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April 1, 1999

VIA HAND DELIVERY

Mr. Douglas Young
Engineer
Federal Communications Commission
Office of Engineering and Technology
2000 M Street, NW
Room 271-A
Washington, DC 20554

Re: Experimental Radio Service Authorization Application of ICO USA Service Group, File No. 0007-EX-PL-1998

Dear Mr. Young:

On November 9, 1998, the ICO USA Service Group ("IUSG") filed an application for Commission authorization of an experimental program designed to verify the function of handset and portable transceiver prototypes for use with the proposed 2 GHz mobile satellite service of ICO Services Limited ("ICO") (FCC File No. 0007-EX-PL-1998). The application is currently pending before the Commission.

The IUSG, by its attorneys, respectfully requests that Exhibit 1 of the pending application be updated to reflect the recent applications filed by U.S. Electrodynamics, Inc. to operate the earth station antennas in Brewster, Washington, to be used in conjunction with the proposed ICO system. These applications replaced the withdrawn earth station antenna applications of COMSAT Corporation. For the convenience of the Commission, a revised page 1 and page 2 of Exhibit 1, which include a description of the recent U.S. Electrodynamic applications, are enclosed and should be used to replace the current page 1 and page 2 of Exhibit 1.

Should you have any questions regarding this matter, please contact the undersigned.

Respectfully yours,

Philip A. Bonomo

Enclosure

Program Description and Objectives

By this application, ICO USA Service Group[1] ("IUSG") requests Commission authorization of an experimental program designed to verify the function of handset and portable transceiver prototypes intended for use with the proposed 2 GHz Mobile Satellite Service ("MSS") of ICO Services Limited[2] ("ICO"). The experimental program is also designed to test the interoperability of these user terminals with feeder link gateway stations — in particular, ICO's North American gateway station.[3]

In general terms, the experimental program, as designed, will verify the function of the ICO satellite payload, user terminal transceiver and feeder link gateway. The program will also validate the link margins that have been designed into the system to cope with varying propagation conditions. The specific objectives of the experimental program include the following:

- validation of the Time Division Multiple Access ("TDMA") access method in the user link as the basic communication system approach for the ICO system;
- validation of the predicted performance of the ICO S-band transmit and receive satellite 163-beam Direct Radiating Array antennas;
- validation of the predicted performance of the communication payload forward transponder, from the feeder link gateway-to-satellite C-band receiver-to-user

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1 IUSG is a consortium of telecommunications oriented companies comprised of investors in ICO that are investigating the provision of MSS in the United States by means of the ICO satellite constellation. See Exhibit 3 infra.

2 On September 26, 1997, ICO filed with the Commission a Letter of Intent indicating its intention to provide MSS in the U.S. market through one or more service partners and seeking access to spectrum in the 2 GHz frequency band. ICO is a company established under the laws of England and Wales, and ICO space segment is subject to authorization by the United Kingdom.

3 On February 12, 1999, U.S. Electrodynamics, Inc. applied for the licenses to operate the transmit/receive earth station antennas in Brewster, Washington, to be used in conjunction with the ICO MSS system. See FCC File Nos. SES-LIC-19990212-00165 through 00169. These applications replace the earth station antenna applications filed by COMSAT Corporation and its business unit COMSAT Mobile Communications (together, "COMSAT") on July 8, 1997, which were withdrawn by COMSAT.

terminal, and return transponder, from the user terminal-to-satellite S-band receiver-to-gateway;

- demonstration of the ICO system's ability to assign different transmit power levels to: (1) different satellite beams, in accordance with geographic variations in user density; and (2) different users in the same beam, in accordance with the user's propagation condition and location;

- verification of the essential operating characteristics of the C-band feeder forward link (from gateway-to-satellite) and feeder return link (from the satellite-to-gateway) backhaul communication system;

- demonstration of the user terminal transceiver with respect to call setup and takedown, power control, as well as its performance during voice transmission;

- validation of the predicted performance of voice quality of the ICO vocoder in the presence of realistic propagation conditions, and verification of the ICO vocoder voice quality versus bit error rate;

- validation of the predicted estimate of the link margin requirement for realistic propagation conditions;

- demonstration of the operation of the gateway with respect to: (1) interaction with the user terminals in support of call setup, takedown, beam-to-beam hand over (i.e., assignment of time slots, frequency subbands), power control; and (2) its ability to interface with the public switched telephone network;

- demonstration of the ICO system's ability to hand over calls from one satellite beam to another and satellite-to-satellite handover; and

- validation of the predicted estimate of the capacity of a given satellite beam via representative loading of the other satellite beams operating on the same frequency subband.

The experiment proposed by IUSG will provide valuable information on several key components of the ICO system prior to commencement of service, which is scheduled to begin in the year 2000. Equally important, the information obtained from the experiment will promote timely development of the ICO system and help ensure delivery of its widely anticipated service to the public as scheduled.

ICO has consented to this experimental program and will assist and cooperate with IUSG in its implementation.