



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Series G

Supplement 28

(10/1984)

SERIES G: DIGITAL NETWORKS

Transmission systems and multiplexing equipment

**Application of transmultiplexers,
FDM codecs, data-in-voice (DIV) systems
and data-over-voice (DOV) systems
during the transition from an analogue to a
digital network**

ITU-T G-series Recommendations – Supplement 28

Originally published in Red Book (1984) - Fascicle III.3

NOTES

- 1 Supplement 28 to the G-series Recommendations was approved in Málaga-Torremolinos (1984)
and published in Fascicle III.3 of the *Red Book*. This file is an extract from the *Red Book*. While the
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- 2 In this Supplement, the expression “Administration” is used for conciseness to indicate both a
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**APPLICATION OF TRANSMULTIPLEXERS, FDM CODECS, DATA-IN-VOICE (DIV) SYSTEMS
AND DATA-OVER-VOICE (DOV) SYSTEMS
DURING THE TRANSITION FROM AN ANALOGUE TO A DIGITAL NETWORK**

(Malaga-Torremolinos, 1984)

(referred to in Recommendations G.791 to G.795)

1 Introduction

The transition from analogue to digital networks takes place in a number of phases during which interconnection must be carried out between analogue and digital systems. The precise characteristics of the various transitional phases depend on both the peculiarities of the existing analogue network and the introduction scenario chosen, which may vary from one country to another. The purpose of this Supplement is to list the types of equipment which may be used in the transition period and to give some of their typical applications.

2 Interconnection between analogue and digital equipments

Since all telecommunication networks are made up of switching or transmission centres linked to one another by transmission media, the various cases of interconnection may be illustrated schematically by the typical configuration given in Figure 1 where X and Y are the centres to be connected by means of transmission medium Z. The interfaces between the centres and the transmission medium are within the FDM and TDM hierarchies. An interconnection problem arises when X, Y and Z are not all either analogue or digital. Two of the four possible cases involve a single analogue-digital conversion, whereas the two remaining ones involve two conversions (see Table 1).

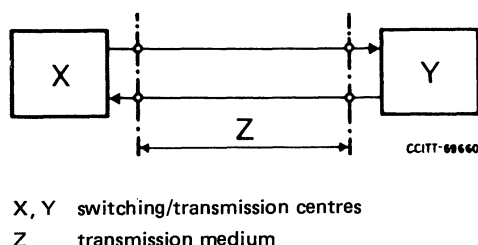


FIGURE 1

Typical interconnection configuration

TABLE 1

Interconnection between analogue and digital equipments

Case	X	Z	Y
1	A	A	D
2	A	D	D
3	A	D	A
4	D	A	D

A: A level in the analogue hierarchy.

N: A level in the digital hierarchy.