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

Packet over Transport aspects – MPLS over Transport aspects

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

Internet protocol aspects – Transport

Terms and definitions for MPLS transport profile

Recommendation ITU-T G.8101/Y.1355

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Terms and definitions for MPLS transport profile

Summary

Recommendation ITU-T G.8101/Y.1355 is a compilation of terms and abbreviations used in MPLS transport profile Recommendations.

History

Edition	Recommendation	Approval	Study Group	Unique ID[*]
1.0	ITU-T G.8101/Y.1355	2006-12-14	15	11.1002/1000/9004
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Terms and definitions for MPLS transport profile

1 Scope

This Recommendation contains a complete listing of the definitions and abbreviations used in the Recommendations associated with MPLS transport profile (MPLS-TP) listed in Appendix I.

This Recommendation provides a representation of the MPLS-TP technology using the methodologies that have been used for other transport technologies, (e.g., SDH, OTN and Ethernet).[1]

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.704]	Recommendation ITU-T G.704 (1998), *Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels*.
[ITU-T G.832]	Recommendation ITU-T G.832 (1998), *Transport of SDH elements on PDH networks – Frame and multiplexing structures*.
[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 (2012), *Characteristics of transport equipment – Description methodology and generic functionality*.
[ITU-T G.870]	Recommendation ITU-T G.870/Y.1352 (2012), *Terms and definitions for optical transport networks*.
[ITU-T G.7710]	Recommendation ITU-T G.7710/Y.1701 (2012), *Common equipment management function requirements*.
[ITU-T G.7712]	Recommendation ITU-T G.7712/Y.1703 (2010), *Architecture and specification of data communication network*.
[ITU-T G.8001]	Recommendation ITU-T G.8001/Y.1354 (2013), *Terms and definitions for Ethernet frames over Transport*.
[ITU-T G.8112]	Recommendation ITU-T G.8112/Y.1371 (2012), *Interfaces for the MPLS Transport Profile layer network*.
[ITU-T M.3010]	Recommendation ITU-T M.3010 (2000), *Principles for a telecommunications management network*.
[ITU-T M.3013]	Recommendation ITU-T M.3013 (2000), *Considerations for a telecommunications management network*.

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[1] This ITU-T Recommendation is intended to be aligned with the IETF MPLS RFCs normatively referenced by this Recommendation.

[ITU-T M.3100]	Recommendation ITU-T M.3100 (2005), *Generic network information model*.
[ITU-T X.700]	Recommendation ITU-T X.700 (1992), *Management framework for Open Systems Interconnection (OSI) For CCITT Applications*.
[ITU-T X.701]	Recommendation ITU-T X.701 (1997), *Information technology – Open Systems Interconnection – Systems management overview*.
[ITU-T X.731]	Recommendation ITU-T X.731 (1992)	ISO/IEC 10164-2:1993, *Information technology – Open Systems Interconnection – Systems management: State management function*.
[IETF RFC 3031]	IETF RFC 3031 (2001), *Multiprotocol Label Switching Architecture*.
[IETF RFC 3032]	IETF RFC 3032 (2001), *MPLS Label Stack Encoding*.
[IETF RFC 3270]	IETF RFC 3270 (2002), *Multi-Protocol Label Switching (MPLS) Support of Differentiated Services*.
[IETF RFC 5462]	IETF RFC 5462 (2009), *Multiprotocol Label Switching (MPLS) Label Stack Entry: "EXP" Field Renamed to "Traffic Class" Field*.
[IETF RFC 5586]	IETF RFC 5586 (2009), *MPLS Generic Associated Channel*.
[IETF RFC 5921]	IETF RFC 5921 (2010), *A Framework for MPLS in Transport Networks*.

3   Definitions

3.1   Terms defined elsewhere

The following terms are defined in [ITU-T G.805]:

3.1.1   access point

NOTE – Access point is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.2   adapted information

NOTE – Adopted information is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.3   administrative domain

NOTE – Administrative domain is referred to in [b-ITU-T G.8110.1].

