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June 2, 1995

William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

RECEIVED

JUN 2 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

Re: Petition For Rulemaking  
FCC File No. RM-7912  
A&H #1300

DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

On behalf of Maritime Telecommunications, Inc. ("MTN"), there are submitted herewith an original plus four (4) copies of a "Motion To Adopt Pioneer's Preference Request (PP-34) Filed By Crescomm Transmission Services, Inc. And Report Of Further Experimentation."

Should there be any questions, please contact the undersigned.

Very truly yours,

  
Robert G. Allen

RGA:vn

Attachments

No. of Copies rec'd  
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ORIGINAL

BEFORE THE  
**Federal Communications Commission**

WASHINGTON, D.C.

RECEIVED  
JUN 2 1995  
FEDERAL COMMUNICATIONS COMMISSION

In Re Matter of )  
 )  
AMENDMENT TO PART 80 OF THE )  
COMMISSION'S RULES )  
 )  
For an Allocation of Frequencies )  
For Digital Shipboard Earth Stations )

FCC Docket No. RM-7912  
PP-34

DOCKET FILE COPY ORIGINAL

To: The Commission

**MOTION TO ADOPT PIONEER'S PREFERENCE REQUEST (PP-34)  
FILED BY CRESCOMM TRANSMISSION SERVICES, INC.  
AND REPORT OF FURTHER EXPERIMENTATION**

MARITIME TELECOMMUNICATIONS NETWORK, INC. ("MTN"), by counsel, pursuant to Section 1.402 of the Commission's Rules, hereby respectfully requests leave to succede Crescomm Transmission Services, Inc. ("Crescomm") as proponent of Pioneer's Preference PP-34 in the above-captioned proceeding and to adopt the Request for Pioneer's Preference as originally filed by Crescomm on January 15, 1992. In addition, a Report of Further Experimentation is hereby respectfully submitted.

IN SUPPORT WHEREOF, the following is shown:

**I. DOCKET AND LICENSING HISTORY**

1. On December 12, 1991, Crescomm submitted a "Petition For Rulemaking"

in the above-captioned proceeding ("Petition"). A portion of the Petition consisted of Crescomm's request, made pursuant to Section 1.402 of the Rules, that it be awarded a Pioneer's Preference as to frequencies which may be allocated by the Commission pursuant to RM-7912.

2. On January 15, 1992, pursuant to advice received from the Commission, Crescomm filed a second, independent pleading captioned "Request For Pioneer's Preference", incorporating the Petition by reference and attaching a copy thereto. The Request stated that Crescomm "...has developed a new service, namely, the provision of shipboard digital earth stations having the capability for the provision of video, audio and high speed digital data communications links with Fixed and Temporary-Fixed Earth Stations." As the instant Motion seeks leave for MTN to adopt Crescomm's Request for Pioneer's Preference, a copy of that Request is being attached herewith for administrative convenience.

3. The broadband maritime service developed by Crescomm came about as the result of a service of experimental authorizations granted to it by the Commission. In its Request For Pioneer's Preference, Crescomm noted that it had initially tested broadband (C-Band/Ku-Band) mobile seaboard maritime communications technology on board the LPH Jwo Jima in October, 1987. The purpose of that experiment was to test the commercial feasibility of providing video, audio and digital data transmission services via Crescomm's fixed earth station at Holmdel, New Jersey in support of a media pool on board that U.S. Navy ship. Subsequently, during the Wood's Hole Oceanographic Institution's 1989 underwater exploration of sunken ships in the Mediterranean Sea,

Crescomm's experimental facility was utilized again for live transmission of educational video programming from a ship of foreign registry to museums throughout the United States and Canada for viewing by over 100,000 school children.<sup>1</sup> The facility was further successfully tested during May and June, 1990, on board non-U.S. registry vessels engaged in deep sea exploration on location in the North Atlantic, providing full time command, control and operational video and high speed digital data communications links between the at-sea exploration site and the operational nerve center located at Holmdel, New Jersey, via Crescomm's fixed earth station facilities.<sup>2</sup>

