INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.992.3

Corrigendum 1

(12/2003)

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

Digital sections and digital line system – Access networks

Asymmetric digital subscriber line transceivers 2 (ADSL2)

Corrigendum 1

ITU-T Recommendation G.992.3 (2002) – Corrigendum 1

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ITU-T Recommendation G.992.3

Asymmetric digital subscriber line transceivers 2 (ADSL2)

Corrigendum 1

Source

Corrigendum 1 to ITU-T Recommendation G.992.3 (2002) was approved on 14 December 2003 by ITU-T Study Group 15 (2001-2004) under the ITU-T Recommendation A.8 procedure.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. 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.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had 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.992.3

Asymmetric digital subscriber line transceivers 2 (ADSL2)

Corrigendum 1

1) CL and CLR describe enabled capabilities

Clauses 6.6.1, 7.10.1, 8.13.2 and K.x.10

Add the following paragraph to these clauses (just before first subclause header):

The CL and CLR messages shall describe capabilities of the ATU-C and ATU-R respectively and can be constrained by application requirements, service requirements, implementation choices, etc. Therefore, the capabilites indicated in the CL and CLR message are the enabled capabilities, which may be equal to or a subset of the set of capabilities supported by the ATU-C and ATU-R respectively. In any case, the MS message (and all subsequent initialization messages) shall account for all capability restrictions indicated in the CL and CLR messages.

2) HDLC message segmentation

Transmitter protocol (7.8.2.4.1)

Change 5th and 6th paragraphs as follows:

When sending a new command message, the LSB of the control field shall be inverted from the previous command message, irrespective of the priority class. The transmitter shall send the command message one time and await a response message. No more than one command message of each priority value shall be awaiting response message at any time. Upon receipt of a response message, a new command message may be sent. If a response message is not received, a time-out occurs and the command message is repeated without inverting the LSB of the control field. Alternately, the ATU may abandon the command message after an implementation specific number of retransmissions. There are different time-out durations for the different priority messages and are displayed in Table 7-17. Timeouts are based starting from the last octet of a request message sent to ~~last~~the first octet of a response message received.

When sending a new response message, the LSB of the control field shall be inverted from the previous response message, irrespective of the priority class.

3) Clause 8.5.1: Definition of control parameters

Change Table 8-4 as follows:

Table 8-4/G.992.3 – The transmit PMD function control parameters

L0-TIME *L2-TIME* *L2-ATPR* *L2-ATPRT*	These configuration parameters are related to the L2 low power state and exist only for the ATU-C. They are configured through the CO-MIB. The *L0-TIME* represents the minimum time (in seconds) between Exit from L2 low power state and the next Entry into the L2 low power state (see 9.5.2). The *L2-TIME* represents the minimum time (in seconds) between Entry into L2 low power state and the first L2 low power trim request and between two consecutive L2 power trim requests (see 9.5.2). The *L2-ATPR* value represents the maximum aggregate transmit power reduction that is allowed in an L2 Request or an L2 low power trim request (see 9.5.2). The *L2-ATPRT* value represents the total maximum aggregate transmit power reduction that is allowed in the L2 state; the total reduction is the sum of all reductions of L2 Request and L2 power trims (see 9.5.2).

4) Clause 9.5.2: Stationarity control mechanism

Change the clause as follows:

ATU-C PMD control parameters provide means to configure the minimum duration within link state L0 (before transition to a different link state) and the minimum duration within link state L2 before using the power trim procedure. This L2 minimum does not restrict the use of the fast exit power procedures. The minimum link state durations may depend on the amount of power cutback to be applied.

ATU-C PMD control parameters also provide means to configure the maximum aggregate transmit power reduction that is allowed in an L2 request and in any single L2 low power trim request, by means of the L2-ATPR control parameter.

The maximum PCBds in a L2 request command shall be limited by following constraint:

$$\max imum\_PCBds - PCBds(L0) \le L2\_ATPR$$

where maximum_PCBds is the maximum PCBds value in the L2 request;

where PCBds(L0) is the PCBds value of the L0 state.

The proposed value of PCBds (in dB) in any L2 trim command shall be limited by following constraint:

$$PCBds(proposed) - PCBds(current) \le L2\_ATPR$$

where PCBds(proposed) is PCBds value proposed in the L2 trim command;

where PCBds(current) is the PCBds value currently used in the L2 state.