3.1.4   characteristic information

NOTE – Characteristics information is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.5   client/server relationship

NOTE – Client/server relationship is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.6   connection

NOTE – Connection is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.7   connection point

NOTE – Connection point is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.8   connection supervision

NOTE – Connection supervision is referred to in [b-ITU-T G.8110.1].

3.1.9 layer network

NOTE – Layer network is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.10 link

NOTE – Link is referred to in [b-ITU-T G.8110.1].

3.1.11 link connection

NOTE – Link connection is referred to in [b-ITU-T G.8110.1].

3.1.12 matrix

NOTE – Matrix is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1] and [b-ITU-T G.8121.2].

3.1.13 network

NOTE – Network is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.14 network connection

NOTE – Network connection is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.15 reference point

NOTE – Reference point is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.16 sublayer

NOTE – Sublayer is referred to in [b-ITU-T G.8110.1].

3.1.17 subnetwork

NOTE – Subnetwork is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.18 subnetwork connection

NOTE – Subnetwork connection is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.19 tandem connection

NOTE – Tandem connection is referred to in [b-ITU-T G.8110.1].

3.1.20 termination connection point

NOTE – Termination connection point is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.21 trail

NOTE – Trail is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.22 trail termination

NOTE – Trail termination is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.23 transport

NOTE – Transport is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.24 transport entity

NOTE – Transport entity is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.25 transport processing function

NOTE – Transport processing function is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.26 unidirectional connection

NOTE – Unidirectional connection is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.27 unidirectional trail

NOTE – Unidirectional trail is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1] and [b-ITU-T G.8121.2].

The following terms are defined in [ITU-T G.806]:

3.1.28 atomic function (AF)

NOTE – Atomic function (AF) is referred to in [b-ITU-T G.8151].

3.1.29 defect

NOTE – Defect is referred to in [b-ITU-T G.8113.1] and [b-ITU-T G.8113.2].

3.1.30 failure

NOTE – Failure is referred to in [b-ITU-T G.8113.1] and [b-ITU-T G.8113.2].

3.1.31 management point (MP)

NOTE – Management point (MP) is referred to in [b-ITU-T G.8151].

The following terms are defined in [ITU-T G.7710]:

3.1.32 local craft terminal

NOTE – Local craft terminal is referred to in [b-ITU-T G.8151].

3.1.33 management application function (MAF)

NOTE – Management application function (MAF) is referred to in [b-ITU-T G.8151].

The following terms are defined in [ITU-T G.7712]:

3.1.34 data communication network (DCN)

NOTE – Data communication network (DCN) is referred to in [b-ITU-T G.8151].

The following terms are defined in [ITU-T M.3010]:

3.1.35 network element (NE)

NOTE – Network element (NE) is referred to in [b-ITU-T G.8151].

3.1.36 network element function (NEF)

NOTE – Network element function (NEF) is referred to in [b-ITU-T G.8151].

3.1.37 Q-Interface

NOTE – Q-Interface is referred to in [b-ITU-T G.8151].

3.1.38 workstation function (WF)

NOTE – Workstation function (WF) is referred to in [b-ITU-T G.8151].

The following term is defined in [ITU-T M.3013]:

3.1.39 message communication function (MCF)

NOTE – Message communication function (MCF) is referred to in [b-ITU-T G.8151].

The following terms are defined in [ITU-T M.3100]:

3.1.40 alarm reporting

NOTE – Alarm reporting is referred to in [b-ITU-T G.8151].

3.1.41 alarm reporting control (ARC)

NOTE – Alarm reporting control (ARC) is referred to in [b-ITU-T G.8151].

3.1.42 managed entity

NOTE – Managed entity is referred to in [b-ITU-T G.8151].

3.1.43 management interface

NOTE – Management interface is referred to in [b-ITU-T G.8151].

3.1.44 persistence interval

NOTE – Persistence interval is referred to in [b-ITU-T G.8151].

3.1.45 operations system (OS)

NOTE – Operations system (OS) is referred to in [b-ITU-T G.8151].

3.1.46 operations system function (OSF)

NOTE – Operations system function (OSF) is referred to in [b-ITU-T G.8151].

3.1.47 qualified problem

NOTE – Qualified problem is referred to in [b-ITU-T G.8151].

