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ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.7710/Y.1701

Corrigendum 2
(04/2011)

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

Data over Transport – Generic aspects – Transport
network control aspects

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

Internet protocol aspects – Operation, administration and
maintenance

Common equipment management function
requirements

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PREPUBLISHED RECOMMENDATION

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ITU-T Recommendation G.7710/Y.1701 (2007) Corrigendum 2

Common equipment management function requirements

Corrigendum 2

Summary

Corrigendum 2 to Recommendation ITU-T G.7710/Y.1701 (2007) corrects text in Amendment 1 to ITU-T G.7710/Y.1701 (2007), which updates the packet layer related specification of severely errored second (SES) in ITU-T G.7710/Y.1701 to align it with the SES definition in Recommendation ITU-T Y.1563.

While lost block count (LBC) was defined in clause 10.1.2 and included in the NPME input/output signal tables (Table 27 and Table 28), it was left out in the process description in clause 10.2.1. This corrigendum corrects the error by adding the missing 6 LBC terms to the process description.

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1 Scope

This Corrigendum corrects text in Amendment 1 to Recommendation ITU-T G.7710/Y.1701 (2007), which updates the packet layer related specification of severely errored second (SES) in ITU-T G.7710/Y.1701 to align it with the SES definition in Recommendation ITU-T Y.1563.

While lost block count (LBC) was defined in clause 10.1.2 and included in the NPME input/output signal tables (Table 27 and Table 28), it was left out in the process description in clause 10.2.1. This corrigendum corrects the error by adding the missing 6 LBC terms to the process description.

2 References

[ITU-T G.7710/Y.1701 Am.1] Recommendation G.7710/Y.1701 Amendment 1 (07/2010),
Common equipment management function requirements
Amendment 1: Required specification of severely errored second to align with Recommendation ITU-T Y.1563

3 Clauses to be updated

The following text and clauses are updated as shown by the blue marked text.

3.1 Update section 10.2.1 (Near-end performance monitoring event function – NPME) as shown below:

Symbol:

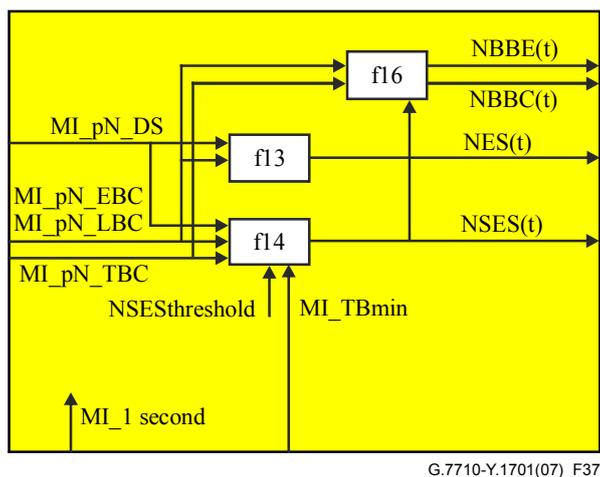


Figure 37 – NPME

Interfaces:

Table 27 – NPME input and output signals

| Input(s) | Output(s) |
|------------------------|-----------|
| MI_pN_DS | NBBE(t) |
| MI_pN_EBC or MI_pN_LBC | NBBC(t) |
| MI_pN_TBC | NES(t) |
| MI_1second | NSES(t) |
| MI_TBmin | |
| NSESthreshold | |

Processes:

This function determines, on a per second basis, the number of near-end background block errors (BBE), near-end background block count, and whether an ES and/or SES occurred.

The TBC, EBC or LBC, and DS performance monitoring primitive signals, received from a transport atomic function, are the inputs for the determination of the performance events BBE, BBC, ES, SES.

For the case a DS input is not connected, DS shall be assumed to be false. In the case where an EBC input is not connected, EBC shall be assumed to be "0". In the case where a TBC input is not connected, TBC shall be assumed to be "1".

Figure 37 presents the processes and their interconnections within the near-end performance monitoring event (NPME) atomic performance monitoring function.

f13: A near-end errored second (NES) performance monitoring event signal shall be generated if pN_DS is set or if pN_EBC ≥ 1; i.e.:

$$NES \leftarrow (pN_DS = \text{true}) \text{ or } (pN_EBC \geq 1).$$

f14: A near-end severely errored second (NSES) performance monitoring event signal shall be generated if pN_DS is set or if pN_EBC (or pN_LBC) ≥ NSESthreshold × pN_TBC and more than a minimum number of blocks (TBmin) were transmitted; i.e.:

$$NSES \leftarrow (pN_DS = \text{true}) \text{ or } ((pN_TBC \geq TBmin) \text{ and } (pN_EBC \text{ or } pN_LBC \geq NSESthreshold \times pN_TBC)).$$

