPLICATIONS ARE IN CONTRAVENTION OF THE COMMISSION'S RULES.**

MTN attempts to characterize the nature of its service as "fixed satellite" and the class of station as a "fixed earth station,"<sup>6/</sup> and is not requesting any waivers or exemptions from any of the Commission's rules with respect to the meaning of a "fixed" station.<sup>7/</sup> Although the MTN applications purport to rely on the Commission's definition of a fixed satellite earth station in Section 25.201 of the rules, (i.e., "an earth station to be used at a specified fixed point"), it is clear that the proposed use is not a "fixed

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<sup>3/</sup> See "Certification" appended hereto as "Attachment 1."

<sup>4/</sup> "Creating New Technology Bands for Emerging Technology," Office of Engineering and Technology, OET/TS 92-1, January, 1992.

<sup>5/</sup> Second Report and Order in ET Docket No. 92-9, 8 FCC Rcd 6495, 6506 (1993) (emphasis added).

<sup>6/</sup> FCC Form 312, items 20 and 25.

<sup>7/</sup> The only waiver requested by MTN is with respect to the Commission's antenna profile rules relating to the 2° spacing requirement for geostationary satellites.

satellite service.” By their own terms, MTN's applications contemplate the provision of “mobile” services in support of “continuous global coverage for ships moving from one ocean region to another,”<sup>8/</sup> including “in-motion operations” for which MTN claims to have used a “critical contour point” method of coordination.<sup>9/</sup> Accordingly, the proposed service is, by MTN's own admission, a maritime mobile satellite service, not a fixed satellite service. It is an undeniable fact that MTN's service is provided by means of terminals mounted on oceangoing ships. To claim that these terminals provide a “mobile” service while the ship is moving but a “fixed” service while the ship is docked is absurd – tantamount to saying that a cellphone subscriber is using a “fixed” service when he makes a call while standing still at a traffic light, which then becomes a “mobile” service when he continues the same call as he travels across the intersection. No matter how hard MTN may strain to characterize it otherwise, its service is fundamentally “mobile” in nature.

MTN's characterization also is directly contrary to the manner in which the Commission defined identical services just a few years ago. In an order released April 29, 1996,<sup>10/</sup> the Commission treated an application by MTN's predecessor, Crescomm Transmission Services, Inc. (“Crescomm”) as a Maritime Mobile Satellite Service (MSS), and specifically noted that MSS does not appear in the Table of Frequency

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<sup>8/</sup> MTN Application, Summary of Nature of Service at fn. 1.

<sup>9/</sup> Id. at Certification of EK Wireless, dated August 10, 1998, included as Exhibit 1 to the applications.

<sup>10/</sup> Crescomm Transmission Services, Inc., 11 FCC RCD 10944 (IB and OET, 1996).

Allocations for the 4/6 GHz and 12/14 GHz bands"<sup>11/</sup> In that Order, the Commission granted a waiver to Crescomm to permit limited, experimental MSS use of the 4/6 GHz band for the same kind of service for which MTN seeks permanent authority here. AAR is aware of no intervening change in either the facts or relevant regulations that somehow could transform what previously was deemed by the Commission to be a mobile service into what MTN now claims to be a fixed service.

In summary, the MTN applications contravene the Commission's rules by proposing a mobile use that is not permitted in the frequency bands reserved for FS and FSS use. Accordingly, the applications should be denied.

### **III. MTN HAS NOT DEMONSTRATED COMPATIBILITY WITH THE FIXED SERVICE**

In its applications, MTN makes the conclusory statement that it "has demonstrated that its service can co-exist with terrestrial fixed microwave service, and MTN has continued to document its record of non-interference."<sup>12/</sup> There is, however, no demonstration of successful co-existence, nor is there any documentation of MTN's alleged "record of non-interference." This is not surprising because, as the Commission recognized in Crescomm, supra, the "mobile nature of [MTN's] MSS stations makes it extremely difficult to prevent harmful interference and to identify the interference source."<sup>13/</sup> The mere fact that MTN has not received any reports of harmful interference

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<sup>11/</sup> Crescomm at paragraph 9.

<sup>12/</sup> MTN application, "Summary of Nature of Services to be Provided", at p. 2.

<sup>13/</sup> Crescomm, supra, at paragraph 11.

does not mean that such interference has not been caused to FS stations by the MTN terminals. Given the transient nature of MTN's customer traffic, a moving ship may cause interference sufficient to disrupt vital FS communications, only to move on and never be traceable as the source of the interference. AAR has undertaken to obtain from MTN the information necessary to help ascertain whether MTN mobile terminals are the cause of communications disruptions, but thus far has not received the necessary information.<sup>14/</sup>

In summary, contrary to the representation in its applications, MTN has not demonstrated that its service can co-exist with the terrestrial fixed microwave service. Accordingly, the applications should be denied.

**IV. GRANT OF THESE APPLICATIONS WILL THWART THE COMMISSION'S RELOCATION POLICIES FOR THE 2 GHz BAND.**

Use of the 6 GHz band for MSS service in shipping lanes to and from port cities and along U.S. coasts will have a major preclusive effect on future use of the 6 GHz band by 2 GHz incumbents who are being forced to relocate to other frequencies as a result of PCS and MSS use of the 2 GHz band. As more railroad FS operations are moved out of the 2 GHz band pursuant to the Commission's mandate in ET Docket 92-9

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<sup>14/</sup> See copies of correspondence between AAR's counsel and MTN's counsel, dated February 8, March 4 and March 5, 1999, appended hereto as Attachments 2, 3 and 4.

and ET Docket 95-18 to make way for new technologies,<sup>15/</sup> there will be an ever-growing need to utilize the higher FS bands specified in Part 101 of the Commission's rules, particularly the 6 GHz band. Indeed, the Commission commenced a rule making to reallocate and rechannelize both the upper and lower 6 GHz band for the express purpose of accommodating FS operators being relocated from the 2 GHz band.<sup>16/</sup> If the Commission grants co-primary status to the MTN operations, vast geographic areas in and near port cities will henceforth be "off limits" to new FS licensees in the 6 GHz band, thereby defeating the policy objectives of the 2 GHz relocation proceeding. The Commission should be true to its promise to protect and preserve existing and future use of the entire 6 GHz band by the FS user community by denying the MTN applications.