3.1.48 reset threshold report

NOTE – Reset threshold report is referred to in [b-ITU-T G.8151].

3.1.49 threshold report

NOTE – Threshold report is referred to in [b-ITU-T G.8151].

3.1.50 timed interval

NOTE – Timed interval is referred to in [b-ITU-T G.8151].

The following term is defined in [ITU-T X.700]:

3.1.51 managed object (MO)

NOTE – Managed object (MO) is referred to in [b-ITU-T G.8151].

The following terms are defined in [ITU-T X.701]:

3.1.52 agent

NOTE – Agent is referred to in [b-ITU-T G.8151].

3.1.53 manager

NOTE – Manager is referred to in [b-ITU-T G.8151].

3.1.54 managed object class (MOC)

NOTE – Managed object class (MOC) is referred to in [b-ITU-T G.8151].

The following term is defined in [ITU-T X.731]:

3.1.55 administrative state

NOTE – Administrative state is referred to in [b-ITU-T G.8110.1].

The following terms are defined in [ITU-T G.870]:

3.1.56 network survivability

NOTE – Network survivability state is referred to in [b-ITU-T G.8110.1].

3.1.57 protection

NOTE – Protection is referred to in [b-ITU-T G.8110.1].

3.1.58 restoration

NOTE – Restoration is referred to in [b-ITU-T G.8110.1].

The following terms are defined in [ITU-T G.8001]:

3.1.59 maintenance entity

NOTE – Maintenance entity is referred to in [b-ITU-T G.8110.1].

3.1.60 maintenance entity group

NOTE – Maintenance entity group is referred to in [b-ITU-T G.8110.1].

3.1.61 maintenance entity group intermediate point compound function

NOTE – Maintenance entity group intermediate point compound function is referred to in [b-ITU-T G.8110.1].

3.1.62 on-demand monitoring

NOTE – On-demand monitoring is referred to in [b-ITU-T G.8110.1].

3.1.63 pro-active monitoring

NOTE – Pro-active monitoring is referred to in [b-ITU-T G.8110.1].

3.1.64 NNI

NOTE – NNI is referred to in [ITU-T G.8112].

The following terms are defined in [ITU-T G.8112]:

3.1.65 MPLS-TP-NNI

NOTE – MPLS-TP-NNI is referred to in [ITU-T G.8112].

3.1.66 UNI

NOTE – UNI is referred to in [ITU-T G.8112].

The following terms are defined in [IETF RFC 3031]:

3.1.67 label

NOTE – Label is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.68 label stack

NOTE – Label stack is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.69 label switched path

NOTE – Label switching path is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.70 MPLS label stack

NOTE – MPLS label stack is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

The following terms are defined in [IETF RFC 3032]:

3.1.71 bottom of stack

NOTE – Bottom of stack is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.72 label value

NOTE – Label value is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.73 time to live

NOTE – Time to live is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

The following terms are defined in [IETF RFC 3270]:

3.1.74 label inferred PHB scheduling class LSP

NOTE – Label inferred PHB scheduling class LSP is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.75 per-hop behaviour

NOTE – Per-hop behaviour is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

The following terms are defined in [IETF RFC 5462]:

3.1.76 explicitly TC-encoded-PSC LSP

NOTE – Explicitly TC-encoded-PSC LSP is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.77 traffic class

NOTE – Traffic class is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

The following terms are defined in [IETF RFC 5586]:

3.1.78 associated channel header

NOTE – Associated channel header is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.79 generic associated channel

NOTE – Generic associated channel is referred to in [b-ITU-T G.8121], [b-ITU-T G.8121.1], [b-ITU-T G.8121.2] and [b-ITU-T G.8110.1].

3.1.80 G-Ach label

NOTE – G-Ach Label is referred to in [b-ITU-T G.8121] and [b-ITU-T G.8121.1], [b-ITU-T G.8121.2].

3.1.81 G-Ach packet

NOTE – G-Ach packet is referred to in [b-ITU-T G.8110.1].

3.1.82 G-Ach packet payload

NOTE – G-Ach packet payload is referred to in [b-ITU-T G.8110.1].