4. On February 1, 1991, Crescomm received an experimental Special Temporary Authorization ("STA") from the Federal Communications Commission (Call Sign KS2XAJ; File No. S-0124-EX-91) authorizing it to initiate further testing of broadband maritime communications technology aboard the M/V Dickerson Tide, a U.S. registry ship utilized by Westinghouse Defense and Electronic Systems Co., a division of Westinghouse Electric Corporation. The service was being provided by the U.S. Army for the benefit of the Armed Forces, U.S. Customs Service and the Drug Enforcement Agency for certain activities occurring in international waters. Full time high speed digital data communications links were provided via PanAmSat's space segment and its earth station in Homestead, Florida. This STA covered a period of thirty (30) days, expiring on March 1, 1991. However, as a result of these first tentative experiments, Crescomm sought

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<sup>1</sup> The space segment was provided by Pan American Satellite ("PanAmSat") under a Temporary Authority dated November 18, 1988 (File No. TAO-1475).

<sup>2</sup> PanAmSat again provided the space segment, under an experimental Special Temporary Authority (Call Sign KS2XAJ).

Commission approval to pursue lengthier shipboard testing and was granted an Experimental License for the period March 1, 1991 to February 1, 1993 (Call Sign KI2XEE; File No. 2237-EX-PL-91). This authorization was modified on November 13, 1992 (File No. 3093-EX-ML-92) to increase to 45 the number of shipboard transmit/receive units and to expand the authorized space segment providers to include PAS-1, Intelsat and GTE-Spacenet IV.

5. On February 1, 1993, Crescomm received a two-year renewal of its modified experimental license (File NO. 3039-EX-R-93). Further experimentation using the facilities of Station KI2XEE has continued to the present date. (See, Paragraphs 9-10, below.)

6. As noted above, Experimental License KI2XEE authorizes the employment of three alternative space segment sources: PanAmSat; GTE Spacenet and Intelsat. Most experimentation to date relating to the provision of this service to cruise ships has occurred utilizing PanAmSat and GTE Spacenet space segment and has involved the deployment of specially constructed C-Band shipboard terminals developed by Crescomm in conjunction with Maritime Telecommunications Network<sup>3</sup> an entity in which Crescomm held a partnership interest.

7. On March 11, 1992, the Commission issued a Public Notice (RM-7912) seeking Comments on the Petition and on Crescomm's Request For Pioneer's Preference, PP-34. Of 25 parties commenting either formally or informally, three argued that a Pioneer's Preference should not be issued to Crescomm<sup>4</sup> and one, CruiseCom

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<sup>3</sup> Though bearing a similar name, this entity is not related to MTN, the Petitioner herein.

<sup>4</sup> Qualcomm, Incorporated, IDB Communications Group, Inc. and Leasing Dynamics, Inc. opposed grant of a Pioneer's Preference to Crescomm.

International, Inc., sought issuance of a Pioneer's Preference to itself. On April 24, 1992, Crescomm filed a Reply to the Comments of those four parties.

8. On November 30, 1994, Crescomm filed a "Supplement to Petition For Rulemaking and Request For Expedited Action" ("Crescomm Supplement") in RM-7912. The Crescomm Supplement reported that on November 9, 1994, Crescomm had assigned Experimental License KI2XEE to Holmdel Telecommunications Group, Inc. ("HTG").<sup>5</sup> A complete statement of the facts surrounding that assignment and other information relevant to and supportive of this Motion are set forth in the "Motion For Leave to Succeede Crescomm Transmission Services, Inc. as Petitioner-Of-Record in Docket RM-7912", ("Motion to Succeede") being filed contemporaneously with the instant Motion by MTN. Accordingly, those facts which are contained in the Motion to Succeede, and which bear on the instant Motion, are hereby incorporated by reference.<sup>6</sup>

9. On December 8, 1994, HTG, as then successor-licensee to Crescomm, filed its own "Request For Pioneer's Preference." Subsequent commercial transactions require that MTN and HTG now seek Commission authority to assign Experimental License KI2XEE to MTN. (An application seeking such authority is under preparation and will be filed shortly.) Upon grant of such authority, HTG will no longer be successor-licensee to Crescomm. Further, upon consummation of the anticipated assignment, HTG shall be dissolved, ceasing to exist as a corporate entity. Accordingly, HTG is today moving for the

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<sup>5</sup> That license was renewed by the Commission, effective February 1, 1995, for a two-year term (FCC File No. 2237-EX-R-94).