In summary, even if MTN were able to coordinate its proposed operations with existing FS licensees in and around port cities, MTN's operations will nevertheless have a serious adverse effect on FS use of the band by precluding significant future use of those frequencies by FS licensees in coastal areas and near the port cities targeted by MTN.

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<sup>15/</sup> See, Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, First Report and Order and Third Notice of Proposed Rule Making, 7 FCC Rcd 6886, 6890 (1992), Second Report and Order, 8 FCC Rcd 6495 (1993); Third Report and Order and Memorandum Opinion and Order, 8 FCC Rcd 6589 (1993).

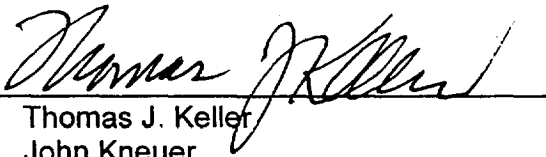
<sup>16/</sup> Id. Second Report and Order, 8 FCC Rcd 6495, 6501-6502.

**V. CONCLUSION**

In conclusion, the MTN applications should be denied because (a) they propose to use the Fixed Satellite Service frequencies for mobile operations, a use that is inconsistent with the Commission's regulations; (b) MTN has not demonstrated that its use of the frequencies in the manner proposed will, in fact, protect FS receivers from interference; and (c) MTN's proposal will have the serious adverse effect of precluding migration of 2 GHz incumbent FS operators into the 5925-6425 MHz band.

Respectfully submitted,

**ASSOCIATION OF AMERICAN RAILROADS**

By: 

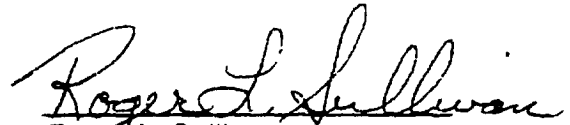
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Attachments: (4)

March 5, 1999

CERTIFICATION

The undersigned hereby certifies that he has read the foregoing "Petition to Deny" concerning the applications of Maritime Telecommunications Network, Inc., and that the factual statements set forth therein concerning the operations and facilities of Union Pacific Railroad are true and correct, to the best of his information, knowledge and belief.

  
Roger L. Sullivan

Principal Engineer  
Union Pacific Railroad

Date: March 3, 1999



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February 8, 1999

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Re: Applications of Maritime Telecommunications Network, Inc.  
(FCC File Nos. SES-LIC-19980911-01272 et seq.)

Dear Mr. Greenwald:

I am hereby requesting on behalf of the Association of American Railroads (AAR), that your client, Maritime Telecommunications Network, Inc. (MTN), provide certain information to AAR to assist in identifying potential interference events involving MTN's operation of satellite earth stations aboard vessels (ESVs) in the 5925-6425 MHz band.

By way of background, AAR recently filed a petition to deny MTN's applications for permanent authorization of this service by the Federal Communications Commission (FCC) on grounds of potential harmful interference to the co-frequency Fixed Service (FS) point-to-point microwave communications facilities operated by AAR's members in coastal areas of the United States and near many port cities identified in MTN's applications. In its petition, AAR challenged MTN's conclusion that its ESV operations to date have not caused interference to FS licensees; AAR noted that the transient nature of MTN's customer traffic and the fact that operation of transmitters aboard moving ships "makes it extremely difficult to prevent harmful interference and to identify the interference source."<sup>1/</sup> AAR also pointed out that the mere fact that MTN has not received any reports of harmful interference does not mean that such interference has not been caused to FS stations, because a moving ship may cause sufficient

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<sup>1/</sup> AAR Petition to Deny filed December 18, 1998, quoting from FCC decision in Crescomm Transmission Services, Inc., 11 FCC Rcd 10944 (1996).

interference to disrupt vital FS communications only to move on and not be traceable as the source of the interference.

It would be preferable for the FS licensees to have more information with which to evaluate possible interference incidents that may be caused by ESV operators. In this regard, it is our understanding that MTN is the successor to Crescomm Transmission Services, Inc., which was the original entity to which the FCC first granted experimental authorizations to provide this service in its 1996 decision in Crescomm Transmission Services, Inc., 11 FCC Rcd 10944. In that decision, the Commission relied upon the pledge of Crescomm "to cooperate in establishing interference assessment and prevention procedures," citing the reply comments filed by Crescomm in that proceeding, in which Crescomm had promised to cooperate in "implementing procedures for detecting, identifying and promptly halting harmful interference."<sup>2/</sup>

To assist AAR's members in identifying MTN's ESV transmissions as possible causes of communications disruptions on their Fixed Service links in the 5925-6425 MHz band, we are asking MTN to provide the following information:

1. The name or other appropriate vessel identification for all ships equipped with ESV transmitters in this band;
2. Timetables, routes, schedules and itineraries for each such ship that is operating within 400 km of the coastline of the United States;
3. Details of any route or schedule variations, including temporary stops;
4. The exact frequencies on which the ESV of each ship is transmitting and the dates and times of transmission using such frequencies;
5. For each ship, a description of the FCC authorization (STA, Experimental License, etc., including FCC file number), pursuant to which the ESV is operating; and

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<sup>2/</sup> Crescomm Reply Comments in RM-7912, filed April 24, 1992, at 5.

