ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.8001/Y.1354
(06/2012)

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

Terms and definitions for Ethernet frames over transport

Recommendation ITU-T G.8001/Y.1354

ITU-T G-SERIES RECOMMENDATIONS

TRANSMISSION SYSTEMS AND MEDIA, DIGITAL SYSTEMS AND NETWORKS

INTERNATIONAL TELEPHONE CONNECTIONS AND CIRCUITS	G.100–G.199
GENERAL CHARACTERISTICS COMMON TO ALL ANALOGUE CARRIER-TRANSMISSION SYSTEMS	G.200–G.299
INDIVIDUAL CHARACTERISTICS OF INTERNATIONAL CARRIER TELEPHONE SYSTEMS ON METALLIC LINES	G.300–G.399
GENERAL CHARACTERISTICS OF INTERNATIONAL CARRIER TELEPHONE SYSTEMS ON RADIO-RELAY OR SATELLITE LINKS AND INTERCONNECTION WITH METALLIC LINES	G.400–G.449
COORDINATION OF RADIOTELEPHONY AND LINE TELEPHONY	G.450–G.499
TRANSMISSION MEDIA AND OPTICAL SYSTEMS CHARACTERISTICS	G.600–G.699
DIGITAL TERMINAL EQUIPMENTS	G.700–G.799
DIGITAL NETWORKS	G.800–G.899
DIGITAL SECTIONS AND DIGITAL LINE SYSTEM	G.900–G.999
MULTIMEDIA QUALITY OF SERVICE AND PERFORMANCE – GENERIC AND USER-RELATED ASPECTS	G.1000–G.1999
TRANSMISSION MEDIA CHARACTERISTICS	G.6000–G.6999
DATA OVER TRANSPORT – GENERIC ASPECTS	G.7000–G.7999
PACKET OVER TRANSPORT ASPECTS	G.8000–G.8999
Ethernet over Transport aspects	**G.8000–G.8099**
MPLS over Transport aspects	G.8100–G.8199
Quality and availability targets	G.8200–G.8299
Service Management	G.8600–G.8699
ACCESS NETWORKS	G.9000–G.9999

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

Recommendation ITU-T G.8001/Y.1354

Terms and definitions for Ethernet frames over transport

Summary

Recommendation ITU-T G.8001/Y.1354 provides definitions and abbreviations used in Ethernet frames over transport (EoT).

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T G.8001/Y.1354	2006-06-06	15
1.1	ITU-T G.8001/Y.1354 (2006) Amd. 1	2007-07-29	15
2.0	ITU-T G.8001/Y.1354	2008-03-29	15
3.0	ITU-T G.8001/Y.1354	2010-07-29	15
4.0	ITU-T G.8001/Y.1354	2011-07-07	15
5.0	ITU-T G.8001/Y.1354	2012-06-22	15

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

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, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

Table of Contents

Recommendation ITU-T G.8001/Y.1354

Terms and definitions for Ethernet frames over transport

1   Scope

This Recommendation contains a complete listing of the definitions and abbreviations used in the Recommendations associated with Ethernet frames over transport (EoT).

2   References

None.

3   Definitions

This Recommendation defines the following terms:

3.1   access link: The connection between the customer equipment and carrier equipment at the edge of the transport network that is realized through a UNI.

3.2   connectionless trail: An ETH access transport entity or ETH sublayer access transport entity interconnecting two or more ETH access points or sublayer access points.

NOTE – Connectionless trail is referred to in [b-ITU-T G.8010].

3.3   customer: The entity that has ownership authority over a set of flow points. The customer may have one or more service instances.

NOTE – Customer is referred to in [b-ITU-T G.8011].

3.4   EoT-NNI: An NNI for the transfer of ETH_CI traffic units over a transport layer network.

NOTE – EoT-NNI is referred to in [b-ITU-T G.8012].

3.5   EoT management network (EoT.MN): An EoT management network is a subset of a TMN that is responsible for managing those parts of a network element that contain EoT layer network entities. An EoT.MN may be subdivided into a set of EoT management subnetworks.