<sup>6</sup> The Motion to Succeede is not being physically attached to this pleading as it would serve no useful purpose to overburden the record by placing two copies of a single pleading, being filed on the same day, into a single docket.

voluntary dismissal of its Request For Pioneer's Preference. As relating to the parties herein, such dismissal leaves only Crescomm's Request For Pioneer's Preference, PP-34 on the record.

10. This Motion, together with the Attachment and the Motion to Succeede, incorporated by reference, sets forth facts supportive of MTN's request to succede to the interests of Crescomm as proponent of Pioneer's Preference PP-34. (See, Motion to Succeede, Paragraph 9.) As more fully described in the Motion to Succeede, MTN is now the owner of the physical plant formerly employed by Crescomm in the conduct of ongoing broadband maritime experimentation. A substantial minority equity position in MTN is currently held by Crescomm's parent (Crescomm Telecommunications Services, Inc.). MTN should shortly be the holder of all Crescomm stock. Upon approval being granted by the Commission to the assignment of KI2XEE, MTN will succede HTG as Part 5 licensee, and shall be directly accountable to the Commission for all relevant broadband maritime experimentation. Finally, MTN's management consists, in substantial part, of the same management persons previously utilized by Crescomm (and HTG), who were most directly responsible for early broadband maritime satellite experimentation. Accordingly, the Commission should grant this Motion and permit MTN to adopt the text of the January 15, 1992 Request For Pioneer's Preference as its own, thereby succeeding Crescomm as proponent of Pioneer's Preference PP-34.

### **III. REPORT OF FURTHER EXPERIMENTATION**

10. Subsequent to the date of filing of Crescomm's Request for Pioneer's Preference on January 15, 1992, substantial additional experimentation was conducted by

Crescomm. In light of the fact that over three years have elapsed since that date, with the Commission having not yet issued a Notice of Proposed Rulemaking ("NPRM") in Docket No. RM-7912,<sup>7</sup> it is appropriate for MTN to provide a further report to the Commission on the results of experimentation conducted in the interim.<sup>8</sup>

12. In 1991, only one digital shipboard commercial system was installed and made operational by Crescomm. Presently, there are 31 systems installed with continuing signs that demand for this technology is increasing. By the end of 1992, Crescomm had made provision for the use of its system via credit card. Digital video implementation was completed that year and global non-commercial testing was initiated.

13. During 1993, Crescomm completed implementation of a fiber backbone network in support of its experimental maritime service. Airline ticketing at sea was successfully instituted, a digital antenna control unit was implemented, GPS interface was completed and digital video testing was also concluded. In 1994, Crescomm completed the testing of 10 voice/fax and 38.4 data channels utilizing its experimental system. In addition to reaching its milestone of successfully installing experimental transmitters aboard 31 vessels (ranging in size from 16,000 to over 80,000 tons), Crescomm also successfully implemented the expansion of SAVENET video-medical emergency services on a worldwide basis thereby advancing a critical life-saving technology to the potential benefit

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<sup>7</sup> The Comments received by the Commission in response to Crescomm's Petition were overwhelmingly favorable.