Eliot J. Greenwald, Esq.  
February 8, 1999  
Page 3

6. For each such ship, a description of the horizontal antenna gain, transmit power, and the name and orbital location of the satellite with which the ESV is communicating.

I suggest that the above-described information be supplied on a regular basis (e.g., monthly or weekly), sufficiently far in advance of the scheduled travel of the ships so as to enable the FS operators to effectively utilize the information in identifying possible interference sources. You may send the information to me, and I shall then forward it to AAR's members that are operating FS facilities in locations near coastlines and port cities.

Thank you in advance for your cooperation in complying with this request.

Sincerely,



Thomas J. Keller

cc: FCC Commissioners  
Chief, Wireless Telecommunications Bureau  
Chief, International Bureau  
Chief, Office of Engineering and Technology  
Office of FCC Secretary

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March 4, 1999

VIA FACSIMILE

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Re: Applications of Maritime Telecommunications Network, Inc.  
FCC File Nos. SES-LIC-19980911-01272 et seq.

Dear Tom:

On behalf of Maritime Telecommunications Network, Inc. ("MTN"), we provide this response to your letter of February 8, 1999, requesting from MTN certain information that you believe would be helpful to members of the Association of American Railroads ("AAR") in identifying potential interference in the 5925-6425 MHz band from the facilities that are the subject of the above-referenced applications for stationary operations.

1. Prior Frequency Coordination

Prior to commencing operations of its shipboard earth stations pursuant to the experimental authority and special temporary authority ("STA") issued by the Federal Communications Commission ("FCC"), MTN coordinated its proposed operations as required by Section 25.203(c) of the Commission's rules. MTN coordinated the operation of each portside location for the shipboard earth stations in the same manner as fixed earth stations are coordinated, because the ships, and hence the shipboard earth stations, return to the same locations for the stationary fixed satellite service operations while the ships are docked at port. All objections from the frequency coordinators concerning potential interference were resolved, and the coordination was renewed as necessary, before the applications were filed with the FCC. It is these fixed portside operations that are the subject of the pending applications, and the respective in-port locations of the earth stations are specified in the applications. Given this prior frequency coordination, it would be extremely unlikely that the perceived interference is attributable to the fixed portside earth station operations.

Thomas J. Keller

March 4, 1999

Page 2

## 2. Cruise Ship Operations

When a cruise ship docks at port, it generally stays from two to six hours while the passengers disembark, the crew takes shore leave, the ship is resupplied, and the new passengers embark. During that time period, the operations of the shipboard earth stations are docked at the locations specified in the applications. Although the cruise lines do publish schedules of when ships arrive and depart, these schedules are often subject to change. The following is a chart showing the number of cruise ship visits to each port during the month of January 1999. Skagway, Juneau and Ketchikan, AK are not included in the chart because they do not receive visits during the winter months. Ships operating from the southern ports will move north for the summer cruises.

Name of Port	Number of Cruise Ship Visits During January, 1999
Port Canaveral, FL	26
Tampa, FL	11
Miami, FL	62
Fort Lauderdale, FL	45
Key West, FL	27
Los Angeles, CA	18
New Orleans, LA	4
San Juan, PR	32
St. Thomas, U.S.V.I.	63

As shown above, cruise ship activities are sufficiently frequent, repetitive and continual for analysis as possible sources of identified interference.

## 3. Continuous Naval Operations

On the other hand, the operations of Navy ships are not a matter of public record and are not available for review by those who do not have the appropriate security clearances. Nevertheless, a Navy ship is generally in port for long periods of time, and therefore any interference caused by the Navy ships would be easily identified. The Navy ports include Bremerton, WA, Everett, WA, Mayport (Jacksonville), FL, Norfolk, VA, and San Diego, CA. Thus, the Navy locations account for 5 of the 17 ports.

Thomas J. Keller

March 4, 1999

Page 3

4. Continuous Carrier Transmissions

Please keep in mind that in order to maintain a "lock" on the satellite, the carrier for a shipboard earth station is continuously transmitting whether or not information is put on the carrier. Therefore, if a shipboard earth station were causing interference, the ships would be transmitting at the dockside location for a sufficient period of time for identification of such interference. The frequencies used by MTN's shipboard earth stations are listed in the applications.

5. In-Motion Operations Not the Subject of the Applications

The operations of the shipboard earth stations while the ships are leaving and entering ports were also coordinated. These operations are not, however, the subject of the pending applications, and no applications are to be filed for these operations until after the National Spectrum Managers Association ("NSMA") issues its report on coordination standards for in-motion operations to the FCC and the FCC adopts interference objectives. Therefore, operations of the shipboard earth stations while in motion will continue to be conducted pursuant to experimental authority and STA. The FCC has not issued individual authorizations for these operations for each ship. Rather MTN has received blanket authorizations from the FCC. The spectrum coordinators for each of your clients should have received the coordination notices and renewals for the in-motion shipboard earth stations.

MTN is fully committed to resolving all cases of interference that may be caused by the operations of its shipboard earth stations. However, since the time when MTN coordinated its frequency usage, MTN has not received any reports of actual interference to date. To the extent that the members of AAR experience unidentified sources of interference, MTN would be pleased to work with them to investigate such reports to determine whether any of MTN's shipboard earth stations were engaged in co-channel operations within distances that could potentially cause interference. Therefore, if any AAR members are experiencing interference from unidentified sources in the 5925-6425 MHz band, please provide me with a report showing the date and time as well as the location and frequency of the path experiencing interference.

