

ITU-T

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**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**

Internet protocol aspects – Transport

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

Recommendation ITU-T G.780/Y.1351

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For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T G.780/Y.1351

Terms and definitions for synchronous digital hierarchy (SDH) networks

Summary

Recommendation ITU-T G.780/Y.1351 provides terms, definitions and abbreviations used in synchronous digital hierarchy (SDH) Recommendations. Physical layer terminology, synchronization-related terminology, and terms applicable to multiple technologies in addition to SDH are not included. The goal of this Recommendation is to be a single normative source for terms in this subject area.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T G.780	1994-11-01	15
2.0	ITU-T G.780	1999-07-02	15
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Keywords

Definitions, synchronous digital hierarchy (SDH), terminology.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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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Recommendation ITU-T G.780/Y.1351

Terms and definitions for synchronous digital hierarchy (SDH) networks

1 Scope

This Recommendation contains a list of terms, definitions and abbreviations used in Recommendations dealing with synchronous digital hierarchy (SDH) networks. SDH terms specific to synchronization or physical layer or characteristics are not a part of this Recommendation.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T G.702] Recommendation ITU-T G.702 (1988), *Digital hierarchy bit rates*.
- [ITU-T G.703] Recommendation ITU-T G.703 (2001), *Physical/electrical characteristics of hierarchical digital interfaces*.
- [ITU-T G.707] Recommendation ITU-T G.707/Y.1322 (2007), *Network node interface for the synchronous digital hierarchy (SDH)*, including its amendments.
- [ITU-T G.783] Recommendation ITU-T G.783 (2006), *Characteristics of synchronous digital hierarchy (SDH) equipment functional blocks*, plus Amendment 1 (2008) and Amendment 2 (2010), *Support for optical modules transporting 40 Gigabit/s signals via a multilane interface*.
- [ITU-T G.784] Recommendation ITU-T G.784 (1999), *Synchronous digital hierarchy (SDH) management*.
- [ITU-T G.803] Recommendation ITU-T G.803 (2000), *Architecture of transport networks based on the synchronous digital hierarchy (SDH)*.
- [ITU-T G.805] Recommendation ITU-T G.805 (2000), *Generic functional architecture of transport networks*.
- [ITU-T G.806] Recommendation ITU-T G.806 (2006), *Characteristics of transport equipment – Description methodology and generic functionality*.
- [ITU-T G.826] Recommendation ITU-T G.826 (2002), *End-to-end error performance parameters and objectives for international, constant bit-rate digital paths and connections*.
- [ITU-T G.828] Recommendation ITU-T G.828 (2000), *Error performance parameters and objectives for international, constant bit-rate synchronous digital paths*.
- [ITU-T G.829] Recommendation ITU-T G.829 (2002), *Error performance events for SDH multiplex and regenerator sections*.
- [ITU-T G.841] Recommendation ITU-T G.841 (1998), *Types and characteristics of SDH network protection architectures*.
- [ITU-T G.842] Recommendation ITU-T G.842 (1997), *Interworking of SDH network protection architectures*.



- [ITU-T G.870] Recommendation ITU-T G.870/Y.1352 (2008), *Terms and definitions for optical transport networks (OTN)*.
- [ITU-T G.7712] Recommendation ITU-T G.7712/Y.1703 (2008), *Architecture and specification of data communication network*.
- [ITU-T M.3010] Recommendation ITU-T M.3010 (2000), *Principles for a telecommunications management network*.
- [ITU-T X.710] Recommendation ITU-T X.710 (1997) | ISO/IEC 9595:1998, *Information technology – Open Systems Interconnection – Common Management Information service*.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 Terms defined in [ITU-T G.805]:

- access point (AP)
- adaptation
- characteristic information (CI)
- connection
- connection point (CP)
- network connection (NC)
- subnetwork connection (SNC)
- trail
- trail termination function (TT)

3.1.2 Terms defined in [ITU-T G.806]:

- alarm
- all ONEs
- defect
- failure
- function
- management information (MI)
- path
- process
- signal degrade (SD)
- signal fail (SF)

3.1.3 Term defined in [ITU-T G.7712]:

- embedded control channel (ECC)

3.1.4 Terms defined in [ITU-T G.870]:

- bridge
- head-end
- null signal
- switch