NOTE – EoT.MN is referred to in [b-ITU-T G.8051].

3.6   EoT management subnetwork (EoT.MSN): An EoT management subnetwork (EoT.MSN) consists of a set of separate embedded communication channels (ECC) and associated intra-site data communication links which are interconnected to form a data communication network (DCN) within any given EoT transport topology. For EoT, the physical channel supporting the ECC is the Ethernet management communication channel (MCC) as defined in [b-ITU-T G.8013]. An EoT.MSN represents an EoT specific local communication network (LCN) portion of a network operator's overall data communication network or TMN.

NOTE – EoT.MSN is referred to in [b-ITU-T G.8051].

3.7   EoT network element (EoT.NE): That part of a network element that contains entities from one or more EoT layer networks. An EoT.NE may therefore be a stand-alone physical entity or a subset of a network element. It supports at least network element functions (NEFs) and may also support an operations system function (OSF). It contains managed objects (MOs), a message communication function (MCF) and a management application function (MAF). The functions of an EoT.NE may be contained within an NE that also supports other layer networks. These layer network entities are considered to be managed separately from EoT entities. As such, they are not part of the EoT.MN or EoT.MSN.

NOTE – EoT.NE is referred to in [b-ITU-T G.8051].

3.8   EPL type 1: An EPL Type 1 service carries the ETH_CI traffic units between two Ethernet UNIs.

NOTE – EPL types are referred to in [b-ITU-T G.8011.1].

3.9   EPL type 2: An EPL Type 2 service carries the information from the 8B/10B symbol stream between two Ethernet UNIs.

NOTE – EPL types are referred to in [b-ITU-T G.8011.1].

3.10   ERP instance: An entity that is responsible for the protection of a subset of the VLANs that transport traffic over the physical Ethernet ring. Each ERP instance is independent of other ERP instances that may be configured on the physical Ethernet ring.

NOTE – ERP instance is referred to in [b-ITU-T G.8032].

3.11   Ethernet management communication channel (EoT.MCC): The Ethernet management communication channel (MCC) function provides a management communication channel between a pair of maintenance entity group (MEG) end points (MEP). The MCC can be used to perform remote management. The specific use of MCC is outside the scope of this Recommendation. A MEP can send a frame with ETH-MCC information to its peer MEP with remote maintenance request, remote maintenance reply, notification, etc. Configuration information needs to be provisioned to the MEP to support the MCC functions. See [b-ITU-T G.8013] for detailed information and the protocol data unit (PDU) structure of the MCC.

NOTE – EoT.MCC is defined in [b-ITU-T G.8051].

3.12   ETH_CI group: A group of ETH_CI signals that is monitored as a single MEG. For this purpose, ETH OAM is added to one of the ETH_CI signals in the group.

NOTE – ETH_CI group is referred to in [b-ITU-T G.8010].

3.13   ETH_CI traffic unit: The following set of signals defined in [b-ITU-T G.8010]: ETH_CI Data (D), ETH_CI Priority (P), ETH_CI Drop Eligibility (DE), ETH_CI Server Signal Fail (SSF) and optionally ETH_CI Automatic Protection Switching (APS). The ETH_CI_D signal carries the traffic unit that consists of the following fields: Destination Address (DA), Source Address (SA) and MAC Service Data Unit (M_SDU).

NOTE – ETH_CI traffic unit is defined in [b-ITU-T G.8010] and referred to in [b-ITU-T G.8012].

3.14   Ethernet connection: An Ethernet connection is the ETH layer network equivalent of a G.800 transport entity.

NOTE – Ethernet connection is referred to in [b-ITU-T G.8010].

3.15   Ethernet Flow Replication Point (ETHF_PP): Connection point between <Srv>/ETH adaptation source and sink. ETH_CI from source Ethernet Flow Point (ETH_FP) is replicated and delivered across ETHF_PP to sink Ethernet Termination Flow Point (ETH_TFP).

NOTE – ETHF_PP is referred to in [b-ITU-T G.8021].