<sup>8</sup> This information is being timely provided, both under Section 5.207 of the Commission's Rules (which allows for the submission of supplementary experimental materials any time up to the release of a Sunshine Notice announcing a Report and Order pertaining to a new service) and under Section 1.402(c) (which allows for submission of a new Pioneer's Preference Request and, by inference, supplementation of pre-existing ones, up to the date of issuance of an NPRM or a Notice of Inquiry in any docket proceeding forming the basis for a Pioneer's Preference Request.)

of the entire world population. On February 11, 1994, Crescomm entered into a contract for the purpose of providing broadband maritime services for various government-related uses aboard U.S. Navy vessels. Crescomm successfully installed a broadband maritime system aboard the aircraft carrier U.S.S. George Washington in 1994. Those experimental operations involved the deployment of shipboard terminal equipment aboard the George Washington to test the technical feasibility and marketability of a broadband satellite service for vessels owned by the Armed Forces. That undertaking has supported the operational, intelligence and private telecommunications needs of shipboard personnel and has been well received within the military community. Deployment of broadband systems for use by the military and by government agencies has been a critical aspect of Crescomm/HTG experimentation to date.

14. The Digital Shipboard Earth Station is based on an extremely reliable gyro-stabilized platform and VSAT technology. The domestic system utilizes a 2.05 meter antenna mounted on a quad-gyro stabilized platform with a sophisticated antenna control unit ("ACU"). Global systems use a 2.4 meter antenna. The Crescomm ACU uses the ship's gyro-reference and a satellite RF signal input to maintain a pointing accuracy of .35 Deg (LOS) in actual operating conditions. Digital video may be transmitted on the Crescomm-developed broadband shipboard unit. The U.S. Navy Challenge Athena II system developed by Crescomm for the George Washington provides a simultaneous Duplex T-1 and a Duplex 64 kilobits data service.

15. Operational parameters for Crescomm's shipboard and fixed earth stations have been proven through time to be capable of providing reliable and efficient service.

Those parameters are<sup>9</sup>:

Shipboard Systems

Maximum EIRP	< 52.00 dBW
Maximum EIRP Density	< 34.40 dBW/4KHz
Total C/T	- 152.00 dBW/K or better
Total C/I	16.00 dB or better
Nominal C/N	> 10.00 dB
Nominal EB/No	> 7.70 dB
TX Gain Stability	+/- 1.00 dB/24 Hours
Pointing Accuracy (MAX)	0.35 degrees

Fixed Earth Stations

Maximum EIRP	< 70.00 dBW
Maximum EIRP Density	< 55.00 dBW/4KHz
Total C/T	- 152.00 dBW/K or better
Total C/I	16.00 dB or better
Nominal C/N	> 10.00 dB
Nominal Eb/No	> 7.70 dB
TX Gain Stability	+/- 0.50 dB/24 Hours

WHEREFORE, in view of the foregoing, it is respectfully requested that the Commission grant the instant Motion of MARITIME TELECOMMUNICATIONS NETWORK, INC., allowing it to succede to Crescomm Transmission Services, Inc. as

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<sup>9</sup> MTN has developed a substantial additional body of engineering data which it may provide pursuant to Section 5.207 of the Commission's Rules.

proponent of Pioneer's Preference PP-34; to adopt the substance and text of Crescomm's Request for Pioneer's Preference as filed on January 15, 1992; to assume all other administrative burdens of going forward with such Request; and to furnish the enclosed Report of Further Experimentation.

Respectfully submitted,

MARITIME TELECOMMUNICATIONS NETWORK, INC.

By: 

Robert G. Allen

Its Counsel

Allen & Harold, P.L.C.  
Crestwood Professional Center  
10610-A Crestwood Drive  
P.O. Box 2126  
Manassas, Virginia 22110  
(703) 361-2278

Co-Counsel:  
Hopper & Kanouff  
1610 Wynkoop Street  
Suite 200  
Denver, Colorado 80202-1196  
(303) 892-6000

June 2, 1995

**CERTIFICATE OF SERVICE**

I, Valerie M. Nealey, a secretary in the law firm of Allen & Harold, P.L.C., hereby certify that I have this 2nd day of June, 1995, caused to be delivered via 1st Class Mail, postage prepaid, copies of the foregoing "Motion To Adopt Pioneer's Preference Request (PP-34) Filed by Crescomm Transmission Services, Inc. and Report of Further Experimentation" to the following:

