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

Packet over Transport aspects – Ethernet over Transport
aspects

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

Internet protocol aspects – Transport

Ethernet private LAN service

Recommendation ITU-T G.8011.5/Y.1307.5



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Recommendation ITU-T G.8011.5/Y.1307.5

Ethernet private LAN service

Summary

Recommendation ITU-T G.8011.5/Y.1307.5 defines the service attributes and parameters for carrying Ethernet private LAN characteristic information over dedicated-bandwidth, point-to-point connections provided by synchronous digital hierarchy (SDH), asynchronous transfer mode (ATM), multi-protocol label switching (MPLS), plesiochronous digital hierarchy (PDH), Ethernet PHY layer network (ETY) optical transport hierarchy (OTH), Ethernet MAC layer network (ETH) or other server layer networks.

History

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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.

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Recommendation ITU-T G.8011.5/Y.1307.5

Ethernet private LAN service

1 Scope

This Recommendation defines the service attributes and parameters for carrying Ethernet characteristic information over dedicated-bandwidth, point-to-point connections provided by SDH, ATM, MPLS, PDH, ETY, OTH, ETH or other server layer networks. This type of service is referred to as Ethernet private LAN (EPLAN) service. This Recommendation is based on the Ethernet service framework as defined in [ITU-T G.8011].

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.707] Recommendation ITU-T G.707/Y.1322 (2003), *Network node interface for the synchronous digital hierarchy (SDH)*.
- [ITU-T G.709] Recommendation ITU-T G.709/Y.1331 (2001), *Interfaces for the optical transport network*.
- [ITU-T G.805] Recommendation ITU-T G.805 (2000), *Generic functional architecture of transport networks*.
- [ITU-T G.809] Recommendation ITU-T G.809 (2003), *Functional architecture of connectionless layer networks*.
- [ITU-T G.7043] Recommendation ITU-T G.7043/Y.1343 (2004), *Virtual concatenation of plesiochronous digital hierarchy (PDH) signals*.
- [ITU-T G.8001] Recommendation ITU-T G.8001/Y.1354 (2008), *Terms and definitions for Ethernet frames over transport*.
- [ITU-T G.8010] Recommendation ITU-T G.8010/Y.1306 (2004), *Architecture of Ethernet layer networks*.
- [ITU-T G.8011] Recommendation ITU-T G.8011/Y.1307 (2009), *Ethernet service characteristics*.
- [ITU-T G.8012] Recommendation ITU-T G.8012/Y.1308 (2004), *Ethernet UNI and Ethernet NNI*.
- [ITU-T G.8012.1] Recommendation ITU-T G.8012.1/Y.1308.1 (2012), *Interfaces for the Ethernet transport network*.
- [ITU-T G.8013] Recommendation ITU-T G.8013/Y.1731 (2013), *OAM functions and mechanisms for Ethernet based networks*.
- [ITU-T G.8021] Recommendation ITU-T G.8021/Y.1341 (2012), *Characteristics of Ethernet transport network equipment functional blocks*.
- [ITU-T G.8021.1] Recommendation ITU-T G.8021.1/Y.1341.1 (2012), *Types and characteristics of Ethernet transport network equipment*.

- [IEEE 802.1Q] IEEE 802.1Q-2011, *IEEE Standard for Local and metropolitan area networks – Media Access Control (MAC) Bridges and Virtual Bridged Local Area Networks*.
- [IEEE 802.1AX] IEEE 802.1AX-2008, *IEEE Standard for Local and metropolitan area networks – Link Aggregation*.
- [IEEE 802.3] IEEE 802.3-2012, *IEEE Standard for Ethernet*.
- [MEF 6.1] MEF 6.1 (2008), *Ethernet Services Definitions – Phase 2*.
- [MEF 6.1.1] MEF 6.1.1 (2012), *Layer 2 Control Protocol Handling Amendment to MEF 6.1*.
- [MEF 10.2] MEF 10.2 (2009), *Ethernet Services Attributes Phase 2*.
- [MEF 26.1] MEF 26.1 (2012), *External Network Network Interface (ENNI) – Phase 2*.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

- 3.1.1 **access link:** [ITU-T G.8001].
- 3.1.2 **customer:** [ITU-T G.8001].
- 3.1.3 **ETH link:** See clause 6.6 of [ITU-T G.8010].
- 3.1.4 **Ethernet connection (EC):** [ITU-T G.8001].
- 3.1.5 **Ethernet service:** [ITU-T G.8001].
- 3.1.6 **Ethernet service area:** [ITU-T G.8001].
- 3.1.7 **Ethernet service instance:** [ITU-T G.8001].
- 3.1.8 **Ethernet virtual connection (EVC):** [ITU-T G.8010].
- 3.1.9 **ENNI:** [MEF 26.1].
- 3.1.10 **flow domain fragment:** [ITU-T G.8010].
- 3.1.11 **flow point:** [ITU-T G.809].
- 3.1.12 **flow termination:** [ITU-T G.809].
- 3.1.13 **link:** [ITU-T G.805].
- 3.1.14 **link connection:** [ITU-T G.805].
- 3.1.15 **network-to-network interface (NNI):** [ITU-T G.8001].
- 3.1.16 **operator virtual connection (OVC):** [MEF 26.1].
- 3.1.17 **service frame:** [ITU-T G.8010].
- 3.1.18 **subnetwork:** [ITU-T G.8010].
- 3.1.19 **termination flow point:** [ITU-T G.809].
- 3.1.20 **traffic conditioning function:** [ITU-T G.8010].
- 3.1.21 **user-to-network interface (UNI):** [ITU-T G.8001].

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ATM	Asynchronous Transfer Mode
ATM VC	Asynchronous Transfer Mode Virtual Circuit
CBR	Constant Bit Rate
CBS	Committed Burst Size
CF	Coupling Flag
CI	Characteristic Information
CIR	Committed Information Rate
CM	Colour Mode
CO-PS	Connection Oriented Packet Switched (service)
EC	Ethernet Connection
EFM	Ethernet in the First Mile
EIR	Excess Information Rate
E-LMI	Ethernet Local Management Interface
EPLAN	Ethernet Private Local Area Network
ETH	Ethernet MAC layer network
ETH_CI	Ethernet MAC Characteristic Information
ETH_FF	Ethernet Flow Forwarding function
ETY	Ethernet physical layer network
ETY _n	Ethernet physical layer network of order <i>n</i>
ETy-NNI	Ethernet NNI
Ety-UNI	Ethernet UNI
EVC	Ethernet virtual connection
FD	Flow Domain
FDFr	Flow Domain Fragment
LACP	Link Aggregation Control Protocol
LAG	Link Aggregation
LCAS	Link Capacity Adjustment Scheme
MAC	Media Access Control
MEG	Maintenance Entity Group
MEN	Metro Ethernet Network
MEP	MEG End Point
MIP	MEG Intermediate Point
MPLS	Multi-Protocol Label Switching
MPLS LSP	Multi-Protocol Label Switching Label Switched Path
MTU	Maximum Transmission Unit

