International Telecommunication Union

# ITU-T G.780/Y.1351

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

**Amendment 1**

(06/2005)

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

Digital terminal equipments – Principal characteristics of multiplexing equipment for the synchronous digital hierarchy

SERIES Y: GLOBAL INFORMATION INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS AND NEXT-GENERATION NETWORKS

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# Terms and definitions for synchronous digital hierarchy (SDH) networks

## Amendment 1

ITU-T Recommendation G.780/Y.1351 (2004) – Amendment 1

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# ITU-T Recommendation G.780/Y.1351

## Terms and definitions for synchronous digital hierarchy (SDH) networks

## Amendment 1

**Summary**

This amendment identifies additional terminology definitions to be inserted into ITU-T Rec. G.780/Y.1351 (07/2004).

**Source**

Amendment 1 to ITU-T Recommendation G.780/Y.1351 (2004) was approved on 29 June 2005 by ITU-T Study Group 15 (2005-2008) under the ITU-T Recommendation A.8 procedure.

## 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.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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# ITU-T Recommendation G.780/Y.1351

## Terms and definitions for synchronous digital hierarchy (SDH) networks

## Amendment 1

### 1) Add "shortened binary-BCH"

*Add new definition, 3.2.115a, as follows:*

**3.2.115a shortened binary-BCH**: A shortened version of the class of the block linear cyclic codes. These shortened binary BCH codes have the following common properties, i.e.:

$n = 2^m - 1 - s$

$k = n - t \times m$

$d = 2 \times t + 1$

where:

n the size of the whole code word;

k the number of the information bits;

m the parameter of the BCH code;

t the number of the corrected errors within the block of the BCH code;

d the minimum code distance;

s the amount of information eliminated as part of the code shorting.

### 2) Add "dSTM-12*NMi* interface"

*Add new definition, 3.2.35a, as follows:*

**3.2.35a dSTM-12*NMi* interface**: An SDH transmission interface which transports one or more TU-12, with SHDSL-based section overhead. dSTM-12*NMi* interfaces are defined for SHDSL transport technologies. The number (*N*) of TU-12 in dSTM-12*NMi* interfaces provided by ITU-T Rec. G.707/Y.1322 Amendment 1 is limited to $N = 1$ to 9 inclusive. The number (*M*) of SHDSL wire pairs over which the dSTM-12*NMi* signal is transported is limited to $M = 1$ to 4 inclusive. The number (*i*) represents the presence or absence of an ($M \times i \times 8$) kbit/s DCC in the dSTM-12*NMi* signal; it is limited to $i = 0,..,7$ (single-pair mode), $i = 0,..,4$ (2-pair mode), $i = 0,..,3$ (3-pair mode) and $i = 0,1,2$ (4-pair mode) or 1. Not all combinations of *N* and *M* are allowed. Refer to Table G.1, ITU-T Rec. G.707/Y.1322 Amendment 1.

### 3) Add "embedded control channel (ECC)"

*Add new definition, 3.2.37a, as follows:*

**3.2.37a embedded control channel (ECC)**: An ECC provides a logical operations channel between SDH NEs, utilizing a data communications channel (DCC) as its physical layer.

**4) Add "APS controller"**

*Add new definition, 3.2.9a, as follows:*

**3.2.9a APS controller**: That part of a node that is responsible for generating and terminating information carried in the APS protocol and implementing the APS algorithm.

**5) Add "APS request"**

*Add new definition, 3.2.9b, as follows:*

**3.2.9b APS request**: That set of signals into an APS controller that determines its behaviour. An APS request can be either an externally initiated command or an automatically initiated command.

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