INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.8251

Corrigendum 1

(06/2002)

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

Digital networks – Quality and availability targets

The control of jitter and wander within the optical transport network (OTN)

Corrigendum 1

ITU-T Recommendation G.8251 (2001) – Corrigendum 1

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ITU-T Recommendation G.8251

The control of jitter and wander within the optical transport network (OTN)

Corrigendum 1

Summary

ITU-T Rec. G.8251, in a number of clauses, currently refers to SDH clients rather than to generic CBRx clients as in ITU-T Rec. G.798. This corrigendum makes G.8251 consistent with G.798 by changing the SDH client reference to CBRx client reference. This corrigendum also makes several other minor corrections to ITU-T Rec. G.8251.

Source

Corrigendum 1 to ITU-T Recommendation G.8251 was prepared by ITU-T Study Group 15 (2001-2004) and approved under the WTSA Resolution 1 procedure on 13 June 2002.

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.

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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.8251

The control of jitter and wander within the optical transport network (OTN)

Corrigendum 1

1) Introduction

ITU-T Rec. G.798 refers to generic Constant bit rates-x (CBRx) clients, where x is 2G5, 10G or 40G (i.e. 2.48832 Gbit/s, 9.95328 Gbit/s or 39.81312 Gbit/s). One example of CBRx clients is the set of SDH clients that have these nominal rates, i.e. STM-16, STM-64 and STM-256.

This Recommendation incorrectly refers to SDH clients in a number of clauses, rather than to the generic CBRx clients. This corrigendum corrects these references to refer to CBRx clients, consistent with ITU-T Rec. G.798.

This corrigendum also makes several other minor corrections to ITU-T Rec. G.8251.

2) Corrections

2.1) Clause 6.2, last paragraph, first sentence

Replace the first sentence of this paragraph by:

STM input ports, i.e. the input to the ODUkP/CBRx-a_A_So and ODUkP/CBRx-b_A_So atomic functions, must tolerate jitter and wander levels specified in ITU-T Rec. G.825.

2.2) Table A.1, final row entry (row whose first column reads "output when input signal is lost")

In the ODCa, ODCb and ODCp columns, replace the entries AIS (SDH client) *by* AIS (CBRx client).

2.3) Table A.2, Note 2

Since this table includes both ODUk and OTUk interfaces, add the ODUk unit intervals to the note by changing Note 2 to read:

NOTE 2 – ODU1 $1\,UI = \frac{238}{(239)(2.48832)}[\text{ns}] = 400.2\,\text{ps}$

ODU2 $1\,UI = \frac{237}{(239)(9.95328)}[\text{ns}] = 99.63\,\text{ps}$

ODU3 $1\,UI = \frac{236}{(239)(39.81312)}[\text{ns}] = 24.80\,\text{ps}$

OTU1 $1\,UI = \frac{238}{(255)(2.48832)}[\text{ns}] = 375.1\,\text{ps}$

OTU2 $1\,UI = \frac{237}{(255)(9.95328)}[\text{ns}] = 93.38\,\text{ps}$

OTU3 $1\,UI = \frac{236}{(255)(39.81312)}[\text{ns}] = 23.25\,\text{ps}$

2.4) Clause A.5.1.2, ODCp jitter generation, first paragraph

In the first sentence of this paragraph, change STM_CI_CK *to* CBR/RS_CI_CK. *In the last sentence of this paragraph, change* STM-N *to* CBRx.

2.5) Table A.3, Note 2

Since the interfaces in this table are CBRx, change Note 2 to indicate CBRx unit intervals:

NOTE 2 – CBR2G5 $1\,UI = \frac{1}{2.48832}[\text{ns}] = 401.9\,\text{ps}$

CBR10G $1\,UI = \frac{1}{9.95328}[\text{ns}] = 100.5\,\text{ps}$

CBR40G $1\,UI = \frac{1}{39.81312}[\text{ns}] = 25.12\,\text{ps}$

2.6) Clause A.6, Noise tolerance, second paragraph

Change the first sentence of this paragraph to read:

ODCb must satisfy the same jitter and wander tolerance requirements as CBR2G5, CBR10G and CBR40G client interfaces (the input to the ODUkP/CBRx-b_A_So atomic function).

2.7) Clause A.7.3, Jitter transfer for ODCp

Change the first sentence of this paragraph to read:

The jitter transfer requirements for ODCp are, essentially, the transfer requirements for a CBR (e.g. SDH) demapper (i.e. desynchronizer).

2.8) Clause A.8, Transient response, second paragraph

Change the first sentence of this paragraph to read:

The maximum possible frequency difference between a CBRx (e.g. SDH) client and free-running ODCb or free-running AIS clock is 40 ppm (because the largest possible offset for each signal is ± 20 ppm).

2.9) Appendix IV, clause IV.2.2, Table IV.2-1

In the third row from the bottom of the table, change the entry in the left hand column from f_{HP}/f_{3dB} *to* f_{LP}/f_{3dB}.

2.10) Appendix IV, clause IV.2.2.1

In the last sentence of the paragraph, *starting with* "The ratios indicate that," *change* Table 5/G.8251 *to* Table A.2/G.8251.

2.11) Appendix IV, clause IV.2.2.2: Results for cases based on OTN 3R regenerator bandwidths (G.8251) High-band jitter for OTU1, OTU2 and OTU3 Wide-band jitter for OTU1 and OTU2

Change the third sentence of paragraph 1 to indicate random rather than systematic jitter accumulation:

Figures IV.2-5a/G.8251 and IV.2-5b/G.8251 show high-band and wide-band jitter accumulation results for the case of low-pass filtered white noise and the case of high-pass filtered white (i.e. WPM only) noise, assuming random jitter accumulation.

2.12) Appendix IV, Figure IV.2-2

Change the slope indicated in this figure to –20 dB/decade, *since this figure applies to a power*.

2.13) Subclauses of annex A

The incorrect subclause numbers in Annex A were corrected in the final version. The references made to Annex A in this corrigendum assume that these numbers have already been corrected.

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Printed in Switzerland
Geneva, 2002