3.16   Ethernet Replicated Information (ETH_PI): Replicated ETH_CI delivered across ETHTF_PP or ETHF_PP.

NOTE – ETHF_PI is referred to in [b-ITU-T G.8021].

3.17   Ethernet private rooted multipoint service: A rooted multipoint Ethernet virtual connection (EVC) for which several UNIs are attached over a dedicated server layer to a common UNI is defined as a private rooted multipoint service.

NOTE – Ethernet private rooted multipoint is referred to in [b-ITU-T G.8011.4].

3.18   Ethernet ring: A collection of Ethernet ring nodes forming a closed physical loop whereby each Ethernet ring node is connected to two adjacent Ethernet ring nodes via a duplex communications facility.

NOTE – Ethernet ring is referred to in [b-ITU-T G.8032].

3.19   Ethernet ring node: A network element which implements at least the following functionality.

a)   One Ethernet connection function (ETH_C) with a dedicated Ethernet flow forwarding function (ETH_FF) for forwarding ring automatic protection switching (R-APS) control traffic.

b)   Two ring ports, including ETHDi/ETH adaptation function at the ring maintenance entity group level (MEL).

c)   Ethernet ring protection (ERP) control process controlling the blocking and unblocking of traffic over the ring ports.

NOTE – Ethernet ring node is referred to in [b-ITU-T G.8032].

3.20   Ethernet service: An Ethernet service supports an Ethernet flow (as defined in [b-ITU-T G.8010]). It is defined by the topology of the Ethernet network and a corresponding set of attributes associated with the Ethernet connection (EC), the UNI ports, and NNI ports.

NOTE – Ethernet service is referred to in [b-ITU-T G.8011].

3.21   Ethernet service area: Identifies the portion of a network that supports an Ethernet service instance.

NOTE – Ethernet service area is referred to in [b-ITU-T G.8011].

3.22   Ethernet service instance: A particular instantiation of an Ethernet service supported by a particular flow domain (as defined in [b-ITU-T G.8010]) with a defined set of characteristics as well as at least two UNIs.

NOTE – Ethernet service instance is referred to in [b-ITU-T G.8011].

3.23   Ethernet termination flow replication point (ETHTF_PP): Connection point between <Srv>/ETH adaptation source and sink. ETH_CI from source Ethernet termination flow point (ETH_TFP) is replicated and delivered across ETHTF_PP to sink filter process.

NOTE – ETHTF_PP is referred to in [b-ITU-T G.8021].

3.24   Ethernet virtual private line service (EVPL): A point-to-point service between two demarcation points.

NOTE – Ethernet virtual private line service is referred to in [b-ITU-T G.8011.2].

3.25   Ethernet virtual private rooted multipoint service (EVPRM): A rooted multipoint Ethernet virtual connection (EVC) for which several UNIs are attached (often with multiplexed access) over a dedicated or shared server layer (often over shared server layer) to a common UNI is defined as a virtual private rooted multipoint service.

NOTE – Ethernet virtual private rooted multipoint service is referred to in [b-ITU-T G.8011.4].

3.26   Ethernet virtual private LAN service (EVPLAN): A multipoint-to-multipoint Ethernet connection (EC) for which several UNIs are attached (often with multiplexed access) over a shared server layer to a common UNI is defined as a virtual private LAN service.

NOTE – Ethernet virtual private LAN service is referred to in [b-ITU-T G.8011.3].

3.27   ETH path: The highest ETH MEG level in a set of eight MEG levels.

NOTE – ETH path is referred to in [b-ITU-T G.8010].

3.28   ETH section: The lowest ETH MEG level in a set of eight MEG levels.

NOTE – ETH section is referred to in [b-ITU-T G.8010].

3.29   ETH tandem connection: An intermediate ETH MEG level in a set of eight MEG levels.

NOTE – ETH tandem connection is referred to in [b-ITU-T G.8010].

3.30   Ety-NNI: An NNI for the transfer of ETH_CI traffic units over a physical Ethernet interface.

NOTE – Ety-NNI is referred to in [b-ITU-T G.8012].

