INTERNATIONAL TELECOMMUNICATION UNION

ITU-T U.45

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

(03/93)

TELEGRAPH SWITCHING
PARTICULAR SIGNALLING FACILITIES

RESPONSE TO THE NOT-READY CONDITION OF THE TELEX TERMINAL

ITU-T Recommendation U.45

(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.45 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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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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RESPONSE TO THE NOT-READY CONDITION OF THE TELEX TERMINAL

(Melbourne, 1988; revised Helsinki, 1993)

The CCITT,

considering

(a) the increasing use of modern electronic terminals, telex automatic emitting devices (TAEDs) and stored-program-controlled exchanges in the international telegraph, telex and gentex networks;

(b) the desirability of standardizing the network and terminal responses to the various not-ready conditions of the terminal;

and recognizing

the need to keep the response as short as possible in order to avoid unnecessary charging;

unanimously recommends

the adoption of the following procedures in response to the not-ready condition of the telex terminal in new equipments and as far as possible in existing equipments.

1 Definition

1.1 The following term used in this Recommendation is defined as follows:

the **not-ready condition of the telex terminal**: The status of a terminal which prevents the return of the call connect signal or answerback sequence in response to a valid incoming call signal or WRU signal respectively.

Alternatively, the status which develops within a terminal during an established connection as a result of the exhaustion of the printing paper, or equivalent recording medium, and which results in premature clearing of the connection.

2 Scope

The provisions of this Recommendation apply only to printed service signals.

3 Call attempts to terminals already in the not-ready condition

3.1 For networks which do not utilize the additional information characters allowed by 10.1.2/U.1, then a call attempt to a terminal in the not-ready condition and connected to that network shall receive the standard service signal DER, constructed in accordance with Table 1/U.1 and 10.1.2/U.1.

It should be noted, however, that some Administrations use the standard service signal ABS to signal the not-ready condition as a result of loss of power at the called terminal.

3.2 An an exception to the above, the service codes listed in Recommendation F.131 shall be used when a call attempt is made from the international telex network to a ship-earth station participating in the maritime mobile service or the maritime mobile-satellite service and which is not capable of accepting the call.

3.3 For networks which can utilize these additional information characters, then a call attempt to a terminal in the not-ready condition and connected to that network shall receive the expanded version of the standard service signal DER, constructed in accordance with Table 1/U.1 and 10.1.2/U.1.

3.4 The additional information characters shall be in accordance with Table 1 for the not-ready conditions listed, where the caracter strings PFL, EXM and NAB have meanings as listed in 4.1.1/F.60.

3.5 For call re-attempts in accordance with Recommendation U.40, it is important that there is no confusion between the basic and expanded form of the service signal. For this reason, the format of the service signal train specified in 10.1.2/U.1 shall be rigidly applied, where the standard service signal is delimited by a carriage-return and line-feed sequence at beginning and end.

The standardization of a specific response to the PFL, EXM and NAB conditions is for further study.

3.6 It should be noted that where an expanded form of a U.1 service signal transits networks which apply signalling conversion rules in accordance with Recommendation U.15, then the additional information characters will be discarded by the conversion process and only the standard service text (i.e. ← ≡ ↓ DER ← ≡) will be translated by the Type D transit centre.

4 Activation of the not-ready condition during an established connection

4.1 During an established connection, the transition to the not-ready condition in the receiving terminal will generally be indicated by an escalation from a PAPER LOW to a PAPER OUT situation. For terminals which use electronic memory as the recording medium, this will be equivalent to STORE LOW and STORE FULL conditions.

The procedures to be applied during this transition are a national matter.

4.2 On reaching a PAPER OUT (or equivalent) condition, one of the following procedures should be applied:

4.2.1 The receiving terminal shall send a clearing signal to initiate immediate clearing of the connection.

4.2.2 Preferably, in new terminals and as far as possible in existing terminals, the following sequence of events will be activated.

4.2.2.1 Interrupt the incoming text as per Recommendation S.4.

4.2.2.2 Send the following character sequence at automatic speed

← ≡ ↓ EXM ← ≡

to indicate exhaustion of the recording medium.

4.2.2.3 Send the clearing signal to initiate clearing of the connection. (See Table 1.)

4.2.2.4 The reaction of automatic calling devices (terminals, CF, SFU) to the receipt of EXM and clearing during forward transmission is for further study.

4.2.3 If the transmitting terminal fails to respond to the request to stop transmission, then the receiving terminal shall initiate clearing in accordance with 4.2.1 above.

4.3 Further incoming calls to this terminal will be handled in accordance with clause 3 above.

4.4 In the situation where a transmitting terminal is about to reach a PAPER OUT condition, then it is recommended that the procedures of 4.2.2.2 and 4.2.2.3 be applied.

TABLE 1/U.45

Response to the not-ready condition in the telex terminal

Not-ready condition of terminal	Effect at exchange	Response of terminal	Signal sent by exchange
During established connection: imminent exhaustion of printing paper (or equivalent recording medium)	None	a) Initiate clearing as per national requirements, or b) Interrupt i/c text as per Recommendation S.4; Transmit the sequence ← ≡ ↓ EXN ← ≡; Initiate clearing as per national requirements. (Note 3)	None
During call set-up: (Note 1)			(Note 2)
– Power failure	No current		↓ PFL ← ≡ ↓ DER ← ≡ (Note 4)
– Lack of text recording medium	Non-receipt of call connect		↓ EXM ← ≡ ↓ DER ← ≡
– Failure of answerback	Non-receipt of valid answerback sequence		↓ NAB ← ≡ ↓ DER ← ≡

NOTES

1 Or technical failure presenting the same conditions at the exchange.

2 Service signal constructed in accordance with 10.1.2/U.1.

3 Should the incoming text fail to stop, then clear as per a).

4 See also 3.1.