



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

F.10

**OPERATIONS AND QUALITY OF SERVICE
TELEGRAPH SERVICES**

**CHARACTER ERROR RATE OBJECTIVE
FOR TELEGRAPH COMMUNICATION
USING 5 - UNIT START-STOP EQUIPMENT**

ITU-T Recommendation F.10

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation F.10 was published in Fascicle II.4 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

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

Recommendation F.10

CHARACTER ERROR RATE OBJECTIVE FOR TELEGRAPH COMMUNICATION USING 5-UNIT START-STOP EQUIPMENT

The CCITT,

considering

- (a) that it would be useful to have a common standard for assessing the quality of telegraph communications,
- (b) that the character error rate [1] of a telegraph communication would be suitable for this purpose;
- (c) that a defined error rate objective should be established;
- (d) that all forms of current wideband transmission techniques have intrinsic characteristics that make some errors economically unavoidable;
- (e) that occasional bursts of errors occur (errors that are concentrated into a relatively short time interval, i.e. seconds),

unanimously declares

- (1) that the quality of service must be the same for telegraph communication in the public telegram service, the telex service and the leased circuit service;
- (2) that the objective, irrespective of transmission media and intervening equipment, should be an error rate not greater than 3 in 100 000 alphabetic telegraph signals transmitted;
- (3) that the error rate objective should have not less than a 95% probability;
- (4) that, in the determination of error rate, measurements should be made for relatively long time periods, i.e. for at least several hours (see Note 1);
- (5) that the effects of operator error rates (e.g. in the public telegram service) and of local ends and their terminations (e.g. teleprinters) should be excluded when determining the error rate.

Note 1 – The minimum time interval should include the busy hour and be of at least 12 hours duration.

Note 2 – The absolute value for the error rate objective requires further study.

Reference

- [1] CCITT Definition: *Character error rate*, Vol. I, Fascicle I.3 (Terms and Definitions).