Sincerely,



Eliot J. Greenwald

VERNER · LIPFERT  
BERNHARD · MCPHERSON & HAND  
CHARTERED

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Thomas J. Keller  
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March 5, 1999

VIA FACSIMILE

Eliot J. Greenwald, Esq.  
Swidler Berlin Shereff Friedman, LLP  
3000 K Street, N.W., Suite 300  
Washington, D.C. 20007

Re: Operations of Maritime Telecommunications Network, Inc. ("MTN")

Dear Eliot:

Thank you for your letter of March 4, 1999. As I mentioned during our phone conversation today, I do not believe your letter was responsive to the request stated in my letter of February 8, 1999.

The focus of my February 8 letter was on the transient nature of the vessels on which MTN's terminals are mounted, and the fact that (as the FCC has recognized) operation of transmitters aboard moving ships makes it very difficult to prevent harmful interference and identify the interference source. In short, I was seeking information regarding the in-motion aspects of MTN's operations, not the dockside operations.

Your response attempted to distinguish between MTN's dockside "fixed" operations and its mobile operations. Specifically, you stated that the "fixed" operations are the subject of the pending FCC applications for permanent co-primary authority, whereas the mobile operations are authorized under experimental authority and STA. Apparently on the basis of that distinction, you declined to provide the requested information regarding in-motion operations.

I do not agree with the distinction, for two reasons. First, MTN's pending applications for permanent authority for "fixed" operations concede that the dockside operations are part and parcel of an overall integrated service that involves continuous transmissions while ships are under way as well as in port. In other words, the dockside transmissions cannot be isolated, for regulatory purposes, from

Eliot J. Greenwald, Esq.

March 5, 1999

Page 2

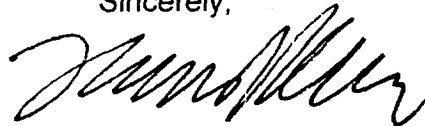
the inherently mobile nature of the service taken as a whole. Accordingly, it is irrelevant that the pending applications purport merely to seek authority for "fixed" operations.

Second, MTN's obligation to assist in detecting, identifying and halting harmful interference resulting from its operations arises separate and apart from anything in the pending applications. It was a condition of the initial authorization to MTN's predecessor (see Crescomm Transmission Services, Inc., 11 FCC Rcd 10944 (1996)), and it is also an obligation arising from the requirements, inter alia, of Sections 5.67(b) and 5.151(a) of the FCC's regulations.

In view of the foregoing, I hereby reiterate my request that MTN provide the six items of information described at pages 2-3 of my February 8 letter.

I am confident that we can find a way to resolve this issue, and I thank you in advance for your cooperation and attention to this request.

Sincerely,

A handwritten signature in cursive script, appearing to read "Tom Keller", written in dark ink.

Thomas J. Keller



BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554

In the Matter of	)	
	)	File Nos.
	)	
Applications of	)	SES-LIC-19980911-01272;
Maritime Telecommunications	)	SES-LIC-19980911-01275 to 01286;
Network, Inc. For Authority	)	SES-LIC-19980911-01289;
to Operate Shipboard Satellite	)	SES-LIC-19980911-01291 to 01297;
Earth Stations	)	SES-LIC-19980911-01299 to 01306;
	)	SES-LIC-19981019-01468

**PETITION TO DENY**

The Consortium Digital Microwave System ("CDMS"),<sup>1</sup> by its undersigned counsel, hereby petitions the Commission to deny the 30 above-referenced applications of Maritime Telecommunications Network, Inc. ("MTN"), announced by Public Notice, Report No. SES-00049, released February 3, 1999. On December 18, 1998, CDMS petitioned to deny two other MTN Earth station applications, Nos. SES-LIC-19980911-01273 and 01274, which appeared in Public Notice Report No. SES-00024, released November 18, 1998. In support of this petition, the following is shown:

**I. BACKGROUND**

The MTN applications as described in the Public Notice are to permit the operation of "a 2.4 meter C-band fixed Shipboard Earth Station ("SES") at dockside in U.S. coastal port[s]. SES will be used to provide private line mobile and fixed services

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<sup>1</sup> CDMS operates a digital 6 GHz microwave system that provides voice and data communications service for the safe operation of various off-shore platforms in the Gulf of Mexico. CDMS serves a number of firms with off-shore facilities including Union Oil Company of California ("Unocal"), Sola Communications, Inc., Pennzoil Exploration and Production Company, Phillips Petroleum Co., and El Paso Energy.

including, digital voice, data and video services via ALSAT on a non-common carrier basis" [emphasis added].<sup>2</sup> Each SES will operate in the Earth-to-space direction in the band 5925-6425 MHz (the "6 GHz band"). The MTN applications request permanent authority to operate SES facilities on board ships at the following 17 U.S. coastal ports: Jacksonville, FL; Miami, FL; Fort Lauderdale, FL; Tampa, FL; Key West, FL; Everett, WA; Bremerton, WA; Ketchikan, AK; Juneau, AK; Skagway, AK; Los Angeles, CA; New Orleans, LA; San Juan, P.R.; St. Thomas, U.S. V.I.; Norfolk, VA; San Diego, CA; and Port Canaveral, FL.

CDMS has a direct and vital interest in this matter as a licensee in the 5925-6425 MHz band for Fixed Service ("FS") point-to-point microwave communications. CDMS and other users of the CDMS facilities previously operated 2 GHz microwave facilities that were relocated to the 6 GHz band pursuant to the Commission's microwave relocation rules, 47 C.F.R. §101.69 *et seq.* The CDMS facilities commenced operations in the 6 GHz band in 1998. When the Commission adopted the microwave relocation rules in ET Docket Nos. 92-9 and 95-18 (regarding the PCS/microwave and MSS/microwave relocations), the Commission identified the 6 GHz band as one of the prime relocation bands for the displaced 2 GHz incumbents.<sup>3</sup>

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<sup>2</sup> Public Notice, Report No. SES-00049, released February 3, 1999.

