International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.803

Amendment 1

(06/2005)

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

Digital networks – General aspects

Architecture of transport networks based on the synchronous digital hierarchy (SDH)

Amendment 1

ITU-T Recommendation G.803 (2000) – Amendment 1

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ITU-T Recommendation G.803

Architecture of transport networks based on the synchronous digital hierarchy (SDH)

Amendment 1

Summary

This amendment replaces some definitions with a reference to ITU-T Rec. G.780/Y.1351 and the modifications contained in Study Group 15 Report COM 15-R 5 Annex C.

Source

Amendment 1 to ITU-T Recommendation G.803 (2000) was approved on 29 June 2005 by ITU-T Study Group 15 (2005-2008) under the ITU-T Recommendation A.8 procedure.

FOREWORD

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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.

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.

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

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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, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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ITU-T Recommendation G.803

Architecture of transport networks based on the synchronous digital hierarchy (SDH)

Amendment 1

1) Clause 2 References

Add the following new reference alphanumerically:

– ITU-T Recommendation G.808.1 (2003), *Generic protection switching – Linear trail and subnetwork protection*.

2) Clause 3 Terms and definitions

Replace the original terms and definitions with the new text as follows and remove footnotes:

Original term	Replacement text
3.1 SDH higher-order path layer networks: Those layer networks with characteristic information of VC-3[1], VC-3-Xv (X = 2 … 48)[2], VC-4, VC-4-Xc (X = 4, 16)[3] or VC-4-Xv (X = 2 … 16)[3].	**3.1 SDH higher-order path layer networks**: See ITU-T Rec. G.780/Y.1351.
3.2 SDH lower-order path layer networks: Those layer networks with characteristic information of VC-11, VC-11-Xv (X = 2 … 84), VC-12, VC-12-Xv (X = 2 … 63), VC-2, VC-2-Xc (X = 2 … 7)[4], VC-2-Xv (X = 2 … 21)[5] or VC-3[1] or VC-3-Xv (X = 2 … 3)[5].	**3.2 SDH lower-order path layer networks**: See ITU-T Rec. G.780/Y.1351.
3.3 SDH path layer: A transport assembly composed of the SDH higher-order path layer network and lower-order path layer network together with the associated adaptation functions.	**3.3 SDH path layer**: See ITU-T Rec. G.780/Y.1351.
3.4 SDH section layer: A transport assembly composed of the SDH multiplex section layer network and regenerator section layer network together with the associated adaptation functions.	**3.4 SDH section layer**: See ITU-T Rec. G.780/Y.1351.
3.5 SDH multiplex section layer: A layer network with characteristic information of STM-N, i.e., with a bit rate of STM-N and the multiplex section overhead as defined in ITU-T Rec. G.707.	**3.5 SDH multiplex section layer**: See ITU-T Rec. G.780/Y.1351.

Original term	Replacement text
3.6 SDH regenerator section layer: A layer network with characteristic information of STM-N, i.e., with a bit rate of STM-N and the regenerator section overhead as defined in ITU-T Rec. G.707.	**3.6 SDH regenerator section layer**: See ITU-T Rec. G.780/Y.1351.
Footnotes: 1 The VC-3 is considered to be a higher-order path if it is supported directly by an AU-3 in a multiplex section layer network; it is considered a lower-order path if it is supported by a TU-3 in a VC-4 layer network. 2 Values of X larger than 48 may be required. 3 Values of X larger than 16 may be required. 4 Transported in one higher order VC-3 5 Transported in one higher order VC-4.	

3) Clause 6.3 Sublayer monitoring

After Figure 6-1 insert the following text and figures:

Note that SDH supports only one level of TCM per VC-n path level. Nesting and overlapping of TCM as shown in Figure 6-1a is, therefore, not supported.

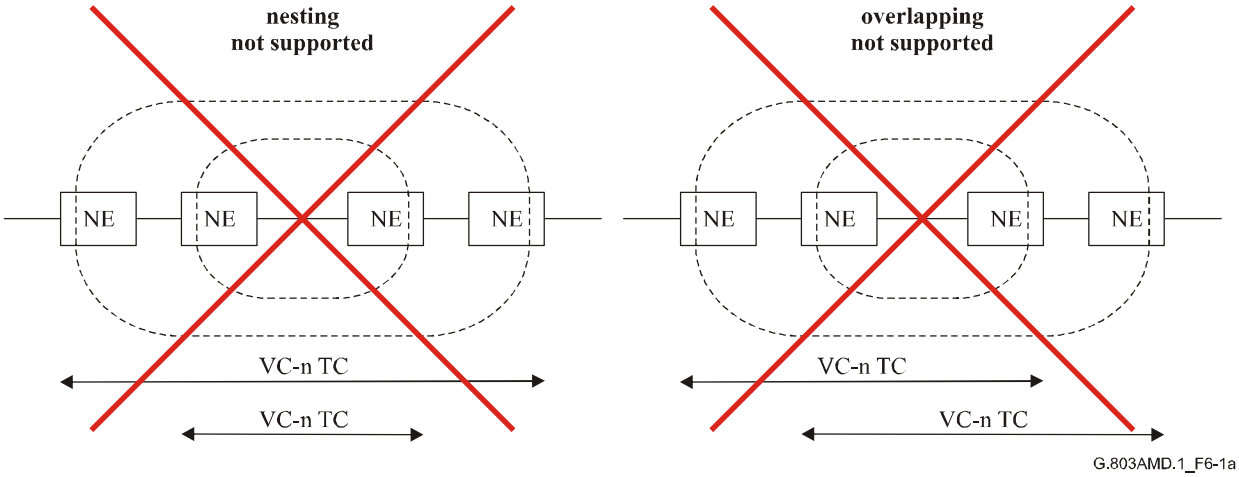

Figure 6-1a/G.803 – Not supported SDH tandem connection monitoring (nesting, overlapping)