3.31   Ety-UNI: An UNI for the transfer of ETH_CI traffic units over a physical Ethernet interface.

NOTE – Ety-UNI is referred to in [b-ITU-T G.8012].

3.32   EVPLAN type 1: A multipoint-to-multipoint service over multiplexed access with EP-LAN.

NOTE – EVPLAN type 1 is referred to in [b-ITU-T G.8011.3].

3.33   EVPLAN type 2: A multipoint-to-multipoint service over dedicated access and a shared server layer.

NOTE – EVPLAN type 2 is referred to in [b-ITU-T G.8011.3].

3.34   EVPLAN type 3: A multipoint-to-multipoint service over multiplexed access and a shared server layer.

NOTE – EVPLAN type 3 is referred to in [b-ITU-T G.8011.3].

3.35   EVPL type 1: EVPL over multiplexed access and dedicated CO-CS and CO-PS (this is also recognized as multiplexed access EPL).

NOTE – EVPL type 1 is referred to in [b-ITU-T G.8011.2].

3.36   EVPL type 2: EVPL over shared CO-CS, CO-PS, and CL-PS.

NOTE – EVPL type 2 is referred to in [b-ITU-T G.8011.2].

3.37   EVPL type 3: EVPL over multiplexed access and shared CO-CS, CO-PS, and CL-PS.

NOTE – EVPL type 3 is referred to in [b-ITU-T G.8011.2].

3.38   EVPRM type 1: A rooted multipoint service over multiplexed access (root or leaf) and a dedicated server layer.

NOTE – EVPRM type 1 is referred to in [b-ITU-T G.8011.4].

3.39   EVPRM type 2: A rooted multipoint service over a shared server layer.

NOTE – EVPRM type 2 is referred to in [b-ITU-T G.8011.4].

3.40   EVPRM type 3: A rooted multipoint service over multiplexed access (root or leaf) and shared server layer.

NOTE – EVPRM type 3 is referred to in [b-ITU-T G.8011.4].

3.41   flow point: A flow point is the ETH layer network equivalent of an ITU-T G.800 forwarding point.

NOTE – Flow point is referred to in [b-ITU-T G.8010].

3.42   interconnection node: An Ethernet ring node which is common to two or more Ethernet rings or to a sub-ring and an interconnected network. At each interconnection node, there may be one or more Ethernet rings that can be accessed through a single ring port and not more than one Ethernet ring that is accessed by two ring ports. The former set of Ethernet rings is comprised of sub-rings, whereas the latter Ethernet ring is considered a major ring, relative to this interconnection node. If the interconnection node is used to connect a (set of) sub-ring(s) to another network, then there is no Ethernet ring accessed by two ring ports.

NOTE – Interconnection node is referred to in [b-ITU-T G.8032].

3.43   in-profile: For frames that belong to the same instance of an Ethernet service and priority, in-profile frames are defined as frames for which priority corresponds to a common value <X> and the network has determined that drop-eligibility corresponds to <false>. Procedures to determine drop-eligibility for a frame and procedures to convey priority and drop-eligibility on a frame are network and service specific.

NOTE – In-profile is referred to in [b-ITU-T G.8013].

3.44   in-service OAM: In-service OAM refers to OAM actions which are carried out while the data traffic is not interrupted with an expectation that data traffic remains transparent to OAM actions.

NOTE – In-service OAM is referred to in [b-ITU-T G.8013].

3.45   maintenance entity: The entity between two of the flow/connection points in a maintenance entity group.

NOTE – ME is referred to in [b-ITU-T G.8010].

3.46   maintenance entity group: A maintenance entity group is defined, for the purpose of fragment/connection monitoring, between a set of flow/connection points within a fragment/connection. This set of flow/connection points may be located at the boundary of one administrative domain or a protection domain, or the boundaries of two adjacent administrative domains. The maintenance entity group consists of one or more maintenance entities.

NOTE – MEG is referred to in [b-ITU-T G.8010].