<sup>3</sup> "Creating New Technology Bands for Emerging Technology," Office of Engineering and Technology, OET/TS 92-1, January, 1992.

**II. THE APPLICATION IS IN CONTRAVENTION OF THE COMMISSION'S RULES.**

Although the MTN applications purport to rely on the Commission's definition of a fixed satellite earth station in Section 25.201 of the rules, (i.e., "an earth station to be used at a specified fixed point"), it is clear that the proposed operations are not "fixed satellite service." Indeed, the Public Notice of these applications explicitly states that the shipboard earth station contemplated in MTN's application would be used for mobile services. Moreover, MTN's applications explicitly contemplate "continuous global coverage for ships moving from one ocean region to another,"<sup>4</sup> as well as "related in-motion operations" for which MTN purports to have used the "critical contour point" method of coordination.<sup>5</sup> Accordingly, the MTN applications propose a service that is really a maritime mobile satellite service, not a fixed satellite service.

As noted above, MTN mischaracterizes the nature of its service as "fixed satellite" and the class of station as a "fixed earth station."<sup>6</sup> In this regard, MTN states that it is not requesting any waivers or exemptions from any of the Commission's rules.<sup>7</sup> This approach is contrary to the manner in which the Commission treated identical services as recently as two years ago. In an order released April 29, 1996,<sup>8</sup> the

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<sup>4</sup> MTN Application, attached summary of nature of service at note 1.

<sup>5</sup> *Id.* at "Certification" of EK Wireless, included as Exhibit 1 to the amended applications.

<sup>6</sup> MTN's response to FCC Form 312, Items 20 and 25.

<sup>7</sup> *Id.* at Item 35.

<sup>8</sup> Crescomm Transmission Services, Inc., 11 FCC RCD 10944 (IB and OET, 1996).

Commission treated an application by MTN's predecessor, Crescomm Transmission Services, Inc. ("Crescomm") as a Maritime Mobile Satellite Service (MSS), and noted that MSS does not appear in the Table of Frequency Allocations for the 4/6 GHz and 12/14 GHz bands"<sup>9</sup> In that Order, the Commission granted a conditional waiver to Crescomm to permit limited, experimental MSS use of the 4/6 GHz bands for the same kind of SES for which MTN seeks permanent authority here. CDMS is aware of no intervening change in either the facts, or the applicable regulations, that somehow could transform what previously was deemed by the Commission to be a mobile service into what MTN now claims to be a fixed service.

In summary, MTN applications contravene the Commission's rules by proposing a mobile use that is not permitted under Fixed Service licensing in the 5925-6425 MHz frequency bands reserved for FS and FSS use. Accordingly, the applications should be denied.

**III. MTN HAS NOT DEMONSTRATED COMPATIBILITY WITH THE FIXED SERVICE**

In its application, MTN makes the conclusory statement that it "has demonstrated that its service can co-exist with terrestrial fixed microwave service, and MTN has continued to document its record of non-interference."<sup>10</sup> There is, however, no "demonstration" of successful co-existence in the application, nor is there any documentation of MTN's alleged "record of non-interference." This is not surprising

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<sup>9</sup> Crescomm at paragraph 9.

<sup>10</sup> MTN application, summary of nature of services to be provided, at p. 2.

because, as the Commission recognized in Crescomm, supra, the "mobile nature of [MTN's] MSS stations makes it extremely difficult to prevent harmful interference and to identify the interference source."<sup>11</sup> The mere fact that MTN has not received any reports of harmful interference does not mean that such interference has not been caused to FS stations by the MTN SES terminals. Given the transient nature of MTN's customer traffic, a moving ship may cause sufficient interference to disrupt vital FS communications, only to move on and not be traceable to MTN's maritime customer as the source of the interference.

The amendments to the applications filed on December 4, 1998, include a certification that prior frequency coordination was completed. In particular, Exhibit I of the amended MTN application for New Orleans, File No. SES-AMD-19981204-02004, states that a Prior Coordination Notice ("PCN") was distributed to CDMS.<sup>12</sup> However, the CDMS operational personnel have no record of receiving either PCNs or renewals for the proposed operations described in the amended New Orleans application. Even if CDMS had received such PCNs, a reasonable interpretation of a fixed-service PCN would assume fixed, not mobile, operations. Therefore, the prior coordination notification process in the case of New Orleans was defective, and, in general, the use of a fixed service prior coordination notice for this type of mobile use is fundamentally flawed. Simply stated, CDMS did not have the information necessary to object to the

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<sup>11</sup> Crescomm, supra, at paragraph 11.

<sup>12</sup> See Certification of Edwards and Kelcey Wireless, L.L.C., dated November 17, 1998.

proposed operations during the frequency coordination stage, and was not adequately notified of the potential interference.

Apart from the flawed prior coordination, MTN has not been forthcoming with detailed information regarding its operations pursuant to the waiver in response to a request by counsel to the Association of American Railroads (copy attached). The superficial response by MTN's counsel, dated March 4, 1999, (copy attached), fails to provide specific dates, times, and routes of travel to permit CDMS and other adversely-affected FS licensees to investigate cases of interference experienced following the commencement of SES operations in the 6 GHz band (5925-6425 MHz). In short, contrary to the representations in MTN's applications, MTN has not demonstrated that its service can co-exist with terrestrial fixed microwave service, and has not been responsive to FS licensee inquiries regarding previously authorized operations. Accordingly, MTN's applications should be denied.

