INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

U.46

(03/93)

TELEGRAPH SWITCHING

PARTICULAR SIGNALLING FACILITIES

INTERRUPTION OF AUTOMATIC TRANSMISSION AND FLOW CONTROL IN THE INTERNATIONAL TELEX SERVICE

ITU-T Recommendation U.46

(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.46 was prepared by the ITU-T Study Group IX (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

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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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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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INTERRUPTION OF AUTOMATIC TRANSMISSION AND FLOW CONTROL IN THE INTERNATIONAL TELEX SERVICE

(Helsinki, 1993)

The CCITT

considering

(a) that interruption of undesired transmission is required in the International Telex Service, e.g. to apply a clearing procedure;

(b) that such a procedure could be used to flow-control automatic transmission e.g. in the interworking environment;

(c) that a uniform procedure should be applied;

(d) that the Quality of Service of the International Telex Service should be preserved and abnormal conditions be avoided;

(e) that the different types of interworking functions should be taken into account,

unanimously recommends

that the following procedures should be applied in the International Telex Service:

1 Interruption of automatic transmission

The station/IWF requiring from the other end interruption of automatic transmission should attempt to prevent further characters being sent by transmitting a sequence of combination No. 20 (in letters or figures shift mode), as indicated in Recommendation S.4, until the transmission is halted, for a maximum of 20 seconds.

If the transmission continues after the 20 seconds period, the connection should be cleared forcefully back to the transmitting terminal or function.

If the transmission halts, the relevant function may be applied (e.g. return of a service signal).

2 Flow control in the interworking environment

2.1 Interworking function IWF

Resuming transmission of characters following an interruption may be required in the interworking environment for flow control purposes. However, due to the return of signals to the calling telex terminal over the backward signalling path, as per the procedure indicated under clause 1, the message will most likely be corrupted.

2.1.1 As the degree of that corruption can not be accurately estimated by the IWF or by the originating terminal, it is recommended to clear the connection with the following message being forwarded to the originating terminal:

EXM

TEMPORARY ABNORMAL CONDITION[1)]

BK

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1) Optional.

2.1.2 Alternatively the following procedure may be implemented in an IWF:

1) interrupt transmission as indicated under clause 1;
2) IWF returns the following text to the originator:

   EXM

   TEMPORARY ABNORMAL CONDITION[2)]
3) IWF informs the recipient of the abnormal condition forwarding the following text:

   MESSAGE INTERRUPTION - POSSIBLE CORRUPTION
4) IWF attends/monitors the abnormal condition and after resumption of the normal condition
5) invites the sender to resume transmission with the service signal

   GA

   To avoid the possibility of unnecessarily prolonging the chargeable duration, the interval between the halting of the transmission and the recommencement of transmission following the return of the service signal GA should be as short as possible and should not exceed six seconds.

6a) Should this period be exceeded, the call should be cleared towards the originating telex terminal with the service signal

   BK

6b) Continuation of the interrupted message should be resumed to the recipient with the following text appended:

   POSSIBLE INCOMPLETE MESSAGE

2.2 Telex terminal

A telex terminal shall be able to flow control an IWF after successfully having interrupted the transmission as per clause 1, by sending the service signal GA to IWF.

2.3 Other networks

The flow control procedures in the case of abnormal conditions applicable to other networks which have access to a telex interworking function are described in the relevant Recommendations. An affected telex subscriber shall be informed of such a condition by the code expression

EXM

TEMPORARY ABNORMAL CONDITION[2)]

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2) Optional.