3.47   maintenance entity group end point compound sink function: A compound transport processing function which accepts the characteristic information of the layer network at its input, extracts and processes the OAM information related to the maintenance entity group's monitoring, filters the OAM information from within to the maintenance entity group, adapts the information and presents it as the characteristic information of the layer or a client layer at its output, potentially as a (client) layer maintenance signal (e.g., AIS).

NOTE – MEP compound sink function is referred to in [b-ITU-T G.8010].

3.48   maintenance entity group end point compound source function: A compound transport processing function which accepts the characteristic information of the layer or a client layer network at its input, adapts that information, filters it for OAM information interfering with its own OAM information, adds OAM information to allow the maintenance entity group to be monitored and presents the resulting information at its output.

NOTE – MEP compound source function is referred to in [b-ITU-T G.8010].

3.49   maintenance entity group intermediate point compound function: A compound transport processing function which accepts the characteristic information of the layer network at its input, reacts to OAM information related to maintenance entity group's on-demand monitoring and presents the characteristic information without the OAM it reacted to at its output.

NOTE – MIP compound function is referred to in [b-ITU-T G.8010].

3.50   major ring: The Ethernet ring that is connected on two ports to an interconnection node.

NOTE – Major ring is referred to in [b-ITU-T G.8032].

3.51   MEG end point (MEP): MEG end point (MEP) marks the end point of an ETH MEG which is capable of initiating and terminating OAM frames for fault management and performance monitoring. A MEP does not add a new forwarding identifier to the transit ETH flows. A MEP does not terminate the transit ETH flows, though it can observe these flows (e.g. count frames).

NOTE – MEP is referred to in [b-ITU-T G.8013].

3.52   MEG Intermediate Point (MIP): MEG intermediate point (MIP) is an intermediate point in a MEG which is capable of reacting to some OAM frames. A MIP does not initiate OAM frames. A MIP takes no action on the transit ETH flows.

NOTE – MIP is referred to in [b-ITU-T G.8013].

3.53   network termination: The network element in the transport network, which is connected to the customer edge equipment.

NOTE – Network termination is referred to in [b-ITU-T G.8012].

3.54   network-to-network interface (NNI): An interface that is used for the interconnection of networks elements within a transport network.

NOTE – Network-to-network interface is referred to in [b-ITU-T G.8012].

3.55   on-demand monitoring: A method to infer a specific status or performance characteristic of a maintenance entity or a set of maintenance entities within a maintenance entity group at a specific point in time with the purpose to obtain a snapshot of the performance or to diagnose an identified fault condition or performance degradation.

NOTE – On-demand monitoring is referred to in [b-ITU-T G.8010].

3.56   on-demand OAM: On-demand OAM refers to OAM actions which are initiated via manual intervention for a limited time to carry out diagnostics. On-demand OAM can result in singular or periodic OAM actions during the diagnostics time interval.

NOTE – On-demand OAM is referred to in [b-ITU-T G.8013].

3.57   out-of-service OAM: Out-of-service OAM refers to OAM actions which are carried out while the data traffic is interrupted.

NOTE – Out-of-service OAM is referred to in [b-ITU-T G.8013].

3.58   proactive monitoring: A method to continuously infer the status and performance of a maintenance entity group with the purpose to detect disturbances, faults and degradations immediately after their occurrence in order to verify the service level agreement and/or initiate recovery actions to restore the service to the guaranteed level.

NOTE – Proactive monitoring is referred to in [b-ITU-T G.8010].

3.59   Proactive OAM: Proactive OAM refers to OAM actions which are carried out continuously to permit proactive reporting of fault and/or performance results.

NOTE – Proactive OAM is referred to in [b-ITU-T G.8013].

3.60   R-APS virtual channel: The R-APS channel connection between two interconnection nodes of a sub-ring in (an)other Ethernet ring(s) or network(s). Its connection characteristics (e.g., path, performance, etc.) are influenced by the characteristics of the network (e.g., Ethernet ring) providing connectivity between the interconnection nodes.

NOTE – R-APS virtual channel is referred to in [b-ITU-T G.8032].

