International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.992.3

Corrigendum 1

(11/2009)

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

Recommendation ITU-T G.992.3 (2009) – Corrigendum 1

ITU-T

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Recommendation ITU-T G.992.3

Asymmetric digital subscriber line transceivers 2 (ADSL2)

Corrigendum 1

Summary

Corrigendum 1 to Recommendation ITU-T G.992.3 (2009) contains:

- Corrections to test parameters definitions and accuracy.
- Editorial change to clause on interleaver.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T G.992.3	2002-07-29	15
1.1	ITU-T G.992.3 (2002) Amend. 1	2003-05-22	15
1.2	ITU-T G.992.3 (2002) Cor. 1	2003-12-14	15
1.3	ITU-T G.992.3 (2002) Cor. 2	2004-02-22	15
1.4	ITU-T G.992.3 (2002) Amend. 2	2004-04-30	15
1.5	ITU-T G.992.3 (2002) Amend. 3	2004-06-13	15
1.6	ITU-T G.992.3 (2002) Amend. 4	2004-06-13	15
2.0	ITU-T G.992.3	2005-01-13	15
2.1	ITU-T G.992.3 (2005) Amend. 1	2005-09-22	15
2.2	ITU-T G.992.3 (2005) Amend. 2	2006-03-29	15
2.3	ITU-T G.992.3 (2005) Amend. 3	2006-12-14	15
2.4	ITU-T G.992.3 (2005) Amend. 4	2007-07-29	15
2.5	ITU-T G.992.3 (2005) Amend. 5	2008-06-22	15
3.0	ITU-T G.992.3	2009-04-22	15
3.1	ITU-T G.992.3 (2009) Cor. 1	2009-11-13	15
3.2	ITU-T G.992.3 (2009) Amend. 1	2010-03-01	15

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.

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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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, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

Recommendation ITU-T G.992.3

Asymmetric digital subscriber line transceivers 2 (ADSL2)

Corrigendum 1

1) Test parameters definitions and accuracy

a) Change the text of clause 8.12.3.4 as follows:

8.12.3.4 Loop attenuation (*LATN*)

The loop attenuation (*LATN*) is ~~the difference in dB between the power received at the near-end and that transmitted from the far-end over all subcarriers, i.e.,~~ the squared magnitude of the channel characteristics function H(f) (as defined in 8.12.3.1) averaged over all subcarriers and this average converted to dB. *LATN* shall be defined as:

$$LATN[dB] = -10 \times \log \frac{\sum_{i=0}^{NSC-1} |H(i \times \Delta f)|^2}{NSC}$$

with *NSC* the number of subcarriers (see 8.5) and H(f) represented by Hlin(f) in diagnostics mode and Hlog(f) in initialization (with conversion of log to linear values for use in the above equation).

…

b) Change the text of clause 8.12.5.3 as follows, and renumber the equations of clause 8 accordingly:

8.12.5.3 Signal to noise ratio per subcarrier (SNRps)

…

For each downstream subcarrier where the SNRps_ds accuracy requirement applies, the statistical sample variance of SNRps_ds measurements (expressed in dB, and all samples taken over a 10-minute time interval, without line re-initialization in this time interval, and under the same loop, noise, temperature, and configuration settings) shall be equal to or smaller than 0.5~~dB~~, as calculated with equations (8-1).

$$SNRps\_\mathrm{var}iance \le 0.5$$

where

$$SNRps\_\mathrm{var}iance = \frac{1}{N}\left(\sum_{i=1}^{N}\left(SNRps(i) - SNRps\_avg\right)^2\right) \quad (8\text{-}1)$$

$$SNRps\_avg = \frac{1}{N}\left(\sum_{i=1}^{N} SNRps(i)\right)$$

…

For each upstream subcarrier where the SNRps_us accuracy requirement applies, the statistical sample variance of SNRps_us measurements (expressed in dB, and all samples taken over a 10-minute time interval, without line re-initialization in this time interval, and under the same loop, noise, temperature, and configuration settings) shall be equal to or smaller than 0.5~~dB~~, as calculated with equations (8-1).

2) Editorial correction to clause on interleaver

Make the following editorial corrections in clause 7.7.1.5

With D_p one of the mandatory values identified in Table 7-9, Table 7-10, Table 7-11 or Table 7-12~~1~~, and with the above-defined rule, the output octets from the interleaver always occupy distinct time slots when $N_{FEC.p}$ is odd and D_p is a power of 2. When $N_{FEC.p}$ is even, a dummy octet shall be added at the beginning of the codeword at the input to the interleaver. The resultant odd-length codeword is then convolutionally interleaved, and the dummy octet shall then be removed from the output of the interleaver.

With D_0 one of the optional (i.e., valid as identified in Table 7-8, but not mandatory as identified in Table 7-9, Table 7-10, Table 7-11 or Table 7-12) values~~ identified in Table 7-8~~, the codeword length $N_{FEC.0}$ and D_0 shall be co-prime (i.e., have no common divisors except for 1). No dummy octets shall be used, as with the above-defined rule, the output octets from the interleaver always occupy distinct time slots.

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