The following terms are defined in [IETF RFC 5921]:

3.1.83 MPLS transport profile (MPLS-TP)

NOTE – MPLS transport profile (MPLS-TP) is referred to in [b-ITU-T G.8110.1], [b-ITU-T G.8113.1] and [b-ITU-T G.8113.2].

3.1.84 MPLS-TP LSP

NOTE – MPLS-TP LSP is referred to in [b-ITU-T G.8110.1].

3.1.85 pseudowire

NOTE – Pseudowire is referred to in [b-ITU-T G.8110.1].

3.1.86 MPLS-TP PE

NOTE – MPLS-TP PE is referred to in [ITU-T G.8112].

3.1.87 CE

NOTE – CE is referred to in [ITU-T G.8112].

3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

3.2.1 MPLS-TP adapted information (MPLS-TP_AI) traffic unit: The MPLS-TP adapted information (MPLS-TP_AI) traffic unit is an instance of characteristic information and a unit of usage, which consists of an MPLS-TP_AI header containing the Bottom of Stack Indicator (S-bit) field of the MPLS shim header and an MPLS payload field.

NOTE – See more details in [b-ITU-T G.8110.1].

3.2.2 MPLS-TP characteristic information (MPLS-TP_CI) traffic unit: The MPLS-TP characteristic information (MPLS-TP_CI) traffic unit is an instance of characteristic information and a unit of usage, which consists of an MPLS-TP_AI traffic unit or of a MPLS-TP OAM traffic unit, extended with an MPLS-TP_CI header containing the time-to-live (TTL) field of the MPLS shim header.

NOTE 1 – See more details in [b-ITU-T G.8110.1].

NOTE 2 – MPLS-TP CI traffic unit is referred to in [ITU-T G.8112].

3.2.3 MPLS-TP management network (MT_MN): An MPLS-TP management network is a subset of a TMN that is responsible for managing those parts of a network element that contain MPLS-TP layer network entities. A MT_MN may be subdivided into a set of MPLS-TP Management SubNetworks.

NOTE – MPLS-TP Management Network (MT_MN) is referred to in [b-ITU-T G.8151].

3.2.4 MPLS-TP management subnetwork (MT_MSN): An MPLS-TP management subnetwork (MT_MSN) consists of a set of separate embedded control channels (ECC) and associated intra-site data communication links which are interconnected to form a data communications network (DCN) within any given MPLS-TP transport topology. For MPLS-TP, the physical channel supporting the ECC is the MPLS-TP management communication channel (MCC) as defined in [ITU-T G.7712]. A MT_MSN represents a MPLS-TP specific local communication network (LCN) portion of a network operator's overall DCN or TMN.

NOTE – MPLS-TP Management SubNetwork (MT_MSN) is referred to in [b-ITU-T G.8151].

3.2.5 MPLS-TP network element (MT_NE): That part of a network element that contains entities from one or more MPLS-TP layer networks. A MT_NE may therefore be a standalone physical entity or a subset of a network element. It supports at least network element functions (NEF) and may also support an operations system function (OSF). It contains managed objects (MO), a message communication function (MCF) and a management application function (MAF). The functions of a MT_NE may be contained within an NE that also supports other layer networks. These layer network entities are considered to be managed separately from MPLS-TP entities. As such they are not part of the MT_MN or MT_MSN.

NOTE – MPLS-TP network element (MT_NE) is referred to in [b-ITU-T G.8151].

4 Abbreviations and acronyms

The following abbreviations and acronyms are used in a series of MPLS-TP Recommendations.

NOTE – The purpose of this clause 4 is to define a single abbreviation or acronym and avoid overlap of abbreviations or acronyms among MPLS-TP Recommendations.