**Robert S. Koppel, Esq.  
James T. Roche, Esq.  
IDB Communications Group, Inc.  
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Rockville, MD 20850**

**Henry Goldberg, Esq.  
Joseph A. Godles, Esq.  
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1229 Nineteenth Street, N.W.  
Washington, DC 20036  
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**Sheila Mellody, Esq.  
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1700 Old Meadow Road  
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**Sambran Sandoval, President  
National Spectrum Managers Association, Inc.  
P.O. Box 8378  
Denver, CO 80201**

**William Roughton, Esq.  
Lawrence W. Katz, Esq.  
Bell Atlantic Telephone Companies  
1710 H Street, N.W.  
Washington, DC 20006**

**ATTACHMENT**

**FILE COPY  
STAMP & RETURN**

**BEFORE THE  
Federal Communications Commission  
WASHINGTON, D.C.**

In the Matter of )  
)  
**AMENDMENT OF PART 80 OF** )  
**THE COMMISSION'S RULES** )  
)  
For an Allocation of Frequencies )  
for Digital Shipboard )  
Earth Stations )

\_\_\_\_\_ Docket No. \_\_\_\_\_  
Rm. No. \_\_\_\_\_

**RECEIVED**

**JAN 15 1992**

To: The Commission

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**REQUEST FOR PIONEER PREFERENCE**

Crescomm Transmission Services, Inc. (herein "Crescomm"), by counsel hereby requests grant of a Pioneer Preference pursuant to Section 1.402 of the Commission's Rules, for the issuance of licenses for Digital Shipboard Earth Stations ("DSES") under the proposed new rules requested in a Petition for Rule Making<sup>1/</sup> and for the issuance of a new rule or rules in Part 80, Stations in the Maritime Service, which was filed with the Commission on December 12, 1991. Under the proposed new rules, Digital Shipboard Earth Stations would be licensed to utilize C-Band and/or Ku-Band frequencies to communicate, from locations in Ocean, Sea and Coastal areas within the "foot print" of Satellite Systems, with Fixed and Temporary-Fixed Satellite Earth Stations.

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<sup>1/</sup>A copy of the Petition for Rulemaking is attached hereto and is hereby incorporated herein as a part of this Request for Pioneer Preference.

The requested Pioneer Preference would be for the grant of licenses for DSES stations on ships operating in Ocean, Sea and Coastal areas within the "foot print" of licensed Satellite Systems.

In support of this Request, the following are shown:

1. Crescomm hereby requests that it be granted a Pioneer Preference provided for under Section 1.402 of the Rules for the licensing of DSES's for operations on ships in Ocean, Sea and Coastal waters that are within the "foot print" of domestic and international satellite systems, for communications with Fixed and Temporary-fixed Satellite Earth Stations. Crescomm has proposed the adoption of new rules for licensing of DSES's on board ship in a Petition for Rulemaking filed on December 12, 1991. See Attachment A.

2. Crescomm submits that it has demonstrated in the Petition for Rulemaking that it has developed a new service, namely, the provision of shipboard digital earth stations having the capability for the provision of video, audio and high speed digital data communications links with Fixed and Temporary-Fixed Earth Stations. It has also brought the service to a more advanced state, namely to that of providing such stations on several cruise line ships in a commercial environment, as described in some detail in the Petition for Rulemaking. Additionally, the development of the DSES VSAT service has involved the use by Crescomm, as well as by PanAm Satellite, of Experimental STA's and licenses.

WHEREFORE, in view of the above, Crescomm Transmission Services, Inc. submits this Request for Pioneer Preference and requests a grant under Section 1.402 of the Rules of the above described Pioneer Preference in the issuance of new licenses for the areas served by such stations under the proposed new rule.

Respectfully submitted,

**CRESCOMM TRANSMISSION SERVICES, INC.**

By:

A handwritten signature in cursive script, appearing to read "Lloyd D. Young", is written over a solid horizontal line.