ATU-C PMD control parameters also provide means to configure the total maximum aggregate transmit power reduction that is allowed in the L2 state, by means of the L2-ATPRT control parameter. All PCBds values in the L2 state (i.e., the maximum PCBds in a L2 request command, and the proposed value of PCBds (in dB) in any L2 trim command) shall be limited by following constraint:

$$PCBds - PCBds(L0) \le L2\_ATPRT$$

where PCBds is any PCBds value in the L2 state;

where PCBds(L0) is the PCBds value of the L0 state.

The L2 power state control parameters L0-TIME, L2-TIME, L2-ATPR and L2-ATPRT are illustrated in Figure 9-4a.

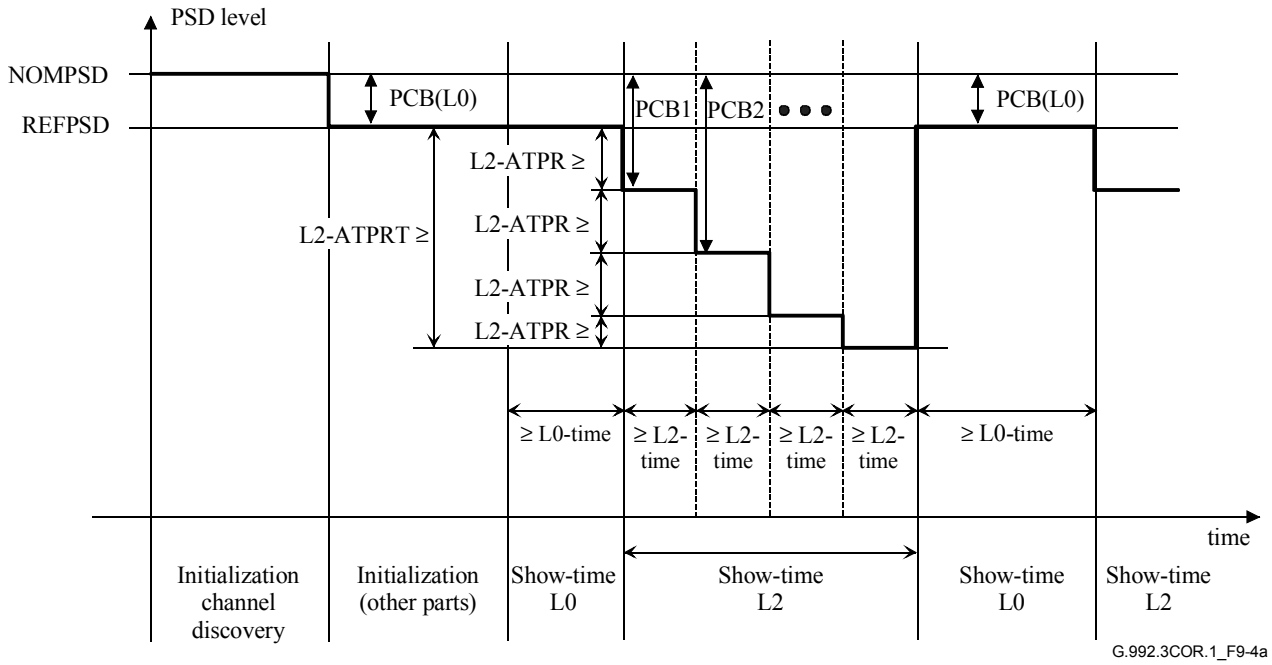

Figure 9-4a/G.992.3 – Illustration of the L2 power state control parameters

5) Loop attenuation

Loop Attenuation (LATN) (8.12.3.4)

In the equation, the LATN results in negative attenuation number. Needs to be inverted to positive number to map into unsigned integer.

In the equation, change "10*log(…)" to "–10*log(…)"

6) Dynamic behaviour

On-line reconfiguration procedures – Receiver initiated procedure (10.2.2.1)

Power management procedures – Receiver initiated procedures (10.3.2.1)

Change bullet 4 as follows in both clauses:

4) The receiving ATU's control function sends a PMD.Control.confirm primitive to the receive PMD function which then waits until the respective priority timeout (see 7.8.2.4.1) for a PMD.SynchFlag to be received from the transmit PMD function.

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