3.61   ring MEL: The maintenance entity group (MEG) level providing a communication channel for ring automatic protection switching (R-APS) information.

NOTE – Ring MEL is referred to in [b-ITU-T G.8032].

3.62   ring protection link (RPL): The ring link that under normal conditions, i.e., without any failure or request, is blocked (at one or both ends) for traffic channel, to prevent the formation of loops.

NOTE – Ring protection link is referred to in [b-ITU-T G.8032].

3.63   RPL neighbour node: When configured, an Ethernet ring node adjacent to the RPL that is responsible for blocking its end of the RPL under normal conditions (i.e., the ring is established and no requests are present in the ring) in addition to the block by the RPL owner node. However, it is not responsible for activating the reversion behaviour.

NOTE – RPL neighbour node is referred to in [b-ITU-T G.8032].

3.64   RPL owner node: An Ethernet ring node adjacent to the RPL that is responsible for blocking its end of the RPL under normal conditions (i.e., the ring is established and no requests are present in the ring). Furthermore, it is responsible for activating reversion behaviour from protected or manual switch/forced switch (MS/FS) conditions.

NOTE – RPL owner node is referred to in [b-ITU-T G.8032].

3.65   server MEP: A server MEP represents the compound function of the server layer termination function and server/ETH adaptation function which is used to notify the ETH layer MEPs upon failure detection by the server layer termination function or server/ETH adaptation function, where the server layer termination function is expected to run OAM mechanisms specific to the server layer.

NOTE – Server MEP is referred to in [b-ITU-T G.8013].

3.66   server sub-network: A topological component that consists of two or more link ports supported by a server layer or sublayer connectionless trail.

NOTE – Server sub-network is referred to in [b-ITU-T G.8010].

3.67   sub-ring: An Ethernet ring which is connected to (an)other Ethernet ring(s) or network(s) through the use of a pair of interconnection nodes. On their own, the sub-ring links do not form a closed loop. A closed connection of traffic may be formed by the sub-ring links and one or more links, that are controlled by (an)other Ethernet ring(s) or network(s), between interconnection nodes.

NOTE – Sub-ring is referred to in [b-ITU-T G.8032].

3.68   sub-ring link: A span (e.g., link/port) connecting adjacent sub-ring nodes that are under the control of the Ethernet ring protocol control process (ERP control process) of the sub-ring.

NOTE – Sub-ring link is referred to in [b-ITU-T G.8032].

3.69   termination flow point: A termination flow point is the ETH layer network equivalent of an ITU-T G.800 termination forwarding point.

NOTE – Termination flow point is referred to in [b-ITU-T G.8010].

3.70   traffic conditioning function: A "transport processing function" which accepts the characteristic information of the layer network at its input, classifies the traffic units according to configured rules, meters each traffic unit within its class to determine its eligibility, polices non-conformant traffic units and presents the remaining traffic units at its output as characteristic information of the layer network.

NOTE – Traffic conditioning function is defined in [b-ITU-T G.8010].

3.71   user-to-network interface (UNI): An interface that is used for the interconnection of customer equipment with a network element of the transport network.

NOTE – User-to-network interface is referred to in [b-ITU-T G.8012].

3.72   wait to block timer: A timer, which is employed by the RPL owner to delay reversion after a forced switch or manual switch has been cleared.

NOTE – Wait to block timer is referred to in [b-ITU-T G.8032].