Lloyd D. Young, Esq.  
Its Attorney

ALLEN, MOLINE & HAROLD  
10500 Battleview Parkway  
P.O. Box 2126  
Manassas, VA 22110  
(703) 361-2278

January 15, 1992

CRESCOMM TRANSMISSION SERVICES, INC.  
REQUEST FOR PIONEER SERVICE

ATTACHMENT A

**FILE COPY**

**ALLEN, MOLINE & HAROLD**

ROBERT G. ALLEN  
DENISE B. MOLINE  
DOUGLAS W. HAROLD, JR.

LLOYD D. YOUNG  
OF COUNSEL

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STEPHENS CITY, VIRGINIA 22655

December 12, 1991

Ms. Donna R. Searcy, Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Re: Crescomm Transmission Services, Inc.  
Petition for Rule Making  
Request for Pioneer Preference

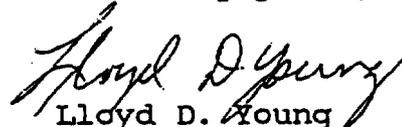
Dear Ms. Searcy:

Submitted herewith on behalf of Crescomm Transmission Services, Inc. are an original and four copies of a Petition for Rule Making. The Petition requests the initiation of a rule making proceeding and, pursuant thereto, the issuance of a new rule or rules in Part 80 of the Rules under which Digital Shipboard Earth Stations would be licensed to communicate, utilizing C-band and/or Ku-band frequencies with land-based, Fixed and Temporary-Fixed Earth Stations.

The Petitioner also requests grant of a Pioneer Preference for the issuance of licenses for such earth stations under the proposed new rules.

Should there be any questions regarding these matters, please contact the undersigned.

Sincerely yours,

  
Lloyd D. Young

LDY:kao  
Enclosures

BEFORE THE  
**Federal Communications Commission**  
WASHINGTON, D.C.

**FILE COPY**  
**STAMP & RETURN**

**RECEIVED**  
DEC 12 '91  
FEDERAL COMMUNICATIONS  
COMMISSION  
OFFICE OF THE  
SECRETARY

In the Matter of )  
 )  
AMENDMENT OF PART 80 OF )  
THE COMMISSION'S RULES )  
 )  
for an Allocation of Frequencies )  
for Digital Shipboard )  
Earth Stations )

Docket No. \_\_\_\_\_  
Rm. No. \_\_\_\_\_

To: The Commission

PETITION FOR RULE MAKING

Crescomm Transmission Services, Inc. (herein "Petitioner"), by counsel and pursuant to Section 1.401 of the Commission's Rules, hereby Petitions for Rule Making and for the issuance of a new rule or rules in Part 80, Stations in the Maritime Service, under which Digital Shipboard Earth Stations<sup>1/</sup> would be licensed to utilize C-Band and/or Ku-Band frequencies to communicate, from locations in Ocean, Sea and Coastal areas within the "foot print" of Satellite Systems, with Fixed and Temporary-Fixed Satellite Earth Stations.

Petitioner also requests grant of a Pioneer Preference pursuant to Section 1.402 of the Commission's Rules, for the issuance of licenses for such Digital Shipboard Earth Stations (or "DSES's") under the proposed new rules, for Ocean, Sea and Coastal areas within the "foot print" of licensed Satellite Systems.

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<sup>1/</sup>Section 80.5 of the Rules defines a "ship station". The phrase "Digital Shipboard Earth Station", as used herein, means a ship station as defined in Section 80.5, which functions as a high speed digital satellite earth station (herein called "DSES").

In support of this petition, the following are shown:

BACKGROUND INFORMATION

1. Petitioner, a Utah corporation, is engaged in the business, among others, of providing domestic and international communication services by means of satellite earth stations licensed in the Domestic and International Satellite Services. These services consist of video, audio and high speed digital communications channels of various band widths operating through INTELSAT, PanAm Satellite, and other domestic and international satellite systems utilizing both C-band and Ku-band frequencies. Petitioner's facilities utilized for these services are operated under various FCC licenses in the Satellite Services.