**IV. GRANT OF THIS APPLICATION WILL THWART THE COMMISSION'S RELOCATION POLICIES FOR THE 2 GHz BAND.**

An important policy justification for denial of the MTN applications is the preclusive effect that widespread use of the 6 GHz band for MSS service on shipping lanes to and from port cities will have on future use of that band by 2 GHz incumbents who are being forced to relocate to other frequencies as a result of PCS and MSS use of the 2 GHz band. As more and more FS operations in use by CDMS users are moved out of the 2 GHz band pursuant to the Commission's mandate in ET Docket Nos. 92-9 and 95-18 to make way for new technologies,<sup>13</sup> there will be an ever-

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<sup>13</sup> See, Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, First Report and Order and Third Notice of Proposed Rule Making, 7 FCC Rcd 6886, 6890 (1992), Second

growing need to utilize the higher FS bands specified in Part 101 of the Commission's rules, particularly the 6 GHz band. Indeed, the Commission commenced a rule making to reallocate and rechannelize both the upper and lower 6 GHz band for the express purpose of accommodating FS operators being relocated from the 2 GHz band.<sup>14</sup> If the Commission now restricts access to this band by granting the MTN applications, the policy objectives of the 2 GHz relocation proceeding will be defeated. The Commission's should be true to its promise to protect and preserve existing and future use of the entire 6 GHz band by the FS user community by denying the MTN applications.

In summary, even if MTN were able to coordinate its proposed operations with existing FS licensees in a proper manner in the vicinity of port cities, MTN's operations would nevertheless have a serious adverse effect on FS use of the band by precluding significant future use of those frequencies by FS licensees off-shore and near the port cities targeted by MTN.

## **V. CONCLUSION**

In conclusion, the MTN applications should be denied because (a) they propose to use the fixed satellite service frequencies for mobile operations, a use which is inconsistent with the Commission's policies and rules; (b) MTN has not demonstrated that its use of the frequencies in the manner proposed will, in fact, protect FS receivers from interference; and (c) MTN's proposal will have the serious adverse effect of

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Report and Order, 8 FCC Rcd 6495 (1993); Third Report and Order and Memorandum Opinion and Order, 8 FCC Rcd 6589 (1993).

<sup>14</sup> Id Second Report and Order, 8 FCC Rcd 6495, 6501-6502.

precluding migration of 2 GHz incumbent FS operators into the 5925-6425 MHz band.

Respectfully submitted,

CONSORTIUM DIGITAL MICROWAVE  
SYSTEM

By:   
Julian L. Shepard  
Verner, Liipfert, Bernhard, McPherson  
and Hand, Chartered  
901 15th Street, N.W., Suite 700  
Washington, D.C. 20005-2301  
Its Attorney

Attachment: Certification of Berne Life  
March 5, 1999



3/5/99

VERNER · LIIPFERT  
BERNHARD · MCPHERSON & HAND  
[CHARTERED]

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Thomas J. Keller  
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February 8, 1999

Ms. Magalie Roman Salas, Secretary  
Federal Communications Commission  
The Portals  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

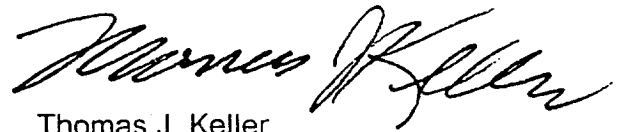
Re: Applications of Maritime Telecommunications Network, Inc.  
(FCC File Nos. SES-LIC-19980911-01272 et seq.)

Dear Madam Secretary:

Enclosed is a copy of a letter from Thomas J. Keller to Eliot J. Greenwald dated February 8, 1999, written on behalf of the Association of American Railroads.

Please associate the enclosed letter with the above-referenced applications of Maritime Telecommunications Network, Inc.

Respectfully submitted,



Thomas J. Keller

Enclosure

cc (w/encl.): FCC Commissioners  
Chief, Wireless Telecommunications Bureau  
Chief, International Bureau  
Chief, Office of Engineering and Technology

■ WASHINGTON, DC ■ HOUSTON ■ AUSTIN  
■ HONOLULU ■ LAS VEGAS ■ MCLEAN ■ MIAMI

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February 8, 1999

Eliot J. Greenwald, Esq.  
Swidler Berlin Shereff Friedman, LLP  
3000 K Street, N.W., Suite 300  
Washington, D.C. 20007

Re: Applications of Maritime Telecommunications Network, Inc.  
(FCC File Nos. SES-LIC-19980911-01272 et seq.)

Dear Mr. Greenwald:

I am hereby requesting on behalf of the Association of American Railroads (AAR), that your client, Maritime Telecommunications Network, Inc. (MTN), provide certain information to AAR to assist in identifying potential interference events involving MTN's operation of satellite earth stations aboard vessels (ESVs) in the 5925-6425 MHz band.

By way of background, AAR recently filed a petition to deny MTN's applications for permanent authorization of this service by the Federal Communications Commission (FCC) on grounds of potential harmful interference to the co-frequency Fixed Service (FS) point-to-point microwave communications facilities operated by AAR's members in coastal areas of the United States and near many port cities identified in MTN's applications. In its petition, AAR challenged MTN's conclusion that its ESV operations to date have not caused interference to FS licensees; AAR noted that the transient nature of MTN's customer traffic and the fact that operation of transmitters aboard moving ships "makes it extremely difficult to prevent harmful interference and to identify the interference source."<sup>1/</sup> AAR also pointed out that the mere fact that MTN has not received any reports of harmful interference does not mean that such interference has not been caused to FS stations, because a moving ship may cause sufficient

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<sup>1/</sup> AAR Petition to Deny filed December 18, 1998, quoting from FCC decision in Crescomm Transmission Services, Inc., 11 FCC Rcd 10944 (1996).

interference to disrupt vital FS communications only to move on and not be traceable as the source of the interference.

