INTERNATIONAL TELECOMMUNICATION UNION

ITU-T S.21

TELECOMMUNICATION
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TELEGRAPHY

ALPHABETICAL TELEGRAPH TERMINAL EQUIPMENT

USE OF DISPLAY SCREENS IN TELEX MACHINES

ITU-T Recommendation S.21

(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 S.21 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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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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USE OF DISPLAY SCREENS IN TELEX MACHINES

(Geneva, 1980; modified at Helsinki, 1993)

The CCITT

considering

(a) that any terminal machine connected to the telex network should meet the basic operational and technical requirements laid down in Recommendations F.60 [1], S.3, S.4, S.6, S.8 and S.9;

(b) that a visual display screen facilitates message preparation and automatic calling in the telex service;

(c) that it is important that the operator should not be interrupted in his work of preparing messages by an incoming call, except that the operator may need to be alerted if combination No. 10 in figure-shift in International Telegraph Alphabet No. 2 is received on the incoming line;

(d) that customer confidence in correct delivery of a telexed message requires that all signals sent or received by a telex terminal should be recorded in a permanent form,

unanimously declares the following views

1 Transmission of the answer-back should be in accordance with Recommendations S.6 and S.9.

2 It is essential that any telex terminal include a printer that records at least all the signals sent or received on the line. Such signals do not necessarily need to be presented on the display screen.

3 It should be possible to transmit a message prepared on the screen automatically to line and simultaneously to the local printer.

4 When a call is received, the operator should be able to prepare or to continue preparing a message by means of the keyboard, the display screen and, possibly, storage equipment. All characters received from or transmitted to line should be printed.

5 The format and content of the message appearing on the screen should be identical to those that will subsequently appear on the page copy of the calling and called subscriber's printers.

6 All the lines on the screen, except in a possible reserved area, should be available to display a message. This message may be

a) a message being prepared;

b) a message already stored in a memory;

c) a message incoming from the line.

NOTES

1 In cases a) and b) the screen should constitute a *window* that the operator can move line by line over the message or the stored part of the message. It is highly desirable that the movement of the *window* over the message should stop automatically when there are no more stored characters, the last recorded line being visible at the top of the screen.

2 In case c) it is desirable that:

– the message received, apart from being printed, can be stored in the memory at the end of the call;

– that the operator can converse with his correspondent, all the characters transmitted or received being visible on the screen.

7 A reserved area of the screen, where the operator cannot write anything, may be set aside in order to warn the operator:

a) that the memory is almost exhausted; or

b) that the visible portion of the message does not include the beginning of the message.

8 The display screen and its memory should employ a line length of 69 printing characters.

NOTE – This number of characters may not be strictly equivalent to the number sent to line, because the code used in the memory may not be the one used in telex calls.

9 It is very important that it should be possible to erase the message only at the command of the operator and not automatically at the end of transmission, so that the operator can send the same message to other addressees.

Reference

[1] CCITT Recommendation *Operational provisions for the international telex service*, Rec. F.60.