4   Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

AI   Adapted Information

AIS   Alarm Indication Signal

CI   Characteristic Information

CL-PS   Connectionless Packet Switched

CO-CS   Connection-Oriented Circuit Switched

CO-PS   Connection-Oriented Packet Switched

DCN   Data Communication Network

DE   Drop Eligibility

EC   Ethernet Connection

ECC   Embedded Communication Channel

EoT   Ethernet over Transport

EoT.MCC   EoT Management Communication Channel

EoT.MN   EoT Management Network

EoT.MSN   EoT Management Subnetwork

EoT.NE   EoT Network Element

EPL   Ethernet Private Line

EP-LAN   Ethernet Private LAN

ERP   Ethernet Ring Protection

ETH   Ethernet layer network

ETH_C   Ethernet Connection Function

ETH_CI   Ethernet MAC Characteristic Information

ETH_FF   Ethernet Flow Forwarding Function

ETH_FP   Ethernet Flow Point

ETH_PI   Ethernet replicated Information

ETH_TFP   Ethernet Termination Flow Point

ETHTF_PP   Ethernet Termination Flow replication Point

Ety-NNI   Ethernet NNI

Ety-UNI   Ethernet UNI

EVC   Ethernet Virtual Connection

EVPL   Ethernet Virtual Private Line

EVPLAN   Ethernet Virtual Private LAN

EVPRM   Ethernet Virtual Private Rooted Multipoint

FS   Forced Switch

LAN   Local Area Network

LCN   Local Communication Network

MAC	Media Access Control
MAF	Management Application Function
MCC	Management Communication Channel
MCF	Message Communication Function
MEG	Maintenance Entity Group
MEL	MEG Level
MEP	MEG End Point
MIP	MEG Intermediate Point
MO	Managed Object
MS	Manual Switch
NE	Network Element
NEF	Network Element Function
NNI	Network Node Interface; Network-to-Network Interface
OAM	Operations, Administration and Maintenance
OSF	Operations System Function
PDU	Protocol Data Unit
R-APS	Ring Automatic Protection Switching
RPL	Ring Protection Link
TMN	Telecommunication Management Network
UNI	User Network Interface
UNI-N	Network side of UNI
VLAN	Virtual Local Area Network

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.8001/Y.1354 – "Terms and definitions for Ethernet frames over transport". 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.

ITU-T Recommendation	Latest version
[b-ITU-T G.8010/Y.1306]	12/2011
[b-ITU-T G.8011/Y.1307]	01/2009
[b-ITU-T G.8011.1/Y.1307.1]	01/2009
[b-ITU-T G.8011.2/Y.1307.2]	01/2009
[b-ITU-T G.8011.3/Y.1307.3]	02/2010
[b-ITU-T G.8011.4/Y.1307.4]	02/2010
[b-ITU-T G.8012/Y.1308]	05/2006 with Amd.1
[b-ITU-T G.8013/Y.1731]	02/2011
[b-ITU-T G.8021/Y.1341]	12/2011
[b-ITU-T G.8032/Y.1344]	03/2010
[b-ITU-T G.8051/Y.1345]	11/2009 with Amd 1

Bibliography

[b-ITU-T G.805]   Recommendation ITU-T G.805 (2000), *General functional architecture of transport networks*.

[b-ITU-T G.808.1]   Recommendation ITU-T G.808.1 (2010), *Generic protection switching – Linear trail and subnetwork protection*.

[b-ITU-T G.809]   Recommendation ITU-T G.809 (2003), *Functional architecture of connectionless layer networks*.

[b-ITU-T G.870]   Recommendation ITU-T G.870/Y.1352 (2008), *Terms and definitions for optical transport networks (OTN)*, plus Amendment 1 (2009).

[b-ITU-T G.7710]   Recommendation ITU-T G.7710/Y.1701 (2007), *Common equipment management function requirements*.

[b-ITU-T G.7712]   Recommendation ITU-T G.7712/Y.1703 (2008), *Architecture and specification of data communication network*.

[b-ITU-T G.8010]   Recommendation ITU-T G.8010/Y.1306 (2011), *Architecture of Ethernet layer networks*.

[b-ITU-T G.8011]   Recommendation ITU-T G.8011/Y.1307 (2009), *Ethernet service characteristics*.

[b-ITU-T G.8011.1] Recommendation ITU-T G.8011.1/Y.1307.1 (2009), *Ethernet private line service*.

[b-ITU-T G.8011.2] Recommendation ITU-T G.8011.2/Y.1307.2 (2009), *Ethernet virtual private line service*.

[b-ITU-T G.8011.3] Recommendation ITU-T G.8011.3/Y.1307.3 (2010), *Ethernet virtual private LAN service*.