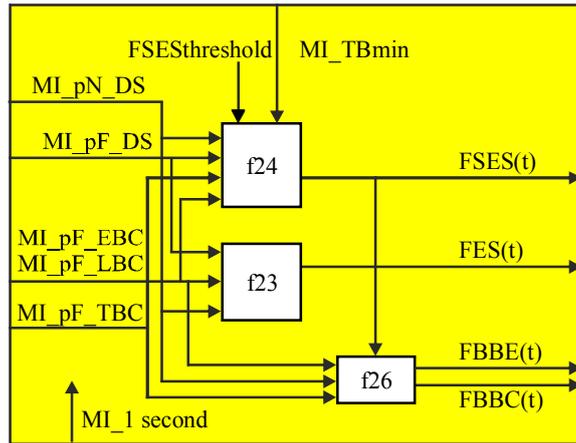
The value of the near-end SES threshold, NSESthreshold, depends on the network layer this NPME is connected to. The value of NSESthreshold is a real value between 0 and 1.

NOTE – For circuit layers (SDH, PDH, OTN) where the number of blocks within a one-second period is a fixed known value, pN_TBC is representing this fixed known value. For packet layers (e.g. ETH) where the number of blocks (i.e., frames or packets) within a one-second period is variable, pN_TBC represents the counted number of transmitted blocks within the one-second period.

f16: The near-end background block error (NBBE) and near-end background block count (NBBC) performance monitoring event signals shall equal pN_EBC and pN_TBC resp. if the NSES of that second is not set. Otherwise, NBBE and NBBC shall be zero.

3.2 Update section 10.2.2 (Far-end performance monitoring event function – FPME) as shown below:

Symbol:



G.7710-Y.1701(07)_F38

Figure 38 – FPME

Interfaces:

Table 28 – FPME input and output signals

| Input(s) | Output(s) |
|------------------------|-----------|
| MI_pN_DS | FBBE(t) |
| MI_pF_DS | FBBC(t) |
| MI_pF_EBC or MI_pF_LBC | FES(t) |
| MI_pF_TBC | FSES(t) |
| MI_1second | |
| MI_TBmin | |
| FSESthreshold | |

Processes:

This function determines, on a per second basis, the number of far-end background block errors (BBE), far-end background block count, and whether an ES and/or SES occurred.

The TBC, EBC or LBC, and DS performance monitoring primitive signals received from an atomic function are the inputs for the determination of the performance events BBE, BBC, ES, SES.

In the case where a DS input is not connected, DS shall be assumed to be false. For the case an EBC input is not connected, EBC shall be assumed to be "0". In the case where a TBC input is not connected, TBC shall be assumed to be "1".

Figure 38 presents the processes and their interconnections within the far-end performance monitoring event (FPME) atomic performance monitoring function. Note that "far-end" represents either those signals that are called "far-end" or those signals that are called "outgoing".

f23: A far-end errored second (FES) performance monitoring event signal shall be generated if pF_DS is set or if pF_EBC ≥ 1, and if that second is not a near-end defect second (pN_DS); i.e.:

$$FES \leftarrow (pN_DS = \text{false}) \text{ and } ((pF_DS = \text{true}) \text{ or } (pF_EBC \geq 1)).$$

f24: A far-end severely errored second (FSES) performance monitoring event signal shall be generated if pF_DS is set or if pF_EBC (or pF_LBC) ≥ FSESthreshold × pF_TBC and more than a minimum number of blocks (TBmin) were transmitted, and that second is not a near-end defect second; i.e.:

- $FSES \leftarrow (pN_DS = \text{false}) \text{ and } ((pF_DS = \text{true}) \text{ or } ((pN_TBC \geq TBmin) \text{ and } (pF_EBC \text{ or } pF_LBC \geq FSESthreshold \times pF_TBC)))$.

The value of the far-end SES threshold, FSESthreshold, depends on the network layer this FPME is connected to. The value of FSESthreshold is a real value between 0 and 1.

NOTE – For circuit layers (SDH, PDH, OTN) where the number of blocks within a one-second period is a fixed known value, pF_TBC is representing this fixed known value. For packet layers (e.g. ETH) where the number of blocks (i.e., frames or packets) within a one-second period is variable, pF_TBC represents the counted number of transmitted blocks within the one-second period.

f26: The far-end background block error (FBBE) and far-end background block count (FBBC) performance monitoring event signal shall equal pF_EBC and pF_TBC resp. if the FSES of that second is not set and if that second is not a near-end defect second. Otherwise, FBBE and FBBC shall be zero.
