21 March 1986

MEMORANDUM FOR THE RECORD

SUBJECT: INTERNET Meeting on 21 March 1986 - COMSAT/FBIS

Attendees:	Helmo Raag William Cool	COMSAT COMSAT

The following items were presented/discussed:

- 1. Helmo Raag submitted a preliminary Statement of Work (SOW) for both the British and Panamanian Earth Terminals (copy attached) for FBIS review. The annexes called out in the SOW are not included because neither the United Kingdom nor Panama negotiations are complete.
- 2. Helmo stated that on 24-25 March 1986, COMSAT will be meeting with BTI to finalize the technical matters to be called out in the SOW for the United Kingdom Earth Terminal. On 26-27 March 1986, COMSAT and the BTI will finalize the contract so that it will be ready for signature.
- 3. Helmo brought up the Engineering Service Circuit (ESC) and wanted to better understand how it was to operate so that COMSAT could explain it to the BTI. Relative to this the following points were made:

Telephone Conversation

- a. The order wire (OW) must be capable of carrying on a conference call.
- b. The order wire should incorporate some type of signalling scheme to only ring the person or persons to whom you want to speak. However anyone who gets on the line will hear that the OW is being used.
- c. Some kind of priority override capability should be provided this would only reside in the Reston facility.

TTY

- a. TTY will be sent to all parties at the same time.
- b. Selective TTY transmission would be acceptable if it was easily accomplished.

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4. Helmo was given a duplicate tape of a wideband facsimile signal. Along with the tape, he was provided two printouts of the first page of data on the tape. One printout was made from the duplicate tape, the other from the original tape which resides with FED. The purpose of the printouts was to demonstrate that a page of text processed from the duplicate tape was of equal quality to one processed from the original tape.

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Attachment:

Statement of Work for British and Panamanian Earth Terminal

cc: COMSAT

COPY MAILED TO COMSAT ATTN: Mr. Raag

INTERNET Services in the United Kingdom and Panama Statement of Work

Purpose and Scope

The purpose of this Statement of Work (SOW) is to specify the work to be performed by the Contractor for the provision of earth stations and requisite terrestrial transmission facilities, as well as operation and maintenance of same for seven years, in the United Kingdom and Panama, for INTERNET service. The INTERNET service arrangements in the United Kingdom and Panama will differ and are detailed separately in the sections below. Nevertheless, the earth stations in the United Kingdom and Panama are required to be compatible in the handling of INTERNET signals, and to be compatible with the INTERNET earth station in the United States.

This SOW, and its Annexes, specify the performance requirements, equipments and services, as applicable, for the provision of INTERNET services in the United Kingdom and Panama.

The following annexes form part of this SOW:

- Annex 1 Negotiated Statement of Work for the provision of INTERNET services in the United Kingdom;
- Annex 2 Negotiated Statement of Work for the provision of a 13-meter C-band earth station in Panama;
- Annex 3 Negotiated Statement of Work for INTERCOMSA to provide earth station operation and maintenance in Panama.

2. Space Segment Access

The earth stations in the United Kingdom and Panama shall meet all INTELSAT and other relevant regulatory requirements, shall be able to work with INTELSAT satellites in the arc from 18.5 degrees West to 53 degrees West, shall be able to operate with both polarizations in both the transmit and receive modes, and shall be able to accommodate frequency assignments of the INTERNET signals anywhere in the 5.925 to 6.425 GHz transmit band, and in the 3.700 to 4.200 GHz receive band.

-2-

3. Earth Station Capacity

The earth stations in the United Kingdom and Panama shall be able to handle one reversible television signal in the NTSC, PAL or SECAM format, three full duplex 15 KHz program audio signals, one 60 KHz to 128 KHz reversible wideband facsimile signal and one 3 KHz order-wire circuit. The earth stations' G/T shall be at least 34 dB/OK at 4 GHz and at the operating angle for a satellite at 332.5 degrees East longitude.

4. Availability

The earth stations in the United Kingdom and Panama, and the associated terrestrial transmission facilities, as applicable, shall have an availability at least 0.99.

5. INTERNET Services in the United Kingdom

The Contractor shall, through contractual arrangements with British Telecom International (BTI), provide facilities, equipment and services for the transmission and reception of video, program audio, wideband facsimile and orderwire signals between the FBIS INTERNET facility at Caversham and an INTELSAT Atlantic Ocean Region satellite. The transmission and reception of the signals will be via a dedicated BTI earth station at Madley with requisite terrestrial transmission facilities between Madley and Caversham. The provision of the service shall be on a 24-hour, 7 days per week basis for 7 years commencing on or about 1 October 1986. BTI shall provide an adequate and competent staff for the operation and maintenance of the earth station and of the terrestrial transmission facilities. The Contractor shall insure that the provision of the service by BTI conforms with this SOW and the provisions of Annex 1.

6. INTERNET Services in Panana

The Contractor shall provide to FBIS, on a turnkey basis, an INTERNET earth station in Panama to be located at the FBIS facility at Panama. The earth station shall meet the requirements of this SOW and the provisions of Annex 2. The Contractor shall also provide, through contractual arrangements with INTERCOMSA, the Panamanian Signatory to INTELSAT, operation and maintenance of the earth station on a 18-hour, 7 days per week basis for 7 years commencing on or about 1 October 1986. INTERCOMSA shall provide an adequate and competent staff for the operation and maintenance of the earth station. The Contractor shall insure that the provision of operation and maintenance by INTERCOMSA conforms with this SOW and the provisions of Annex 3.

7. Deliverables

The Contractor shall provide the following deliverables:

- (a) INTERNET service in the United Kingdom as specified in Section 5 above;
- (b) INTERNET earth station in Panama as specified in Section 6 above;
- (c) Operation and maintenance of the INTERNET earth station in Panama as specified in Section 6 above;
- (d) Monthly progress reports to be provided to FBIS in five (5) copies ten (10) days after the beginning of each calendar month commencing 1 April 1986. Upon the commencement of INTERNET service in the United Kingdom and Panama, the monthly progress reports shall be replaced by quarterly operational reports for the 7 year contract period.