[b-ITU-T G.8011.4] Recommendation ITU-T G.8011.4/Y.1307.4 (2010), *Ethernet virtual private rooted multipoint service*.

[b-ITU-T G.8012]   Recommendation ITU-T G.8012/Y.1308 (2004), *Ethernet UNI and Ethernet NNI*, plus Amendment 1 (2006).

[b-ITU-T G.8013]   Recommendation ITU-T G.8013/Y.1731 (2011), *OAM functions and mechanisms for Ethernet based networks*.

[b-ITU-T G.8021]   Recommendation ITU-T G.8021/Y.1341 (2011), *Characteristics of Ethernet transport network equipment functional blocks*, plus Amendment 1 (2011).

[b-ITU-T G.8031]   Recommendation ITU-T G.8031/Y.1342 (2011), *Ethernet Linear Protection Switching*.

[b-ITU-T G.8032]   Recommendation ITU-T G.8032/Y.1344 (2010), *Ethernet ring protection switching*.

[b-ITU-T G.8051]   Recommendation ITU-T G.8051/Y.1345 (2009), *Management aspects of the Ethernet-over-transport (EoT) capable network element*, plus Amendment 1 (2011).

[b-ITU-T M.3010]   Recommendation ITU-T M.3010 (2000), *Principles for a telecommunications management network*, plus Amendment 2 (2005).

[b-ITU-T M.3013]   Recommendation ITU-T M.3013 (2000), *Considerations for a telecommunications management network*.

[b-ITU-T M.3100]   Recommendation ITU-T M.3100 (2005), *Generic network information model*.

[b-ITU-T X.700]   Recommendation ITU-T X.700 (1992), *Management framework for Open Systems Interconnection (OSI) for CCITT applications*.

[b-ITU-T X.701]   Recommendation ITU-T X.701 (1997) | ISO/IEC 10040:1998, *Information technology – Open Systems Interconnection – Systems management overview*.

ITU-T Y-SERIES RECOMMENDATIONS

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

GLOBAL INFORMATION INFRASTRUCTURE	
General	Y.100–Y.199
Services, applications and middleware	Y.200–Y.299
Network aspects	Y.300–Y.399
Interfaces and protocols	Y.400–Y.499
Numbering, addressing and naming	Y.500–Y.599
Operation, administration and maintenance	Y.600–Y.699
Security	Y.700–Y.799
Performances	Y.800–Y.899
INTERNET PROTOCOL ASPECTS	
General	Y.1000–Y.1099
Services and applications	Y.1100–Y.1199
Architecture, access, network capabilities and resource management	Y.1200–Y.1299
Transport	**Y.1300–Y.1399**
Interworking	Y.1400–Y.1499
Quality of service and network performance	Y.1500–Y.1599
Signalling	Y.1600–Y.1699
Operation, administration and maintenance	Y.1700–Y.1799
Charging	Y.1800–Y.1899
IPTV over NGN	Y.1900–Y.1999
NEXT GENERATION NETWORKS	
Frameworks and functional architecture models	Y.2000–Y.2099
Quality of Service and performance	Y.2100–Y.2199
Service aspects: Service capabilities and service architecture	Y.2200–Y.2249
Service aspects: Interoperability of services and networks in NGN	Y.2250–Y.2299
Numbering, naming and addressing	Y.2300–Y.2399
Network management	Y.2400–Y.2499
Network control architectures and protocols	Y.2500–Y.2599
Packet-based Networks	Y.2600–Y.2699
Security	Y.2700–Y.2799
Generalized mobility	Y.2800–Y.2899
Carrier grade open environment	Y.2900–Y.2999
FUTURE NETWORKS	Y.3000–Y.3499
CLOUD COMPUTING	Y.3500–Y.3999

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

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	**Transmission systems and media, digital systems and networks**
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	Telecommunication management, including TMN and network maintenance
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Terminals and subjective and objective assessment methods
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks, open system communications and security
Series Y	**Global information infrastructure, Internet protocol aspects and next-generation networks**
Series Z	Languages and general software aspects for telecommunication systems