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**SERIES G: TRANSMISSION SYSTEMS AND MEDIA,
DIGITAL SYSTEMS AND NETWORKS**

**Digital transmission systems – Terminal equipments –
Principal characteristics of multiplexing equipment for the
synchronous digital hierarchy**

**Characteristics of a flexible multiplexer in a
synchronous digital hierarchy environment**

ITU-T Recommendation G.785

(Previously CCITT Recommendation)

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ITU-T RECOMMENDATION G.785**CHARACTERISTICS OF A FLEXIBLE MULTIPLEXER IN A SYNCHRONOUS
DIGITAL HIERARCHY ENVIRONMENT****Summary**

This Recommendation covers functional requirements for a flexible multiplexer intended to be installed in a synchronous digital hierarchy environment. The flexible multiplexer provides time-division multiplexing and demultiplexing functions of signals supporting a variety of user services. This Recommendation should be used in conjunction with Recommendations G.783 and G.797 as only additional requirements are presented to describe the functions of the equipment.

Source

ITU-T Recommendation G.785 was prepared by ITU-T Study Group 15 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 8th of November 1996.

FOREWORD

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

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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Introduction

This Recommendation gives the characteristics of a flexible multiplex equipment intended to be installed in a synchronous digital hierarchy environment. This Recommendation provides additional requirements to those presented in Recommendations G.797 and G.783 and necessary to describe the functions of the equipment. The flexible multiplex equipment is able to handle a variety of services with transparency for service provider, allowing enhanced management capabilities and to be used in the access network. The management of the equipment is in line with general principles of the Telecommunications Management Network (TMN).

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Recommendation G.785**CHARACTERISTICS OF A FLEXIBLE MULTIPLEXER IN A SYNCHRONOUS
DIGITAL HIERARCHY ENVIRONMENT***(Geneva, 1996)***1 General characteristics****1.1 Definitions**

This Recommendation defines the following terms.

Refer also to 1.2 for additional functional description.

1.1.1 flexible access system (FA): A flexible access system is a means of providing a wide range of telecommunication services to customers in a flexible manner. These services may be delivered at the customer premises or from a public network location.

On the network side, connections are established to the appropriate service networks.

The flexible access system is managed by the TMN.

1.1.2 flexible multiplexer (FM): A device that provides time-division multiplexing and demultiplexing of signals supporting a variety of user services. In addition, the device provides enhanced management capabilities.

The flexible multiplexer is part of flexible access system.

1.1.3 flexible access termination (FAT): The flexible access termination is used in conjunction with the flexible multiplexer to constitute a flexible access system.

1.1.4 monoservice 2048 kbit/s G.704 frame: A digital signal with structure according to 2.3/G.704 and clause 5/G.704 comprising constituent 64 kbit/s or $n \times 64$ kbit/s signals and any related signalling corresponding to only one particular service network.

1.1.5 multiservice 2048 kbit/s G.704 frame: A digital signal with structure according to 2.3/G.704 comprising constituent 64 kbit/s or $n \times 64$ kbit/s signals and any related signalling corresponding to various service networks.

1.1.6 embedded operation channel (EOC): An embedded operation channel is a physical channel of the managed network used for management communication purposes, specifically to exchange information between Network Element (NE) functions and Operations System (OS) or Mediation Device (MD) functions. It may be carried over different physical bearers.

1.2 Abbreviations

This subclause contains the abbreviations which are not defined in the core text of the Recommendation.

AIS	Alarm Indication Signal
CRC	Cyclic Redundancy Check
DC	Direct Current
DCC	Data Communication Channel
DCE	Data Circuit-terminating Equipment