1DM	One-Way Delay Measurement
ACH	Associated Channel Header
AcSL	Accepted Signal Label
AF	Atomic Function
AI	Adapted Information
AIS	Alarm Indication Signal
ALM	Alarm reporting
AP	Access Point
APS	Automatic Protection Switching
ARC	Alarm Reporting Control
BFD	Bidirectional Forwarding Detection
CC	Continuity Check
CC/CV	Continuity Check or Connectivity Verification
CCM	Continuity Check Message
C-DCI	Client – Defect Clear Indication
CFI	Client Failure Indication
CI	Characteristic Information
CII	Common Interworking Indicators
CLNE	Client Layer Network Entity
CoS	Class of Service
CSF	Client Signal Fail
CtrlP	Control Plane
CW	Control Word
CO-PS	Connection-Oriented Packet Switched
CP	Connection Point
CV	Connectivity Verification
DA	Destination Address
DCC	Data Communication Channel
DCN	Data Communication Network
DE	Drop Eligibility
DLM	Direct Loss Measurement
DSMap	Downstream Mapping
DM	Delay Measurement
DMM	Delay Measurement Message
DMR	Delay Measurement Reply
DP	Drop Precedence
DT	Diagnostic Test

ECC	Embedded Communication Channels
ECMP	Equal Cost Multi-Path
E-LSP	Explicitly TC-encoded-PSC LSP
EMF	Equipment Management Function
ES	Experimental Specific
ETH	Ethernet MAC layer network
ETH_CI	Ethernet MAC Characteristic Information
ETY	Ethernet PHY layer network
EXM	Experimental OAM Message
EXP	Experimental
EXR	Experimental OAM Reply
FC	Frame Count
FCAPS	Fault management, Configuration management, Account management, Performance management and Security management
FDI	Forward Defect Indication
FEC	Forwarding Equivalence Class
FFS	For further study
FP	Flow Point
FTP	Flow Termination Point
GAL	Generic Associated channel (G-Ach) Label
G-ACh	Generic Associated Channel
GFP	Generic Framing Procedure
GFP-F	Frame mapped-Generic Framing Procedure
GNE	Gateway Network Element
IANA	Internet Assigned Numbers Authority
ICC	ITU Carrier Code
IaDI	Intra-Domain Interface
IETF	Internet Engineering Task Force
IF	Interface
ILM	Inferred Loss Measurement
IP	Internet Protocol
IrDI	Inter-Domain Interface
iPHB	Incoming Per Hop Behaviour
LAN	Local Area Network
LBM	Loopback Message
LBR	Loopback Reply
LC	Link Connection

LCAS	Link Capacity Adjustment Scheme	
LCK	Locked (G.8121) or Locked Signal (G.8113.1 and G.8113.2)	
LCN	Local Communication Network	
LCT	Local Craft Terminal	
LER	Label Edge Router	
LKI	Lock Instruct	
LKR	Lock Report	
L-LSP	Label-Only-Inferred PSC LSP	
LM	Loss Measurement	
LMM	Loss Measurement Message	
LMR	Loss Measurement Reply	
LOC	Loss of Continuity	
LOS	Loss of Signal	
LSE	Label Stack Entry	
LSP	Label Switched Path	
LSR	Label Switch Router	
LStack	Label Stack	
MAC	Media Access Control	
MAF	Management Application Function	
MCC	Management Communication Channel	
MCF	Message Communication Function	
MD	Mediation Device	
ME	Maintenance Entity	
MEL	MEG Level	
MEG	Maintenance Entity Group	
MEP	Maintenance entity group (MEG) End Point	
MIP	Maintenance entity group (MEG) Intermediate Point	
MF	Mediation Function	
MgmtP	Management Plane	
MI	Management Information	
MIB	Management Information Base	
MIP	Maintenance entity group Intermediate Point	
MMG	Mis-merge	
MN	Management Network	
MO	Managed Object	
MOC	Managed Object Class	
MoE	MPLS-TP over ETH	

