

May 18, 1993

EXHIBIT NO. 1

In accordance with Sections 5.51, 5.52 and 5.56 of the Commission's Rules, Communications Satellite Corporation (COMSAT), through its COMSAT World Systems business unit, requests experimental authority (including special temporary authority to the extent required) to transmit data, voice and video signals at C- and Ku-band frequencies via INTELSAT satellites in the Atlantic and Pacific Ocean Regions to and from seagoing vessels and other points in the maritime environment. This experimental authority is requested in conjunction with testing to: (1) assess service quality using C- and Ku-band frequencies in the maritime environment; (2) determine the ability of enhanced gyroscope stabilizing mechanisms to stabilize C- and Ku-band antennas of 2.0 to 4.0 meters; and (3) assist in the development of C- and Ku-band antennas for use on seagoing vessels that can qualify for certification under INTELSAT standards.

The instant request for experimental authority initially involves two sets of experiments. One, which is to be conducted by LDI Technologies, Inc. for Kloster Cruise Lines, involves the use of C-band only and utilizes a full-duplex 64 Kbps circuit on an INTELSAT V satellite communicating with a C-band antenna in Miami, Florida and a C-band antenna on a non-U.S. ship at sea.

NO

COMSAT's role is to provide two-way space segment in conjunction with the experiment and to assist in determining whether the C-band antenna qualifies under INTELSAT Standard G specifications.¹

The second experiment is in conjunction with a GTE Government Systems contract with the United States Navy to assess the use of Ku-band antennas on seagoing vessels in order to determine service quality in a maritime environment. The experimental service involves the use of a 768 Kbps IBS circuit using an INTELSAT V or VI satellite (depending on availability of capacity) in the AOR for testing ship-to-shore and shore-to-ship voice, data and compressed video service. The experiment will entail use of a land-based earth station located at Norfolk, (GTE) Virginia and a Ku-band antenna aboard a U.S. Navy vessel. COMSAT is responsible for the provision of space segment, and for ^{GTE} assisting with the testing of the Ku-band antenna aboard the ship to determine the feasibility of certification as an INTELSAT Standard E-1 antenna.²

COMSAT has conducted preliminary tests at C-band and Ku-band under grants of special temporary authority issued by the Common Carrier Bureau's International Facilities Division (TAO-

¹ No Part 5 authorization is required for this antenna since it will operate on a ship of non-U.S. origin.

² GTE Government Systems is the licensee of the land-based antenna at Norfolk, Virginia and also has Experimental Special Temporary Authorization, File No. 3571-EX-PL-93, to operate the Ku-band antenna aboard the U.S. Navy ship.

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2170, TAO-2065, TAO-2199). Because of the experimental nature of this service, and because FCC rules currently do not provide for the use of C-band and Ku-band frequencies in the maritime environment, COMSAT is requesting experimental authority under Part 5 commencing not later than August 1, 1993.³ ←

COMSAT anticipates that, in addition to the two experiments described above, there will be other parties with an interest in determining the feasibility of using C- and Ku-band frequencies to communicate with seagoing vessels. Accordingly, COMSAT requests an Experimental Authorization for a two-year period to provide space segment in conjunction with such experiments, provided that operators of antennas on U.S.-registered ships have obtained Part 5 authorization. If these experiments prove successful and the service appears to be commercially viable, COMSAT will undertake the necessary rulemaking requests.

In this regard, a petition for rulemaking to amend Part 80 of the Commission's Rules, 47 C.F.R. Part 80, to permit the use of C- and Ku-band frequencies by digital shipboard earth stations is pending before the Commission.⁴ At this time, COMSAT is not prepared to pursue with the Commission any additional rule

³ PanAmSat has received similar authority from the Commission under Part 5 to use the PAS-1 satellite (KS2XAI, KG2XLZ).

⁴ Petition for Rule Making filed by Cresscom Transmission Services, RM-7912.

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changes that may be required until the adequacy of the antenna stabilizing mechanism can be assessed, and until it can be determined whether the antennas can qualify under INTELSAT standards. However, COMSAT does intend to charge for the use of INTELSAT space segment in connection with this experimental authorization.

In light of the above, COMSAT hereby requests authority to provide space segment for experimental use in assessing the feasibility of two-way service using C- and Ku-band frequencies in the maritime environment. The experiments described above, and any others that might be conducted, will use an INTELSAT V or INTELSAT VI satellite. Since INTELSAT V satellites (up to INTELSAT V (F-8)) were procured before the INMARSAT Convention entered into force, consultation with INMARSAT pursuant to Article 8 of the INMARSAT convention is not required. Consultation with INMARSAT for later INTELSAT V and/or INTELSAT VI satellites under Article 8 has been completed for five 64 Kbps full-duplex circuits and for two full-duplex T1 circuits.⁵ COMSAT would not exceed use of this amount of capacity for experiments involving satellites subject to Article 8 requirements without undertaking additional consultations under Article 8.

⁵ Technical information regarding both the INTELSAT V and INTELSAT VI satellites is on file with the Commission.

COMSAT respectfully submits that the grant of this application for experimental authority is in the public interest because it will foster the development of a new service and contribute valuable information on the use of FSS frequencies in the maritime environment. Such experiments will be conducted on a non-interference basis, and COMSAT and its customers realize that transmissions must cease in the unlikely event that they do cause harmful interference.