



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.276

**SPECIFICATIONS OF SIGNALLING SYSTEM No. 6
SIGNALLING LINK**

SERVICE DEPENDABILITY

ITU-T Recommendation Q.276

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation Q.276 was published in Fascicle VI.3 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 Q.276

6.6 SERVICE DEPENDABILITY

6.6.1 *Dependability requirements*

The following dependability requirements should be obtained with signalling links having the error rate characteristics as described in Recommendation Q.272, § 6.1.2. These requirements refer to each signalling link.

a) Signal units which carry telephone signal information and which are delayed as a consequence of correction by retransmission:

not more than one in 10^4 such signal units to be delayed as a long-term average.

b) Signal units of any type which give rise to wrongly-accepted signals due to undetected errors and causing false operation (e.g., false clear-back signal):

not more than one error in 10^8 of all signal units transmitted.

c) As in item b) but causing serious false operation (e.g., false metering or false clearing of connection):

not more than one error in 10^{10} of all signal units transmitted.

d) Interruption to the signalling service (including both normal and reserve links):

- interruption of duration between 2 seconds and 2 minutes - not more than once a year;
- interruption of duration exceeding 2 minutes - not more than once in 10 years.

Items a), b) and c) assume one telephone signal per signal unit. Results for a multi-unit message will be at least comparable to those for one-unit messages transmitting the same information.

6.6.2 *Retransmission considerations*

The requirement of § 6.6.1 a) above is inserted to limit the percentage of the answer signals which are delayed through the retransmission process. The amount of retransmission depends on the number of bits in the signal units and on interferences such as those caused by short interruptions and intermittent bursts of noise up to the point at which changeover to the reserve link occurs.

6.6.3 *Service interruption considerations*

The requirement of § 6.6.1 d) depends largely on the performance of the voice frequency links or digital links assigned for signalling. Therefore precautions should be taken in the design stage of the terminal equipment to ensure that the contribution to the total is relatively small.