MoO	MPLS-TP over OTH
MoP	MPLS-TP over PDH
MoS	MPLS-TP over SDH
MP	Management Point
MPLS	Multi-Protocol Label Switching
MPLS-TP	Multi-Protocol Label Switching – Transport Profile
MPLS-TP_AI	MPLS-TP Adapted Information
MPLS-TP_CI	MPLS-TP Characteristic Information
MPLS-TPP	MPLS-TP Path
MPLS-TPT	MPLS-TP Tandem connection monitoring
M_SDU	MAC Service Data Unit
MSN	Management Subnetwork
MS-PW	Multi-Segment Pseudowire
MT	Multi-Protocol Label Switching – Transport Profile
MT_C	MPLS-TP Channel layer
MT_MN	MPLS-TP Management Network
MT_MSN	MPLS-TP Management Subnetwork
MT_NE	MPLS-TP Network Element
MT_P	MPLS-TP Path layer
MT_S	MPLS-TP Section layer
MTDe	MPLS-TP MEP Diagnostic function
MTDi	MPLS-TP MIP Diagnostic function
MTH	MPLS-TP Layer Network
MTH-NNI	MPLS-TP Layer Network Network Node Interface
MTM-n	MPLS-TP Transport Module layer n
MTP	MPLS-TP path layer
MTS	MPLS-TP Section
MTU	Maximum Transmit Unit
NALM	No Alarm reporting
NALM-CD	No Alarm reporting, Count Down
NALM-NR	No Alarm reporting, Not Ready
NALM-QI	No Alarm reporting, Qualified Inhibit
NALM-TI	No Alarm reporting, Timed Inhibit
NC	Network Connection
NE	Network Element
NEF	Network Element Function
NEL	Network Element Layer

NSP	Native Service Processing
NNI	Network Node Interface or Network Network Interface
NMS	Network Management System
Num	Number
OAM	Operation, Administration and Maintenance
OAM&P	Operations, Administration, Maintenance and Provisioning
ODCV	On-Demand Connectivity Verification
ODU	Optical channel Data Unit
ODUj	Optical Channel Data Unit – order j
ODUj-Xv	Virtual concatenated Optical Channel Data Unit – order j
ODUk	Optical Channel Data Unit – order k
ODUk-Xv	Virtual concatenated Optical Channel Data Unit – order k
OpCode	Operations Code
oPHB	Outgoing Per Hop Behaviour
OPU	Optical Payload Unit
OPUk	Optical Payload Unit of level k
OPUk-Xv	Virtually concatenated Optical Payload Unit of level k
OS	Operations System
OSF	Operations System Function
OSI	Open Systems Interconnection
OTH	Optical Transport Hierarchy
OTN	Optical Transport Network
p2mp	point-to-multipoint
p2p	point-to-point
P11s	1544 kbit/s PDH path layer with synchronous 125 µs frame structure according to [ITU-T G.704]
P12s	2048 kbit/s PDH path layer with synchronous 125 µs frame structure according to [ITU-T G.704]
P31s	34368 kbit/s PDH path layer with synchronous 125 µs frame structure according to [ITU-T G.832]
P32e	44 736 kbit/s PDH path layer with frame structure according to ITU T G.704
PA	(Ethernet) Preamble
PD	Packet Delay
PDH	Plesiochronous Digital Hierarchy
PDU	Protocol Data Unit
PDV	Packet Delay Variation
PHB	Per Hop Behaviour

PHP	Penultimate Hop Popping
PHY	Physical
PID	Protocol Identifier
PM	Performance Monitoring
PMC	Performance Monitoring Clock
PRBS	Pseudo-Random Bit Sequence
PSC	PHB Scheduling Class
PSI	Payload Structure Indication
PSN	Packet Switched Network
PT	Payload Type
PW	Pseudowire
PWE3	Pseudowire Emulation Edge-to-Edge
QoS	Quality of Service
QTF	Querier's Timestamp Format
RES	Reserved overhead
Req	Request
Resp	Response
RFC	IETF Request for Comments
RDI	Remote Detect Indication
RI	Remote Information
RP	Remote Point
RPTF	Responder's Preferred Timestamp Format
RTF	Responder's Timestamp Format
RT	Route Trace
RTC	Real Time Clock
Rx	Receive
SA	Source Address
S-bit	Bottom of Stack indicator
SCC	Signalling Communication Channel
SCN	Signalling Communication Network
SDH	Synchronous Digital Hierarchy
SFD	Start of Frame Delimiter
Sk	Sink
SLA	Service Level Agreement
SLNE	Server Layer Network Entity
SN	Sub-Network
SNAP	Sub-Network Access Protocol

