

1. Relations with international standards

(1) This Standard is based on ITU-T Recommendation Q.703, Red Book, 1984.

2. Summary of departures from ITU-T Recommendations

(1) This Standard specifies no prior to ITU-T Recommendation.

(2) This Standard deletes the following items specified in the above ITU-T Recommendation.

- (a) The specification where LI of the link status signal unit equals two
- (b) Regarding retransmission, the facility when inconsistency occurs in any two backward sequence number values in three consecutively received signal units or fill-in signal units.

The facility when inconsistency occurs in any two forward indicator bit values in three consecutively received signal units or fill-in signal units.

- (c) Status Indication Normal alignment (SIN) in initial alignment status indications
- (d) Processor outage

Regarding item (a) deletion, there is no specific description in ITU-T Recommendation, No requirements are specified for domestic use.

Regarding item (b) deletion, TTC has concluded that bit errors on the transmission path can be completely detected in the digital signalling data link, and that other error-detecting methods specified in this Standard effectively detect link failures.

Regarding item (c) deletion, there is no practical advantage in providing "normal" alignment status separately from "emergency" alignment status. Moreover, the signalling data link can be initialized by SIE (Status Indication "Emergency alignment").

Regarding item (d) deletion, there is no special advantage in initializing processors by distinguishing signalling data link failure and processor failure.

(3) The following are specified in addition to the above ITU-T Recommendation.

- (a) Priority Indicator (PRI)
Sending-signal priority on MTP level has been studied and is adopted in this Standard.
- (b) Signal sending trigger
- (c) The outstanding number of MSUs that can be sent without receiving active acknowledgment in the signal unit sequence control.
- (d) The function to discard the received signal unit when the FIB value of the received MSU does not match the BIB value of the signal unit sent last.
- (e) The function to return a negative acknowledgment in the signal unit sequence control if the received MSU is the same as the previous one.
- (f) Timing Tl is newly defined to supervise and to detect excessive response delay.
- (g) Timing Te is newly defined to supervise the error rate of signal units. The supervision method is specified.
- (h) This Standard specifies timing values used in level 2.

Regarding item (a), the signal format is determined to cover applications to the existing signalling network providing signal transfer points. LI will be available to prioritize particular signal units between networks. This method also covers the case where this LI subfield is not used.

Item (b) is specified for stable signalling system operation.

Item (c) is specified to affect use of signalling system resources by defining the outstanding number within 127.

Item (d) is specified to increase error-detecting ability in signal unit sequence control.

Item (e) is provided to retransmit signal units more quickly and to increase error-correcting ability.

Item (f) is specified as the general method necessary to detect excessive response delay. The specified method uses transmission-path noise characteristics. It has the advantage of being applied independently from the bearers' rate.

Item (g) is timing necessary to supervise the signal unit error rate.

Item (h) is summarized for implementation. Timing values are given as guidelines from experience in the domestic field even when the timing value is provisionally defined by ITU-T Recommendation.

(4) In the following items one alternative is chosen and standardized in TTC for the reasons below.

- (a) Basic error correction is standardized as the error correction because this signalling system is not applicable to either intercontinental transmission or satellite signalling data link.

(5) The following are specified in TTC, which the ITU-T Recommendation mentions as national matters.

- (a) LI value shall be fixed at 63 if message length exceeds 62 octets.
- (b) SIF (Signal Information Field) length shall be from a minimum integer 2 octets to maximum integer 272 octets.