It would be preferable for the FS licensees to have more information with which to evaluate possible interference incidents that may be caused by ESV operators. In this regard, it is our understanding that MTN is the successor to Crescomm Transmission Services, Inc., which was the original entity to which the FCC first granted experimental authorizations to provide this service in its 1996 decision in Crescomm Transmission Services, Inc., 11 FCC Rcd 10944. In that decision, the Commission relied upon the pledge of Crescomm "to cooperate in establishing interference assessment and prevention procedures," citing the reply comments filed by Crescomm in that proceeding, in which Crescomm had promised to cooperate in "implementing procedures for detecting, identifying and promptly halting harmful interference."<sup>2/</sup>

To assist AAR's members in identifying MTN's ESV transmissions as possible causes of communications disruptions on their Fixed Service links in the 5925-6425 MHz band, we are asking MTN to provide the following information:

1. The name or other appropriate vessel identification for all ships equipped with ESV transmitters in this band;
2. Timetables, routes, schedules and itineraries for each such ship that is operating within 400 km of the coastline of the United States;
3. Details of any route or schedule variations, including temporary stops;
4. The exact frequencies on which the ESV of each ship is transmitting and the dates and times of transmission using such frequencies;
5. For each ship, a description of the FCC authorization (STA, Experimental License, etc., including FCC file number), pursuant to which the ESV is operating; and

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<sup>2/</sup> Crescomm Reply Comments in RM-7912, filed April 24, 1992, at 5.


Eliot J. Greenwald, Esq.  
February 8, 1999  
Page 3

6. For each such ship, a description of the horizontal antenna gain, transmit power, and the name and orbital location of the satellite with which the ESV is communicating.

I suggest that the above-described information be supplied on a regular basis (e.g., monthly or weekly), sufficiently far in advance of the scheduled travel of the ships so as to enable the FS operators to effectively utilize the information in identifying possible interference sources. You may send the information to me, and I shall then forward it to AAR's members that are operating FS facilities in locations near coastlines and port cities.

Thank you in advance for your cooperation in complying with this request.

Sincerely,



Thomas J. Keller

cc: FCC Commissioners  
Chief, Wireless Telecommunications Bureau  
Chief, International Bureau  
Chief, Office of Engineering and Technology  
Office of FCC Secretary

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March 4, 1999

VIA FACSIMILE

Thomas J. Keller  
Verner Liipfert Bernhard McPherson and Hand  
901 - 15th Street, NW  
Washington, DC 20005-2301

Re: Applications of Maritime Telecommunications Network, Inc.  
FCC File Nos. SES-LIC-19980911-01272 et seq.

Dear Tom:

On behalf of Maritime Telecommunications Network, Inc. ("MTN"), we provide this response to your letter of February 8, 1999, requesting from MTN certain information that you believe would be helpful to members of the Association of American Railroads ("AAR") in identifying potential interference in the 5925-6425 MHz band from the facilities that are the subject of the above-referenced applications for stationary operations.

1. Prior Frequency Coordination

Prior to commencing operations of its shipboard earth stations pursuant to the experimental authority and special temporary authority ("STA") issued by the Federal Communications Commission ("FCC"), MTN coordinated its proposed operations as required by Section 25.203(c) of the Commission's rules. MTN coordinated the operation of each portside location for the shipboard earth stations in the same manner as fixed earth stations are coordinated, because the ships, and hence the shipboard earth stations, return to the same locations for the stationary fixed satellite service operations while the ships are docked at port. All objections from the frequency coordinators concerning potential interference were resolved, and the coordination was renewed as necessary, before the applications were filed with the FCC. It is these fixed portside operations that are the subject of the pending applications, and the respective in-port locations of the earth stations are specified in the applications. Given this prior frequency coordination, it would be extremely unlikely that the perceived interference is attributable to the fixed portside earth station operations.

## 2. Cruise Ship Operations

When a cruise ship docks at port, it generally stays from two to six hours while the passengers disembark, the crew takes shore leave, the ship is resupplied, and the new passengers embark. During that time period, the operations of the shipboard earth stations are docked at the locations specified in the applications. Although the cruise lines do publish schedules of when ships arrive and depart, these schedules are often subject to change. The following is a chart showing the number of cruise ship visits to each port during the month of January 1999. Skagway, Juneau and Ketchikan, AK are not included in the chart because they do not receive visits during the winter months. Ships operating from the southern ports will move north for the summer cruises.

Name of Port	Number of Cruise Ship Visits During January, 1999
Port Canaveral, FL	26
Tampa, FL	11
Miami, FL	62
Fort Lauderdale, FL	45
Key West, FL	27
Los Angeles, CA	18
New Orleans, LA	4
San Juan, PR	32
St. Thomas, U.S.V.I.	63

As shown above, cruise ship activities are sufficiently frequent, repetitive and continual for analysis as possible sources of identified interference.

## 3. Continuous Naval Operations

On the other hand, the operations of Navy ships are not a matter of public record and are not available for review by those who do not have the appropriate security clearances. Nevertheless, a Navy ship is generally in port for long periods of time, and therefore any interference caused by the Navy ships would be easily identified. The Navy ports include Bremerton, WA, Everett, WA, Mayport (Jacksonville), FL, Norfolk, VA, and San Diego, CA. Thus, the Navy locations account for 5 of the 17 ports.