2. With this background as an experienced operator of fixed and transportable satellite earth stations, Petitioner has developed a very small aperture terminal ("VSAT"), which will operate as a Digital Ship Earth Station (DSES) from a gyrostabilized platform mounted on board ship for communications via satellite with C-band and Ku-band Fixed and Temporary-Fixed Satellite Earth Stations. This DSES VSAT facility was initially successfully tested in a seaboard environment on board the LPH Iwo Jima in October 1987 for transmission of video, audio and digital data via Petitioner's Fixed Earth Station at Holmdel, NJ for the purpose of demonstrating that an at-sea commercial satellite up-link system on board a U.S. Navy ship for media pool support is feasible. During the Wood's Hole Oceanographic Institution's 1989 underwater exploration of sunken ships in the Mediterranean Sea,

the DSES VSAT facility was utilized again in a test environment for live transmission of educational video programming from a ship of foreign registry on location to museums throughout the United States and Canada for viewing by over 100,000 school children.<sup>2/</sup> The DSES VSAT facility was subsequently successfully tested during May and June 1990 in a shipboard environment on board non-U.S. registry vessels engaged in deep sea exploration on location in the North Atlantic, for provision of full time command, control and operational video and high speed digital data communications links between the at-sea exploration site and the operational nerve center located at Holmdel, New Jersey via Petitioner's Fixed Earth Station facility.<sup>3/</sup>

3. More recently the DSES VSAT facility has been tested successfully on board the M/V Dickerson Tide, a U.S. registry ship utilized by Westinghouse in support of a service being provided by the U.S. Army for benefit of the U.S. Armed Forces, U.S. Customs Service and the Drug Enforcement Agency for activities in international waters, with full time high speed digital data communications links being provided via PanAm Satellite's satellite space segment and Homestead, Florida earth station.<sup>4/</sup> Petitioner

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<sup>2/</sup> The space segment was provided by PanAm Satellite under a Temporary Authority dated November 18, 1988.

<sup>3/</sup> PanAm Satellite provided the space segment, under an Experimental STA (Call Sign KS2XAI).

<sup>4/</sup> The shipboard station was provided by Petitioner under Experimental STA (Call Sign KS2XAJ; File No. S-0124-EX-91) and Experimental Construction Permit and License (Call Sign KI2XEE; File 2237-EX-PL-91). PanAm Satellite provided space segment under

is currently providing several DSES VSAT facilities on board a number of cruise line ships of foreign registry operating in Caribbean Sea areas within the "foot print" of the PanAM Satellite domestic satellite system. These DSES VSAT facilities are being utilized to provide full-time high speed digital links between the cruise line ships and cruise line operational headquarters located in South Florida.<sup>5/</sup>

4. These DSES VSAT facilities are capable of communicating via other satellite systems with virtually any Fixed or Temporary-Fixed Earth Station operating on C-Band or Ku-Band. Petitioner has thus developed a commercially viable shipboard satellite earth station which can be technically and economically deployed for the provision of full time high speed digital links in numerous kinds of ship operations in Ocean, Sea and Coastal waters.

**AUTHORIZATION OF DIGITAL SHIPBOARD  
EARTH STATIONS UNDER PART 80 IS REQUIRED**

5. Authorization of new Digital Shipboard Earth Stations under Part 80 of the Rules is required, along with an allocation of C-Band and Ku-Band frequencies for use by such earth stations on ships for communicating via Satellite Systems with satellite earth stations operating on C-Band and/or Ku-Band frequencies. Part 80 currently contains no allocation of frequencies for shipboard earth station which permits communications via satellite with C-Band

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Experimental STA and License (Call Signs KS2XAI and KI2XET).

