



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
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G.709/Y.1331

Amendment 2
(06/2018)

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

Digital terminal equipments – General

SERIES Y: GLOBAL INFORMATION
INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS,
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Internet protocol aspects – Transport

Interfaces for the optical transport network (OTN)
Amendment 2

CAUTION !

PREPUBLISHED RECOMMENDATION

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Amendment 2 to Recommendation ITU-T G.709/Y.1331 (2016)

Interfaces for the optical transport network (OTN): Amendment 2

Summary

This amendment adds the OTN mappings for the IEEE 802.3 200Gbit/s and 400Gbit/s Ethernet client signals, adds the eSSM message type for the OSMC, specifies OTSiG-O transport over the FlexO-LR SOTUm interface, and adds reference to two FEC options for OTUk signals. It also provides clarification regarding interfaces where OTUk and OTUCn Section Monitoring overhead is optional, and elaborates on OCh and OTSiA maintenance signals.

Amendment 2 to Recommendation ITU-T G.709/Y.1331 (2016)

Interfaces for the optical transport network (OTN): Amendment 2

1 Introduction

This amendment contains extensions to the fifth edition (06/2016) of ITU-T Recommendation G.709/Y.1331, related to the:

- Addition of 200G and 400G Ethernet client mapping specifications (15.9.2.11, 17.13, 17.13.2, Annex I, Annex J)
- Addition of OTSiG-O transport over FlexO-LR SOTUm interface specification (14, 14.1, 14.2, 14.2.1, 14.2.2).
- Clarification regarding interfaces where OTUk and OTUCn Section Monitoring overhead is optional (6.1.1)
- Elaboration of OCh and OTiSA maintenance signals (16.3)
- Reference to two FEC options for OTUk signals (11.1)
- Addition of eSSM to the type of messages carried over the OSMC (2, 4, 15.7.2.4)

2 Additions

2.1 Clause 2

Add the following reference:

[ITU-T G.8264] Recommendation ITU-T G.8264 (2017), *Distribution of timing information through packet networks.*

2.2 Clause 4

Add the following abbreviations:

eSSM	enhanced Synchronization Status Message
SSM	Synchronization Status Message

2.3 Clause 6.1.1

Add notes to the text and figure 6-1 as follows:

- The completely standardized OTUk or functionally standardized OTUk-v and OTUkV provide supervision and condition the signal for transport between 3R regeneration points in the OTN.

Note that the OTUk section monitoring overhead is optional if the ODUk network connection is comprised of a single link connection supported by an OTUk trail.

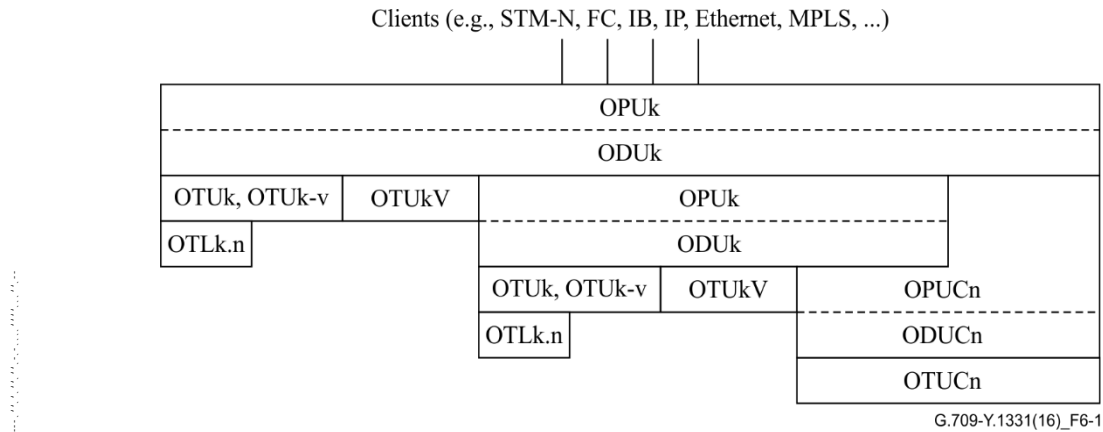
<..>

- The OTUCn provides supervision for transport between 3R regeneration points in the OTN. Note that the OTUCn does not condition the signal for transport between 3R regeneration

points because encapsulation and forward error correction are not included in the OTUCn definition.

Note that the OTUCn section monitoring overhead is optional if the ODUcn network connection is comprised of a single link connection supported by an OTUCn trail.

<..>



Note that the OTU section monitoring overhead is optional if the ODU network connection is comprised of a single link connection supported by an OTU trail.

⋮

Figure 6-1 – Digital structure of the OTN interfaces

2.4 Clause 11.1

Modify the text in clause 11.1 as follows:

The OTUk forward error correction (FEC) area contains an interface specific FEC type. Two FEC types are specified:

Reed-Solomon RS(255,239) FEC

The OTUk (k=1,2,3,4) ~~forward error correction (FEC) area~~ contains the Reed-Solomon RS(255,239) FEC codes. Transmission of the OTUk FEC is mandatory for k=4 and optional for k=1,2,3. If no FEC is transmitted, fixed stuff bytes (all-0s pattern) are to be used.

The RS(255,239) FEC code shall be computed as specified in Annex A.

For interworking of equipment supporting FEC, with equipment not supporting FEC (inserting fixed stuff all-0s pattern in the OTUk (k=1,2,3) FEC area), the FEC supporting equipment shall support the capability to disable the FEC decoding process (ignore the content of the OTUk (k=1,2,3) FEC).

Staircase FEC

The OTU4 FEC area contains the Stair Case FEC codes as specified in [ITU-T G.709.2].

2.5 Clause 12.2.3

Change the red colour of the terms “**CBR client**” and “**BMP**” in figure 12-2 into black colour as follows: