

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.9701

Corrigendum 4

(12/2017)

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

Access networks – Metallic access networks

Fast Access to Subscriber Terminals (G.fast) –
Physical layer specification

Corrigendum 4

Recommendation ITU-T G.9701 (2014) –
Corrigendum 4

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Recommendation ITU-T G.9701

Fast Access to Subscriber Terminals (G.fast) – Physical layer specification

Corrigendum 4

Summary

Corrigendum 4 to Recommendation ITU-T G.9701 (2014) adds several clarifications, and fixes various errors and inconsistencies.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T G.9701	2014-12-05	15	11.1002/1000/12090
1.1	ITU-T G.9701 (2014) Cor. 1	2015-11-22	15	11.1002/1000/12541
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1.4	ITU-T G.9701 (2014) Amd. 2	2016-07-22	15	11.1002/1000/12816
1.5	ITU-T G.9701 (2014) Cor. 3	2017-04-06	15	11.1002/1000/13069
1.6	ITU-T G.9701 (2014) Amd. 3	2017-04-06	15	11.1002/1000/13068
1.7	ITU-T G.9701 (2014) Cor. 4	2017-12-07	15	11.1002/1000/13332
1.8	ITU-T G.9701 (2014) Amd. 4	2017-12-07	15	11.1002/1000/13331

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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.

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Recommendation ITU-T G.9701

Fast Access to Subscriber Terminals (G.fast) – Physical layer specification

Corrigendum 4

1) Clause 3.2.34

Revise the text of clause 3.2.34 "subcarrier group" as follows:

3.2.34 subcarrier group: A group of G (where $G = 1, 2, 4$ or 84) adjacent subcarriers.

NOTE – Subcarrier groups are used to reduce the number of test parameter data points that need to be stored by and communicated between the FTU-O and FTU-R. Each subcarrier in a subcarrier group is characterized by the same value of a test parameter (see clause 11.4.1).

2) Clause 10.2.2.2

Revise the text of clause 10.2.2.2 "Initialization symbol encoder" as follows:

10.2.2.2 Initialization symbol encoder

...

SOC symbols are transmitted on the first s symbol positions of each logical frame (s_{ds} symbols for the downstream and s_{us} symbols for the upstream); the value of s_{ds} is determined during the ITU-T G.994.1 handshake and the value of s_{us} is communicated to the FTU-R in the O-SIGNATURE message (see clause 12.3.3). However, if one of these s symbol positions is a sync symbol position, a sync symbol shall be transmitted in this position (not an SOC symbol), as described above.

Bits of initialization data shall be modulated on the subcarriers of initialization symbols using 2-bit constellation mapping defined in clause 10.2.1.4. Cyclic extension and windowing of all initialization symbols shall be the same as applied for symbols of active lines during showtime.

Constellation points on all subcarriers shall be rotated based on 2-bit numbers provided by the quadrant scrambler described in clause 10.2.2.4. The scrambler shall be used in the reset mode or in free running mode, depending on the stage of initialization (see clauses 12.3.3-12.3.5). In the reset mode, the scrambler shall be initialized at the beginning of each symbol with an 11-bit initialization seed. The seed for each line is determined by the VCE and communicated to the FTU-R during the ITU-T G.994.1 handshake. The VCE shall define the same seed for sync symbols and all initialization symbols transmitted over a particular line. In free-running mode, the scrambler shall be initialized with the selected seed at the beginning of the corresponding stage of the initialization.

The downstream SOC symbols may be repeated (see clause 10.2.2.2.3) and may be modulated afterwards by an identification sequence (IDS) (see clause 10.2.2.2.2).

3) Clause 10.3.2.3.1

Revise the text of clause 10.3.2.3.1 "Control parameters for vectoring feedback reporting" as follows:

10.3.2.3.1 Control parameters for vectoring feedback reporting

The VCE communicates to the FTU-O a set of control parameters for vectoring feedback reporting defined in Table 10-9.