

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.998.1
Amendment 1
(08/2013)

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

Digital sections and digital line system – Metallic access
networks

ATM-based multi-pair bonding

**Amendment 1 – Intentional temporary shutdown
of some bonded lines**

Recommendation ITU-T G.998.1 (2005) –
Amendment 1



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

Recommendation ITU-T G.998.1

ATM-based multi-pair bonding

Amendment 1

Intentional temporary shutdown of some bonded lines

Summary

Amendment 1 to Recommendation ITU-T G.998.1 (2005) includes:

- A new clause 12 defining "intentional temporary shutdown of some bonded lines" (new functionality).

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T G.998.1	2005-01-13	15
1.1	ITU-T G.998.1 (2005) Amd. 1	2013-08-29	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.

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Recommendation ITU-T G.998.1

ATM-based multi-pair bonding

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Intentional temporary shutdown of some bonded lines

1) Clause 2

Add the following references:

- [5] Recommendation ITU-T G.991.2 (2003), *Single-pair high-speed digital subscriber line (SHDSL) transceivers*.
- [6] Recommendation ITU-T G.993.2 (2011), *Very high speed digital subscriber line transceivers 2 (VDSL2)*.

2) New clause 12, "Intentional temporary shutdown of some bonded lines"

Add a new clause 12 as follows:

12 Intentional temporary shutdown of some bonded lines

Customer premises equipment (CPE) with bonded DSL may temporarily shut down some lines in a bonded group of lines while keeping at least one other line of the group in operation. This could be done to reduce the power consumption of the CPE to extend the operating duration of a back-up battery or to conserve energy during idle periods. The normal procedure for orderly shutdown of a DSL line may be used and later the DSL start-up procedure may be used when all lines need to be active. The orderly shutdown procedure for VDSL2 is specified in clause 11.2.3.9 of [ITU-T G.993.2] and for ADSL2/2plus in clauses 9.5.3.1 and 9.5.3.5 of [ITU-T G.992.3]. When a portion, but not all, of the lines in a bonded group are shut down using the orderly shutdown procedure and later their operation resumes, the bonded group shall remain in service, without interruption of transmission. Furthermore, the service management function for the DSL access multiplexer (DSLAM) or the associated element management system (EMS) may need to be aware of the intentional shutdown of some lines so as to avoid unnecessary service alarms due to the resulting reduced bit rate of the bonded DSL group.

A service alarm should be reported if all lines in a bonded group are shut down or if a line has a disorderly shut down.

For [ITU-T G.991.2], the behaviour in this situation is for further study.

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