



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.57

PUBLIC DATA NETWORKS

TRANSMISSION, SIGNALLING AND SWITCHING

**METHOD OF TRANSMITTING A SINGLE
LOWER SPEED DATA CHANNEL ON A
64 kbit/s DATA STREAM**

ITU-T Recommendation X.57

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation X.57 was published in Fascicle VIII.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 X.57

**METHOD OF TRANSMITTING A SINGLE LOWER SPEED DATA
CHANNEL ON A 64 kbit/s DATA STREAM**

(Malaga-Torremolinos, 1984)

The CCITT,

considering

- (a) that the Recommendation X.1 defines the synchronous user classes of services to be provided by a public data network;
- (b) that Recommendation X.50 defines some envelope data formats which can be used in public data networks;
- (c) that the use of a full 64 kbit/s data stream for the transmission of a single lower speed synchronous data channel may be economically attractive in some applications, when a low cost 64 kbit/s channel is available;
- (d) that for customer access to circuit switched data services in the ISDN, a method for adaption of synchronous user data rates to a 64 kbit/s bearer rate is defined in Recommendation X.30, but that in certain applications as mentioned under (c) a simpler method is preferred,

unanimously declares

that for networks using a 6 + 2 envelope structure, a single low speed synchronous data channel (i.e. 600, 2400, 4800, 9600 bit/s) shall be transmitted through a 64 kbit/s data stream by using the following method:

The 6 + 2 envelopes related to the low speed channel shall be repeated as many times as required to reach the 64 kbit/s speed.

The receive end can recover the original data signal by taking out of the received 64 kbit/s stream an envelope for every envelope period of the chosen data rate.

In the networks which transmit the 8 kHz envelope timing, no alignment circuit is required in the receiver; in the networks not transmitting the 8 kHz timing, the alignment is obtained by transmitting an alignment pattern in the framing bit position of each envelope. When the framing bit is not used for alignment, it is available to transmit housekeeping information or, when this is not required, it is set to zero. Further study is needed for the case of 8 + 2 envelope structure.