



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.724

**GENERAL ASPECTS OF DIGITAL TRANSMISSION
SYSTEMS**

TERMINAL EQUIPMENTS

**CHARACTERISTICS OF A 48-CHANNEL
LOW BIT RATE ENCODING PRIMARY
MULTIPLEX OPERATING AT 1544 kbit/s**

ITU-T Recommendation G.724

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation G.724 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.

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Recommendation G.724

CHARACTERISTICS OF A 48-CHANNEL LOW BIT RATE ENCODING PRIMARY MULTIPLEX OPERATING AT 1544 kbit/s

(Melbourne, 1988)

1 General

1.1 Fundamental characteristics

The 48-channel primary multiplexer provides conversion between 48 voice-frequency channels and one 1544 kbit/s ADPCM stream. In the 1544 kbit/s stream, the voice-frequency signals are coded according to the PCM encoding law defined in Recommendation G.711 and the ADPCM encoding law defined in Recommendation G.721. In addition, it may be arranged to provide limited 64 kbit/s unrestricted channel transfer capacity for baseband digital channel.

Figure 1/G.724 represents the nomenclature used.

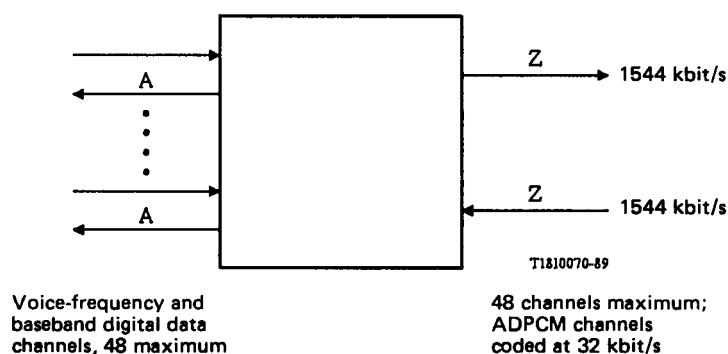


FIGURE 1/G.724

48-channel low bit rate encoding primary multiplex

The 1544 kbit/s stream associated with port Z can be partitioned into four independent 384 kbit/s entities defined as time-slot groupings. Each 384 kbit/s time-slot grouping consists of twelve 32 kbit/s time slots which can be used to transport up to 12 voice-frequency channels or 11 voice-frequency channels plus their channel associated a-b-c-d signalling information. Therefore, the 1544 kbit/s stream associated with port Z will have a maximum channel capacity of between 44 and 48 voice-frequency channels.

Note 1 - Administrations should take into account the guidance given in Recommendation G.721 concerning the use and transmission performance of 32 kbit/s ADPCM.

Note 2 - It should be noted that the primary multiplex equipment described in this Recommendation has a limited capability of transparently transporting 64 kbit/s data channel, and this should be taken into account in the planning of networks which are likely to evolve into an ISDN (see § 4.2).

1.2 Timing signal

It should be possible to derive the transmit timing signal from an incoming digital signal or from an external source.