INTERNATIONAL TELECOMMUNICATION UNION

ITU-T G.791

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

GENERAL ASPECTS OF DIGITAL TRANSMISSION SYSTEMS

TERMINAL EQUIPMENTS

GENERAL CONSIDERATIONS ON TRANSMULTIPLEXING EQUIPMENTS

ITU-T Recommendation G.791

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation G.791 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.791

GENERAL CONSIDERATIONS ON TRANSMULTIPLEXING EQUIPMENTS

(Geneva, 1980; further amended)

The CCITT,

considering

the advantages offered in some cases by direct through-connection (without voice-frequency interfaces) from FDM signals to TDM signals and vice versa,

recommends in such cases

(1) the use of the transmultiplexing equipment described in Definition 4020 of Recommendation G.701;

(2) Recommendation G.792 which contains the characteristics common to all transmultiplexing equipment;

(3) Recommendation G.793 which concerns 60-channel transmultiplexers providing 2048 kbit/s signals and using A-law encoding;

(4) Recommendation G.794 which concerns 24-channel transmultiplexers providing 1544 kbit/s signals and using μ-law encoding.

1 Complementary definitions

1.1 type P transmultiplexer (TMUX-P)

A transmultiplexing equipment in which the analogue interface is made up of several groups.

1.2 type S transmultiplexer (TMUX-S)

A transmultiplexing equipment in which the analogue interface is made up of one or more supergroups.

1.3 hierarchical transmultiplexer

A transmultiplexer in which the digital interfaces satisfy the provisions of Recommendations G.703 and G.704 and the analogue interfaces those of Recommendation G.233 [1].

1.4 transmultiplexer channel

A frequency band of 4000 Hz on the analogue side, corresponding to a bit rate of 64 kbit/s on the digital side, which permits the transmission of a signal limited to the telephone band 300-3400 Hz. Access may be gained to a given channel:

- either at the level of the time slot associated with the relevant channel of the TDM signal;
- or at the level of the frequency band (f_p, f_p ± 4000 Hz) of the FDM signal, f_p being the virtual carrier frequency associated with the channel concerned. The + sign corresponds to the case of the base

supergroup, the - sign to the case of the base group.

Note - Correspondence between out-of-band signalling on the analogue side and channel associated signalling on the digital side will be covered in the Recommendations specific to the various transmultiplexers.

2 Transmultiplexer application

The application on transmultiplexers for the interconnection of digital and analogue networks is illustrated in Supplement No. 28.

Reference

[1] CCITT Recommendation *Recommendations concerning translating equipments*, Vol. III, Rec. G.233.