INTERNATIONAL TELECOMMUNICATION UNION

ITU-T G.752

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

GENERAL ASPECTS OF DIGITAL TRANSMISSION SYSTEMS

TERMINAL EQUIPMENTS

CHARACTERISTICS OF DIGITAL MULTIPLEX EQUIPMENTS BASED ON A SECOND ORDER BIT RATE OF 6312 kbit/s AND USING POSITIVE JUSTIFICATION

ITU-T Recommendation G.752

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation G.752 was published in Fascicle III.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 G.752

CHARACTERISTICS OF DIGITAL MULTIPLEX EQUIPMENTS BASED ON A SECOND ORDER BIT RATE OF 6312 kbit/s AND USING POSITIVE JUSTIFICATION

(Geneva, 1976; amended at Geneva, 1980)

The CCITT,

considering

(a) that various third- and higher-order multiplex equipments exist due to the differing characteristics of networks and signal sources in those networks;

(b) that, although studies will continue with the aim of reducing the differences between various systems, the existing situation cannot be changed in the near future;

recommends the following

(1) when countries using 1544 kbit/s primary multiplex equipments, such as the PCM multiplex equipment according to Recommendation G.733 and second-order multiplex using 6312 kbit/s according to Recommendations G.743 and G.746, are planning digital paths requiring interconnection at higher bit rates they should, when practical, utilize third-order bit rates of either 32 064 kbit/s or 44 736 kbit/s. When countries using 32 064 kbit/s third-order multiplex equipments are planning digital paths requiring interconnection at higher bit rates, they should, when practical, utilize the fourth-order bit rate of 97 728 kbit/s.

For Figure 1/G.752 refer to Figure 1/G.702 for the basic multiplex arrangements recommended for Administrations using 1544 kbit/s primary multiplex equipment. The bit rates of terrestrial systems should accommodate multiples of 1544 kbit/s. Whenever practical, the bit rate should also accommodate a multiple of 6312 kbit/s, either 32 064 or 44 736 kbit/s, and 97 728 kbit/s;

(2) the characteristics of the third-order multiplex equipments using positive justification is given in § 1, below;

(3) the characteristics of the fourth-order multiplex equipments using positive justification is given in § 2 below.

1 Third-order digital multiplex equipment based on second-order bit rate of 6312 kbit/s and using positive justification

1.1 *General*

The third-order digital multiplex equipment using positive justification described below, is intended for use on digital paths and between countries using 1544 kbit/s and 6312 kbit/s primary and secondary multiplex equipments.

A bit rate of either 32 064 kbit/s or 44 736 kbit/s is recommended to allow for the efficient and economical coding of wideband signals in the networks of Administrations using primary systems according to Recommendations G.733 and G.743. For instance for a 300 voice-circuit mastergroup (Recommendation G.233 [1]) 32 064 kbit/s is appropriate, while for a 600 voice-circuit mastergroup 44 736 kbit/s coding is appropriate.

1.2 *Third-order digital multiplex equipment operating at 32 064 kbit/s*

1.2.1 *Bit rate*

The nominal bit rate should be 32 064 kbit/s. The tolerance on that rate should be ± 10 parts per million (ppm).