INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

S.20

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

(03/93)

TELEGRAPHY

ALPHABETICAL TELEGRAPH TERMINAL EQUIPMENT

AUTOMATIC CLEARING PROCEDURE FOR A TELEX TERMINAL

ITU-T Recommendation S.20

(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.20 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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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.

© ITU 1994

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

Recommendation S.20

AUTOMATIC CLEARING PROCEDURE FOR A TELEX TERMINAL

(Geneva, 1980; amended at Melbourne, 1988
and at Helsinki, 1993)

The CCITT

considering

(a) that new equipment should be capable of automatic performance of functions that would normally require an operator;

(b) that those operator functions that involve repetitive work or idle waiting on the part of an operator should be considered most immediately for automation of a terminal;

(c) that one of the most straightforward operator functions that could benefit from automatic assistance is the clearing of call;

(d) that conditions for automatic establishments of calls are laid down in Recommendation U.40 [1] whereas this Recommendation assumes that an operator is present to initiate the calling condition.

unanimously recommends

that the following procedure should be adopted for new equipment to assist operators by automatically providing a clearing down procedure following automatic transmission of a message.

1 the activation of this automatic procedure should be under the control of the operator, so that either manual control, or automatic control, can be selected according to the requirements of a particular call.

2 It is assumed that connection to the desired subscriber has already been established, and that the correctness of this connection has been confirmed by examination of the answer-back sequence received from the called subscriber.

3 It is also assumed that the message to be transmitted is ready for release to line via the automatic transmitter.

4 The subsequent procedure may be described as a series of steps as follows:

a) Operate the special control that initiates the following automatic transmission and clearing procedure.

b) (Optional, according to national requirements.) The equipment transmits a WRU signal in order to obtain a sample of the answer-back sequence of the called subscriber. This sequence is stored for subsequent checking.

NOTE – If step b) is not implemented it may be desirable to modify the subsequent procedure. For example, step h) may also be eliminated, with corresponding changes to step g) and step k). Also if this check procedure is not considered to be necessary, it may be desirable to reduce the period of alarm in step m) to less than 30 seconds before the terminal automatically clears the call.

c) Automatic transmission is started.

d) At any time, automatic transmission may be stopped by either the detection of incoming teleprinter signals or the forced clearing of the call. In the latter case an alarm should be given and then the call should be re-established by the operator. However, if the connection is still established but the automatic transmission has stopped, an alarm should be given to the operator. If the alarm is cleared by the operator within 30 seconds, proceed to step n) else step m). Automatic transmission may be resumed after a delay of 1 second. If the transmission includes a TDM system with loop back facilities [refer to 3.6.2 b)/R.101], this condition may continue for a period of 5 to 7 seconds.

e) The end of automatic transmission is detected locally by the tape-out contacts of the tape reader, or by the recognition of the transmission of an end of message pattern or by other means arranged within the terminal.

f) The terminal then automatically transmits the WRU signal (combinations Nos. 30 and 4) and awaits reception of the called subscriber's answer-back.

g) If the called subscriber's answer-back is received in less than six seconds the terminal immediately follows it by step h), otherwise it proceeds to step k).

h) If the received answer-back code is the same as the stored answer-back [step b)] the terminal makes step i), otherwise it proceeds to step 1).

i) The terminal transmits its own answer-back signal.

j) A clearing signal is initiated, and maintained until a clear confirm signal is recognized. This is followed by assumption of the free line condition.

k) If the called subscriber's answer-back is not received within six seconds, or if, it differs in more than one character from that stored in step b), then step f), the transmission of the WRU signal is repeated once more. If this results in the reception of a called subscriber's answer-back that is identical with that stored in step b), then the terminal proceeds to step i), otherwise to step 1).

l) An alarm is operated to attract an operator's attention. This alarm may be the same as that used for combination No. 10 (Bell) or it may be a separate alarm provided for the purpose.

m) If the operator does not cancel the alarm and restore manual control of the terminal functions within 30 seconds, the terminal moves to step i), sending its own answer-back and automatically clearing the call.

n) Having waited for a period of at least 7 seconds from the commencement of the alarm, the operator should send carriage return, line feed then a WRU signal. This delay is necessary to allow TDM systems with loop back to restore or normal or choose an alternative bearer [refer 3.6.2 b)/R.101]. If the called party's answer-back is correctly received, the tape should be reset after giving a further carriage return and line feed.

Automatic transmission can again be started.

5 Clearing of a broadcast call shall be in accordance with Recommendation U.44.

References

[1] CCITT Recommendation *Reactions by automatic terminals connected to the telex network in the event of ineffective call attempts or signalling incidents*, Rec. U.40.