



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

U.61

(03/93)

TELEGRAPH SWITCHING RADIOTELEX INTERWORKING

DETAILED REQUIREMENTS TO BE MET IN INTERFACING THE INTERNATIONAL TELEX NETWORK WITH MARITIME SATELLITE SYSTEMS

ITU-T Recommendation U.61

(Previously "CCITT Recommendation")

FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation U.61 was revised by the ITU-T Study Group IX (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms "CCITT, CCIR or IFRB" or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Recommendation U.61

DETAILED REQUIREMENTS TO BE MET IN INTERFACING THE INTERNATIONAL TELEX NETWORK WITH MARITIME SATELLITE SYSTEMS

(Geneva, 1980; amended at Malaga-Torremolinos, 1984 and at Helsinki, 1993)

The CCITT,

considering

- (a) that fully automatic working between subscribers in the international telex service and subscribers to a radiotelex service provided by a maritime satellite system is technically possible;
- (b) Recommendation U.60, which gives the general requirements to be met in interfacing the international telex network with maritime satellite systems,

unanimously recommends

1 Maritime satellite systems should be capable of detecting the head-on collision condition at the coast earth station between a ship earth station request for call and a terrestrially originated call for that particular ship earth station and should:

- permit the ship-originated call to be connected to the international telex network; and
- terminate the call from the international telex network with an appropriate telex service signal (**OCC**) and a clear (see Recommendation F.60 [1]).

2 Should the head-on collision condition occur in the connections in the terrestrial network between the coast earth station and the telex exchange, then the normal procedures in accordance with the appropriate Series U Recommendations (see 3.3/U.12, clause 2/U.11 and 12.2/U.1) should prevail.

3 A call-connected signal or a telex service signal and clear shall be returned as soon as possible after the receipt of the end-of-selection character at the coast earth station for shore-originated calls. The signal return delay shall not exceed 35 seconds.

NOTE – For type C signalling (see Recommendation U.11) the end-of-selection (EOS) character is combination No. 26 in figure-shift mode (+) in International Telegraph Alphabet No. 2. For type D signalling (see Recommendation U.12) the EOS is character No. 11 in the Control Signalling Code (CSC). For signalling to Recommendation U.1, this signal shall be combination No. 26 in figure-shift mode (+) in International Telegraph Alphabet No. 2.

4 The maritime satellite system returns to the subscriber in the terrestrial network the service signal **DER** (see Recommendation F.60 [1]), followed by a clearing signal when the maritime satellite system detects:

- that the ship's station (teleprinter, control logic, radio equipment) is faulty;
- failure of the answer-back from the ship's teleprinter.

5 At the termination of the call the requirements of the clearing and clear-confirmation signals shall apply to and from the international network (see Recommendations U.1, U.11, U.12); the maritime satellite system may use different timings in the directions to and from the ship. It is preferred that the total times for such signal exchanges should have a minimum time addition to that quoted for the international network.

NOTE – Automatic calling equipment and subscribers in the international telex network may attempt, under certain conditions, to place a follow-on call to the same ship. Under conditions of long clear and clear-confirmation cycle times, such calls will not be successful.

6 In the first generation INMARSAT system, telex characters are transmitted in synchronous channels using 6-unit frames. A telex character is thus sent as one start element followed by the five information elements of International Telegraph Alphabet No. 2. Speed differences between the on-board teleprinter and the satellite circuit are compensated for by occasionally inserting six elements of Z polarity, i.e., whenever a frame is to be sent on the synchronous channel and there is no complete telex character available. When the characters are retransmitted into the telex network, a stop element nominally 1.5 units long is added. Therefore, a period of Z polarity equal to the duration of a telex character may occasionally appear in the data stream.