<sup>5/</sup>The space segment is currently being provided by PanAM Satellite under an Experimental License (Call Sign KG2XLZ).

and/or Ku-Band earth stations. Currently, all shipboard satellite earth stations must operate under the auspices of INMARSAT, irrespective of whether the land based points of communications are U.S. domestic points or foreign points.<sup>9/</sup>

6. However, INMARSAT's facilities and services are dedicated largely, if not entirely, to the provision of message telephone services. Tariffs on file with FCC for INMARSAT services do not include an offering which will accommodate Petitioner's or any other party's needs for full-time, uninterrupted, both way, video, audio and high speed digital data channels. While Comsat Tariff No. 102 includes some offerings of 56 kbps and 64 kbps circuits, they provide only for one way service "on a temporary and preemptible basis". The full time, high capacity needs of Petitioner's services cannot be met by INMARSAT's tightly limited services, which will be preempted whenever INMARSAT message traffic volumes peak to existing capacity limits.

7. Moreover, INMARSAT circuits terminate at earth stations at Southbury, Connecticut and Paolo Alto, California, and accordingly require extensive and costly domestic landline extensions to reach Petitioner's customer locations in South Florida and elsewhere. The ability of shipboard stations to communicate with customer locations in South Florida and at other locations away from Connecticut and California by means of nearby earth stations will greatly reduce the cost of landline extensions

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<sup>9/</sup>See, 47 C.F.R. § 80.51(b) (1989).

facilities, resulting in commensurate saving to the ultimate user of the services.<sup>1/</sup>

TEXT OF PROPOSED RULE

8. Petitioner proposes that the text of the new rule, to be added to Part 80, be essentially as follows:

"Digital Shipboard Earth Stations.

(a) Digital Shipboard Earth Stations may be licensed for operation on board ships.

(b) Digital Shipboard Earth Stations may communicate while within the service area, or "foot print", of Satellite Systems with Fixed and Temporary-Fixed Earth Stations on the following frequencies:

<u>Shipboard Station</u> <u>Transmit</u>	<u>Earth Station</u> <u>Receive</u>
5.925- 6.425 GHz	3.700- 4.200 GHz
14.000-14.500 GHz	11.700-12.200 GHz
<u>Receive</u>	<u>Transmit</u>
3.700- 4.200 GHz	5.925- 6.425 GHz
11.700-12.200 GHz	14.000-14.500 GHz

9. A new subparagraph (d)(5) should be added to Section 80.15, Eligibility for License, as follows: "(d)(5) Owner or operator of a ship station." This broader eligibility for licensing will permit providers of Digital Shipboard Earth Stations such as Petitioner to be the licensee of the ship stations which they utilize to provide satellite services to ship owners and

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<sup>1/</sup>The use of PanAm Satellite's facilities as the space segment for the experimental uses of Petitioner's DSES VSAT facilities on board ship, as described herein, have been coordinated under the notification and consultation procedures of Article XIV(c) of the INTELSAT protocols and Article 8 of the INMARSAT convention. Such procedures would, of course, be pursued with respect to any licensing procedures under the new rules proposed herein.

operators.

**AFFECTS ON  
INTERESTS OF PETITIONER**

10. As noted above, there is no current rule in Part 80 or elsewhere in the Commission's Rules which provides for the licensing of earth stations on board ships and for the provision of communications from such ship stations via satellite to Fixed and Temporary-Fixed Satellite Earth Stations. Petitioner, nonetheless, obtained Experimental STA and, subsequently, an Experimental Construction Permit and License, which has permitted testing of its DSES VSAT facilities during the provision of communications channels for the Westinghouse service to the U.S. Armed Forces, U.S. Customs Service and Drug Enforcement Agency activities in international waters described above. Under Section 5.63 of the Rules, such experimental licenses are granted for a two year period. However, no provision is made for renewal for an additional period, except perhaps upon a showing of extraordinary need. Moreover, such licenses may be utilized only for the purposes set forth in Section 5.202 of the Rules.

11. Because of the regulatory limitations on the permitted uses of an Experimental License as well as that of a brief two year license period, Petitioner's current Experimental License provides no foundation for the continued investment in, and growth of, the provision of full time video and high speed digital data channels to cruise lines and other ship operations having need for such services. The proposed regularization of the service, by means of