Thomas J. Keller

March 4, 1999

Page 3

4. Continuous Carrier Transmissions

Please keep in mind that in order to maintain a "lock" on the satellite, the carrier for a shipboard earth station is continuously transmitting whether or not information is put on the carrier. Therefore, if a shipboard earth station were causing interference, the ships would be transmitting at the dockside location for a sufficient period of time for identification of such interference. The frequencies used by MTN's shipboard earth stations are listed in the applications.

5. In-Motion Operations Not the Subject of the Applications

The operations of the shipboard earth stations while the ships are leaving and entering ports were also coordinated. These operations are not, however, the subject of the pending applications, and no applications are to be filed for these operations until after the National Spectrum Managers Association ("NSMA") issues its report on coordination standards for in-motion operations to the FCC and the FCC adopts interference objectives. Therefore, operations of the shipboard earth stations while in motion will continue to be conducted pursuant to experimental authority and STA. The FCC has not issued individual authorizations for these operations for each ship. Rather MTN has received blanket authorizations from the FCC. The spectrum coordinators for each of your clients should have received the coordination notices and renewals for the in-motion shipboard earth stations.

MTN is fully committed to resolving all cases of interference that may be caused by the operations of its shipboard earth stations. However, since the time when MTN coordinated its frequency usage, MTN has not received any reports of actual interference to date. To the extent that the members of AAR experience unidentified sources of interference, MTN would be pleased to work with them to investigate such reports to determine whether any of MTN's shipboard earth stations were engaged in co-channel operations within distances that could potentially cause interference. Therefore, if any AAR members are experiencing interference from unidentified sources in the 5925-6425 MHz band, please provide me with a report showing the date and time as well as the location and frequency of the path experiencing interference.

Sincerely,



Eliot J. Greenwald

## CERTIFICATION

The undersigned hereby certifies that he has read the foregoing "Petition to Deny" concerning the applications of Maritime Telecommunications Network, Inc., and that the factual statements set forth therein concerning the operations and facilities of the Consortium Digital Microwave System are true and correct, to the best of his information, knowledge and belief.



Berne Life

Telecommunications Manager  
Union Oil Company of California  
the Operations Manager for CDMS

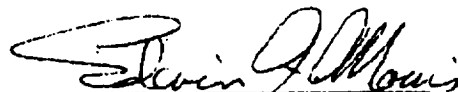
March 5, 1999



### ENGINEERING STATEMENT

This Engineering Statement is prepared in connection with the foregoing Petition to Deny Application (FCC File No. 0100-EX-RR-1999) dated March 24, 1999, filed by Consortium Digital Microwave System, a licensee of private operational-fixed microwave facilities operating in the 5,925 to 6,425 MHz band, and the Association of American Railroads, representing other private operational-fixed microwave licensees operating in the 5,924 to 6,425 MHz band. I, Edwin F. Morris, being a duly qualified and experienced Communications Engineer doing business at 3318 Kimberly Way, San Mateo, California 94403, under penalty of perjury, do hereby state the following:

1. I have reviewed: (a) the foregoing Petition to Deny Applications dated March 24, 1999; (b) the Order granting waivers of the Table of Frequency Allocations to both Crescomm Transmission Services, Inc. and Qualcomm, Inc., to provide satellite-based communications between ships and fixed or temporary -fixed satellite earth stations in the Fixed Satellite Service, 4/6 and 12/14 GHz bands, 11 FCC Rod 10944 (April 29, 1996); (c) the applicable rules of the Federal Communications Commission including 47 C.F.R. §§ 25.251 and 101.105; (d) the applicable International Telecommunications Union Radio Regulations and certain recommendations of the ITU Radiocommunications Sector (ITU-R); and (e) certain other technical documents prepared or circulated by qualified experts and participants within relevant working parties, committees, or groups considering the technical feasibility of proposed satellite earth station operations in the 5,925 to 6,425 MHz band aboard vessels.
2. The coordination distance of 100 km applied by the Federal Communications Commission in the Crescomm Order is inconsistent with the coordination distances currently applicable to fixed-service use of the 5,924 to 6,425 MHz band, i.e., 400 km around the boresight of a fixed service antenna, and 200 km at all other azimuths.
3. The above-mentioned 400 km and 200 km fixed-service coordination distances are based on propagation characteristics assuming land-based stations which may afford terrain shielding that is not present in operations over water.
4. The above-mentioned fixed-service coordination distances are based on parameters of analog systems and do not take into account enhancements in digital microwave systems such as automatic transmitter power control which are now in use by many fixed-service licensees.
5. Credible engineering studies have indicated that instances of ducting and fading occur in 6 GHz transmissions over water, which may result in increases in the reception of undesired signals and decreases in the reception of desired signals.
6. Therefore, there is insufficient technical support to rely on a 100 km coordination distance to ensure the interference protection to be provided to fixed-service stations pursuant to Section 101.105 of the FCC's rules, 47 C.F.R. § 101.105, and there is a sound technical basis upon which to doubt the adequacy of a 100 km coordination distance.



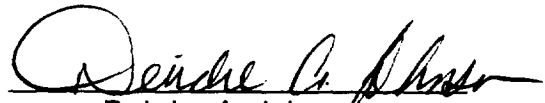
Edwin F. Morris

Date: March 24, 1999.

**CERTIFICATE OF SERVICE**

I, Deirdre A. Johnson, a secretary for the law firm of Verner, Liipfert, Bernhard, McPherson, and Hand, Chartered, hereby certify that I have this 24th day of March, 1999, caused a copy of the foregoing "Petition to Deny" to be sent, via First Class, United States Mail, postage prepaid to each of the following:

Nancy Killien Spooner  
Swidler Berlin Shereff Friedman, LLP  
3000 K Street, N.W., Suite 300  
Washington, D.C. 20007-5116

  
Deirdre A. Johnson