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| **Title:** | Draft Amendment 1 to Recommendation ITU-T G.8032/Y.1344 (2015) (for Consent, 30 September 2016) | |

This document provides Draft Amendment 1 to Recommendation ITU-T G.8032/Y.1344 (08/2015) (latest edition) (for Consent).

This Draft Amendment is prepared based on review at the 17-20 May 2016 Q9, 10, 14/15 joint interim meeting of WD09-20/WD1014-19, and on review at the 19-30 September 2016 SG15 plenary meeting of C2132, C2141, C2191 and of TD623/P.

**Draft Amendment 1 to Recommendation ITU-T G.8032/Y.1344 (08/2015)**

**Ethernet ring protection switching:  
Amendment 1**

**Summary**

Amendment 1 to Recommendation ITU-T G.8032/Y.1344 (08/2015) provides support for management information indicating the node state of an Ethernet ring node and the port states of an Ethernet ring node’s ports. It also updates references to Recommendation ITU-T G.870/Y.1352 with references to Recommendation ITU-T G.808.

**Draft Amendment 1 to Recommendation ITU-T G.8032/Y.1344 (08/2015)**

**Ethernet ring protection switching:  
Amendment 1**

**1) Scope of Amendment 1**

This amendment provides support for management information indicating the node state of an Ethernet ring node and the port states of an Ethernet ring node’s ports. It also updates references to Recommendation ITU-T G.870/Y.1352 with references to Recommendation ITU-T G.808.

**2) Text modifications to Recommendation ITU-T G.8032/Y.1344 (08/2015)**

**2.1) Clause 2, References**

*Amend the following references from Clause 2 as indicated in green:*

[[ITU-T G.806](http://handle.itu.int/11.1002/1000/11490" \o "11.1002/1000/11490)] Recommendation ITU-T G.806 (2012), *Characteristics of transport equipment – Description methodology and generic functionality*, plus Corrigendum 1 (2012) and Corrigendum 2 (2016).

[ITU-T G.8001] Recommendation ITU-T G.8001/Y.1354 (2016), *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*, plus Amendment 1 (2006), Amendment 2 (2010), Erratum 1 (2007) and Erratum 2 (2007).

[ITU-T G.8013] Recommendation ITU-T G.8013/Y.1731 (2015), *Operation, administration and management (OAM) functions and mechanisms for Ethernet based networks*.

[ITU-T G.8021] Recommendation ITU-T G.8021/Y.1341 (2016), *Characteristics of Ethernet transport network equipment functional blocks*.

*Add the following reference to Clause 2:*

[[ITU-T G.808](http://handle.itu.int/11.1002/1000/11490" \o "11.1002/1000/11490)] Recommendation ITU-T G.808 (2016), *Terms and definitions for network protection and restoration*.

*Delete the following reference from Clause 2:*

[ITU-T G.870] Recommendation ITU-T G.870/Y.1352 (2012), *Terms and definitions for optical transport networks (OTN)*.

**2.2) Clause 3, Definitions**

*Replace the text of Clause 3 with the following:*

**3.1 Terms defined elsewhere**

This Recommendation uses the following terms defined elsewhere:

**adaptation**: [ITU-T G.809]

**adapted information**: [ITU-T G.805]

**characteristic information**: [ITU-T G.805]

**defect**: [ITU-T G.806]

**ERP instance**: [ITU-T G.8001]

**Ethernet ring node**: [ITU-T G.8001]

**Ethernet ring**: [ITU-T G.8001]

**failure**: [ITU-T G.806]

**flow**: [ITU-T G.809]

**hold-off time**: [ITU-T G.808]

**interconnection** **node**: [ITU-T G.8001]

**layer** **network**: [ITU-T G.809]

**link**: [ITU-T G.805]

**maintenance** **entity (ME)**: [ITU-T G.8001]

**maintenance** **entity** **group (MEG)**: [ITU-T G.8001]

**major ring**: [ITU-T G.8001]

**MEG end point (MEP)**: [ITU-T G.8001]

**network**: [ITU-T G.809]

**non-revertive (protection) operation**: [ITU-T G.808]

**port**: [ITU-T G.809]

**protected domain**: [ITU-T G.808]

**protection transport entity**: [ITU-T G.808]

**protection**: [ITU-T G.808]

**R-APS virtual channel**: [ITU-T G.8001]

**revertive (protection) operation**: [ITU-T G.808]

**ring MEL**: [ITU-T G.8001]

**ring protection link (RPL)**: [ITU-T G.8001]

**RPL neighbour node**: [ITU-T G.8001]

**RPL owner node**: [ITU-T G.8001]

**server signal fail (SSF)**: [ITU-T G.806]

**signal degrade (SD)**: [ITU-T G.806]

**signal fail (SF)**: [ITU-T G.806]

**signal**: [ITU-T G.808]

**sub-ring link**: [ITU-T G.8001]

**sub-ring**: [ITU-T G.8001]

**switch**: [ITU-T G.808]

**switching time**: [ITU-T G.808]

**tandem connection**: [ITU-T G.805]

**trail signal fail (TSF)**: [ITU-T G.806]

**trail**: [ITU-T G.805]

**transfer time (*T*t)**: [ITU-T G.808.1]

**transport entity**: [ITU-T G.809]

**transport**: [ITU-T G.809]

**wait to block timer**: [ITU-T G.8001]

**wait-to-restore time**: [ITU-T G.808]

**working transport entity**: [ITU-T G.808]

**2.3) Clause 10.1, Principles of operations**

*Replace Figure 10-1 with the following figure:*



**2.4) Clause 10.1.2, R-APS request processing**

*Replace the following text:*

1) Node state – The current state of the Ethernet ring node.

*with:*

1) Node state – The current state of the Ethernet ring node. This state is readable via the ETH\_C\_MI\_RAPS\_NodeState signal. ETH\_C\_MI\_RAPS\_NodeState takes the values “–”, “Idle”, “Protection”, “Manual switch”, “Forced switch” or “Pending”.

*Add the following text at the end of clause 10.1.2:*

Actions a) through i) result in a ring port being in either a blocked or an unblocked forwarding state. This forwarding state is readable for a given ring port (0 / 1) via the ETH\_C\_MI\_RAPS\_PortState[0..1] signal. ETH\_C\_MI\_RAPS\_PortState takes the values “Blocked” or “Unblocked”. The ETH\_C\_MI\_RAPS\_PortIds[0..1] signal associates the given ring port (0 / 1) to an ETH flow point in the ETH\_FF function controlled by the ERP control process. ETH\_C\_MI\_RAPS\_PortIds is set by the EMF based on ERP configuration and is not exposed to the operator as a configuration parameter of the equipment management interface.

**2.5) Appendix VIII, Flush optimization**

*Amend Figure VIII.4 as indicated in green:*



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