SNC	Sub-Network Connection
SNC/S	SNCP with Sublayer monitoring
SNCP	Sub-Network Connection Protection
So	Source
SPME	Sub-Path Maintenance Element
SQI	Session Query Interval
SRV	Server
SSF	Server Signal Fail[2]
SS-PW	Single-Segment Pseudowire
STM-N	Synchronous Transport Module – level N
TC	Traffic Class
TCM	Tandem Connection Monitoring
TCP	Termination Connection Point
TFP	Termination Flow Point
TH	Throughput
TNE	Transport Network Element
TLV	Type Length Value
TMN	Telecommunication Management Network
TrCP	Traffic Conditioning Point
TS	Timestamp
TSFmt	Timestamp Format
TSB	Telecommunication Standardization Bureau
TSD	Trail Signal Degrade
TSF	Trail Signal Fail
TST	Test
TT	Trail Termination
TTL	Time-To-Live
TTSI	Trail Termination Source Identifier
Tx	Transmit
UNI	User Network Interface
UNL	Unexpected (MEG) Level
UNM	Unexpected MEP
UNP	Unexpected Period
UNPr	Unexpected Priority
VC	Virtual Container

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[2] The IETF has not yet selected a term for this abstract information element.

VCCV	Virtual Circuit Connectivity Verification
VC-m	Lower Order VC – order m
VC-n	Higher Order VC – order n
VC-n-Xc	Contiguous concatenated VC – order n
VC-n-Xv	Virtual concatenated VC – order n
vcPT	virtual concatenation Payload Type
VcPLM	Virtual concatenation Payload Mismatch
VS	Vendor Specific
VSM	Vendor Specific (OAM) Message
VSR	Vendor Specific (OAM) Reply
WAN	Wide Area Network
WS	WorkStation
WTR	Wait To Restore

Appendix I

List of source Recommendations

(This appendix does not form an integral part of this Recommendation.)

This text is an updated version of Recommendation ITU-T G.8101/Y.1355, *Terms and definitions for MPLS transport profile*. The abbreviations and terms were taken from the Recommendations listed below. Where the definitions were not a part of an explicit Definitions clause of the source Recommendation, the source Recommendation is referenced in a Note following the definition. After this Recommendation is finally approved, corrigenda or revisions to the original sources of these terms will be proposed to replace the definitions in those documents by references to this one (except where the definition is part of the source Recommendation text and not in a definitions clause). The end result should be a single normative definition for each term in this subject area, contained in this Recommendation.

Recommendation	Latest version	MPLS-TP specific definitions
ITU-T G.7712/Y.1703	09/2010	No
ITU-T G.8110.1/Y.1370.1	12/2011	No
ITU-T G.8112/Y.1371	09/2012	Yes
ITU-T G.8113.1/Y.1372.1	11/2012 with Amd. 1	Yes
ITU-T G.8113.2/Y.1372.2	11/2012 with Amd. 1	Yes
ITU-T G.8121/Y.1381	07/2013 with Amd. 1	No
ITU-T G.8121.1/Y.1381.1	07/2013	No
ITU-T G.8121.2/Y.1381.2	07/2013	No
ITU-T G.8151/Y.1374	07/2012	Yes

Appendix II

Terms and definitions for MPLS transport profile defined by the IETF

(This appendix does not form an integral part of this Recommendation.)

The following IETF RFC/I-D contain provisions which, through reference in this text, constitute provisions of this appendix. At the time of publication, the editions indicated were valid. All RFC/I-D are subject to revision; users of this list are therefore encouraged to investigate the possibility of applying the most recent edition of the RFC/I-Ds listed below.

[b-IETF tp-rosetta-stone]   IETF Internet Draft draft-ietf-mpls-tp-rosetta-stone-04 (2011), *A Thesaurus for the Terminology used in Multiprotocol Label Switching Transport Profile (MPLS-TP) drafts/RFCs and ITU-T's Transport Network Recommendations. RFC 3031 (2001), Multiprotocol Label Switching Architecture*.

[b-IETF RFC 6291]   IETF RFC 6291 (2011), *Guidelines for the Use of the "OAM" Acronym in the IETF*.