Together with VC-n subnetwork protection SNC (see 11.2/G.808.1) TCM can be used to provide the protection switching criteria by monitoring the working and protection subnetwork connection between the protection switching points (SNC/S as defined in 11.2/G.808.1) or for monitoring of the protected signal as shown in Figure 6-1b.

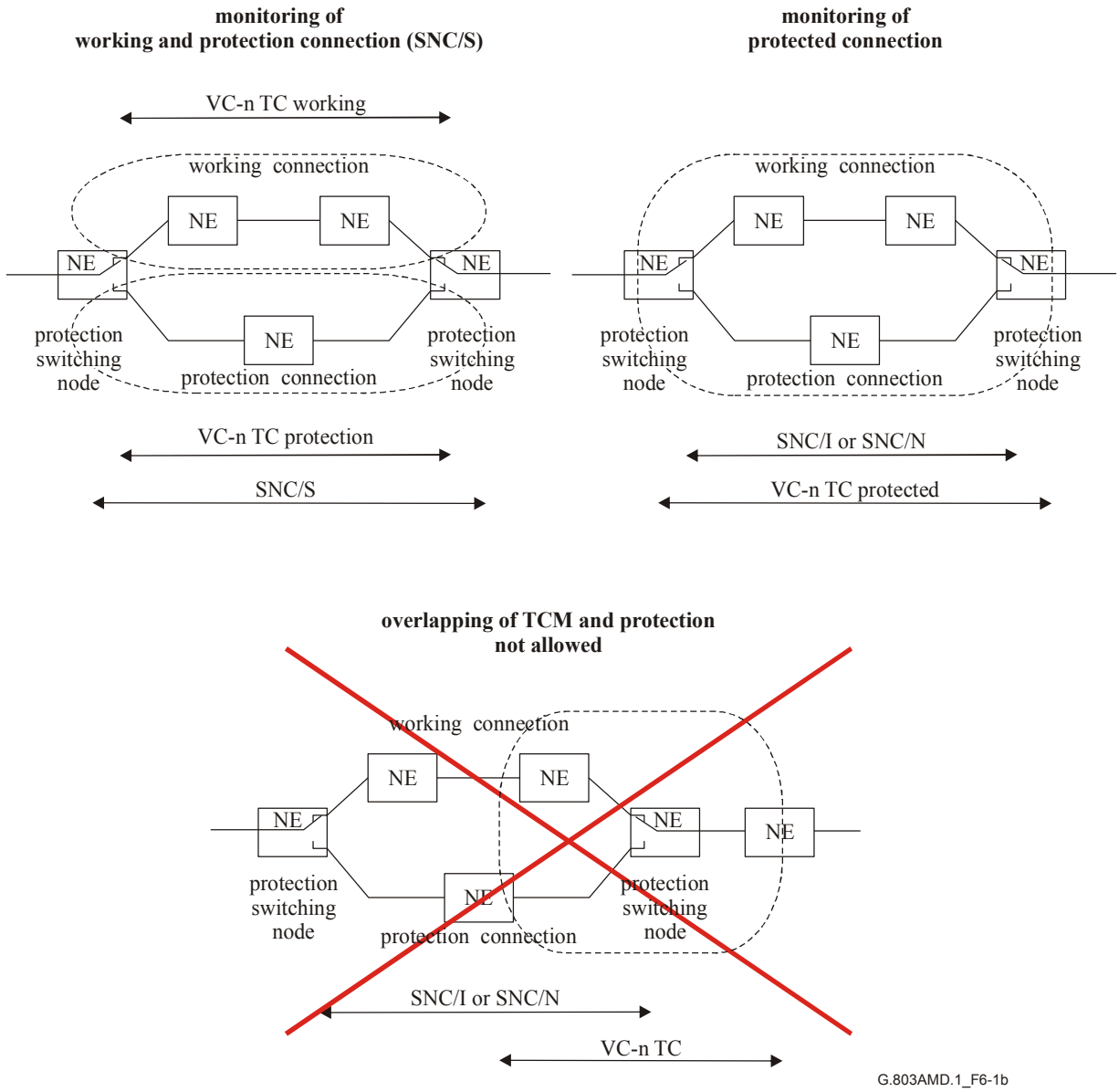

Figure 6-1b/G.803 – SDH tandem connection monitoring SNC protection

Note that TCM for the working and protection connection and the protected connection at the same time is not possible as nesting of TCM is not supported.

Overlapping of TCM and subnetwork connection protection is not allowed as the relation between TCM source and sink functions will change with every protection switch.

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