INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.957

Amendment 2
(01/2005)

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Digital sections and digital line system – Digital line systems

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Optical interfaces for equipments and systems relating to the synchronous digital hierarchy

Amendment 2

ITU-T Recommendation G.957 (1999) – Amendment 2

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ITU-T Recommendation G.957

Optical interfaces for equipments and systems relating to the synchronous digital hierarchy

Amendment 2

Summary

This amendment contains modifications for ITU-T Rec. G.957 (1999) to remove ambiguity in the text of the definition of receiver sensitivity contained in clause 6.4.1.

Source

Amendment 2 to ITU-T Recommendation G.957 (1999) was approved on 13 January 2005 by ITU-T Study Group 15 (2005-2008) 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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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.

ITU-T Recommendation G.957

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Modify clause 6.4.1 as follows:

6.4.1 Receiver sensitivity

Receiver sensitivity is defined as the minimum ~~acceptable~~ value of average received power at point R to achieve a 1×10^{-10} BER. ~~It takes into account power penalties caused by use of~~ This must be met with a transmitter ~~under standard operating conditions~~ with worst-case values of transmitter eye mask, extinction ratio, ~~pulse rise and fall times,~~ optical return loss at point S, receiver connector degradations and measurement tolerances. The receiver sensitivity does not ~~include power penalties associated with~~ have to be met in the presence of dispersion~~, jitter,~~ or reflections from the optical path; these effects are specified separately in the allocation of maximum optical path penalty.

NOTE –The receiver sensitivity does not have to be met in the presence of transmitter jitter in excess of the appropriate jitter generation limit (e.g., ITU-T Rec. G.783 for SDH optical tributary signals).

Aging effects are not specified separately since they are typically a matter between a network provider and an equipment manufacturer. Typical margins between a beginning-of-life, nominal temperature receiver and its end-of-life, worst-case counterpart are desired to be in the 2 to 4 dB range. An example of a measurement method for determining aging effects on receiver sensitivity is given in Appendix II. The receiver sensitivities specified in Tables 2 to 4 are worst-case, end-of-life values.

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