II.1 Definitions

The following terms are defined in [b-IETF RFC 6291]:

II.1.1 Mgmt.

II.1.2 OAM

II.1.3 O&M

II.1.4 SDO

The following terms are defined in [b-IETF tp-rosetta-stone]:

II.1.5 associated bidirectional path

II.1.6 bidirectional path

II.1.7 client layer network

II.1.8 concatenated segment

II.1.9 control plane

II.1.10 co-routed bidirectional path

II.1.11 domain

II.1.12 layer network

II.1.13 link

II.1.14 MPLS-TP logical ring

II.1.15 MPLS-TP physical ring

II.1.16 MPLS-TP ring topology

II.1.17 path

II.1.18 section layer network

II.1.19 segment

II.1.20 server layer

II.1.21 span

II.1.22 sublayer

II.1.23 tandem connection

II.1.24 transport network

II.1.25 transport path

II.1.26 transport path layer

II.1.27 transport service layer

II.1.28 transmission media layer

II.1.29 unidirectional path

II.1.30 failure

II.1.31 fault

II.1.32 defect

II.1.33 MPLS transport profile (MPLS-TP)

II.1.34 MPLS section

II.1.35 MPLS-TP NE

II.1.36 MPLS-TP network

II.1.37 equipment management function (EMF)

II.1.38 data communication network (DCN)

II.1.39 communication channel (CC)

II.1.40 embedded communication channel (ECC)

II.1.41 management communication channel (MCC)

II.1.42 management communication network (MCN)

II.1.43 signaling communication channel (SCC)

II.1.44 signaling communication network (SCN)

II.1.45 operations system (OS)

II.1.46 maintenance entity

II.1.47 maintenance end points (MEPs)

NOTE – Should be Maintenance Entity Group End Points.

II.1.48 maintenance intermediate points (MIPs)

NOTE – Should be Maintenance Entity Group Intermediate Points.

II.1.49 server MEPs

II.2 Abbreviations

The following abbreviations are used in IETF RFCs/I-Ds:

CC   Communications Channel

DCN   Data Communication Network

ECC   Embedded Communication Channel

EMF   Equipment Management Function

MCC	Management Communication Channel
MCN	Management Communication Network
ME	Maintenance Entity
MEG	ME Group
MEP	MEG End Point
MIP	MEG Intermediate Point
Mgmt	Management
MPLS	Multiprotocol Label Switching
MPLS-TP	MPLS Transport Profile
NE	Network Element
OAM	Operations, Administration and Maintenance
O&M	OAM and Management
SCC	Signaling Communication Channel
SCN	Signaling Communication Network
SDO	Standards Development Organization

Bibliography

[b-ITU-T G.8110.1] Recommendation ITU-T G.8110.1/Y.1370.1 (2011), *Architecture of MPLS Transport Profile layer network.*

[b-ITU-T G.8113.1] Recommendation ITU-T G.8113.1/Y.1372.1 (2012), *Operations, administration and maintenance mechanism for MPLS-TP in packet transport networks,* plus Amendment 1 (2013).

[b-ITU-T G.8113.2] Recommendation ITU-T G.8113.2/Y.1372.2 (2012), *Operations, administrations and maintenance mechanisms for MPLS-TP networks using the tools defined for MPLS,* plus Amendment 1 (2013).

[b-ITU-T G.8121] Recommendation ITU-T G.8121/Y.1381 (2013), *Characteristics of MPLS-TP equipment functional blocks.*

[b-ITU-T G.8121.1] Recommendation ITU-T G.8121.1/Y.1381.1 (2013), *Characteristics of MPLS-TP equipment functional blocks supporting ITU T G.8113.1/Y.1372.1.*

[b-ITU-T G.8121.2] Recommendation ITU-T G.8121.2/Y.1381.2 (2013), *Characteristics of MPLS-TP equipment functional blocks supporting ITU-T G.8113.2/Y.1372.2.*

[b-ITU-T G.8151] Recommendation ITU-T G.8151/Y.1374 (2012), *Management aspects of the MPLS-TP network element.*

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