ITU-T

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU G.994.1

Amendment 6 (08/2015)

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

Digital sections and digital line system – Metallic access networks

Handshake procedures for digital subscriber line transceivers

Amendment 6 – Codepoints for the support of ITU-T G.993.2 profile 35b

Recommendation ITU-T G.994.1 (2012) – Amendment 6



ITU-T G-SERIES RECOMMENDATIONS

${\bf TRANSMISSION~SYSTEMS~AND~MEDIA,DIGITAL~SYSTEMS~AND~NETWORKS}$

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| INDIVIDUAL CHARACTERISTICS OF INTERNATIONAL CARRIER TELEPHONE SYSTEMS ON METALLIC LINES | G.300-G.399 |
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| | |

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T G.994.1

Handshake procedures for digital subscriber line transceivers Amendment 6 – Codepoints for the support of ITU-T G.993.2 profile 35b

Summary

Amendment 6 to Recommendation ITU-T G.994.1 (2012) includes:

- The codepoints for the support of ITU-T G.993.2 Annex Q (profile 35b).

History

| Edition | Recommendation | Approval | Study Group | Unique ID* |
|---------|-----------------------------|------------|-------------|--------------------|
| 1.0 | ITU-T G.994.1 | 1999-07-02 | 15 | 11.1002/1000/4720 |
| 1.1 | ITU-T G.994.1 (1999) Cor. 1 | 2000-04-04 | 15 | 11.1002/1000/5139 |
| 2.0 | ITU-T G.994.1 | 2001-02-09 | 15 | 11.1002/1000/5364 |
| 3.0 | ITU-T G.994.1 | 2002-07-29 | 15 | 11.1002/1000/6119 |
| 4.0 | ITU-T G.994.1 | 2003-05-22 | 15 | 11.1002/1000/6281 |
| 4.1 | ITU-T G.994.1 (2003) Amd. 1 | 2004-02-22 | 15 | 11.1002/1000/7080 |
| 4.2 | ITU-T G.994.1 (2003) Amd. 2 | 2004-06-13 | 15 | 11.1002/1000/7351 |
| 4.3 | ITU-T G.994.1 (2003) Amd. 3 | 2005-01-13 | 15 | 11.1002/1000/7495 |
| 4.4 | ITU-T G.994.1 (2003) Amd. 4 | 2006-01-13 | 15 | 11.1002/1000/8549 |
| 5.0 | ITU-T G.994.1 | 2007-02-13 | 15 | 11.1002/1000/8993 |
| 5.1 | ITU-T G.994.1 (2007) Amd. 1 | 2007-11-22 | 15 | 11.1002/1000/9167 |
| 5.2 | ITU-T G.994.1 (2007) Amd. 2 | 2008-04-13 | 15 | 11.1002/1000/9388 |
| 5.3 | ITU-T G.994.1 (2007) Amd. 3 | 2009-03-22 | 15 | 11.1002/1000/9675 |
| 5.4 | ITU-T G.994.1 (2007) Amd. 4 | 2009-06-29 | 15 | 11.1002/1000/9891 |
| 5.5 | ITU-T G.994.1 (2007) Amd. 5 | 2010-04-22 | 15 | 11.1002/1000/10415 |
| 5.6 | ITU-T G.994.1 (2007) Amd. 6 | 2010-11-29 | 15 | 11.1002/1000/11018 |
| 5.7 | ITU-T G.994.1 (2007) Amd. 7 | 2011-04-13 | 15 | 11.1002/1000/11129 |
| 5.8 | ITU-T G.994.1 (2007) Cor. 1 | 2011-10-29 | 15 | 11.1002/1000/11417 |
| 5.9 | ITU-T G.994.1 (2007) Amd. 8 | 2011-12-16 | 15 | 11.1002/1000/11416 |
| 6.0 | ITU-T G.994.1 | 2012-06-13 | 15 | 11.1002/1000/11644 |
| 6.1 | ITU-T G.994.1 (2012) Amd. 1 | 2012-10-29 | 15 | 11.1002/1000/11797 |
| 6.2 | ITU-T G.994.1 (2012) Amd. 2 | 2013-08-29 | 15 | 11.1002/1000/11994 |
| 6.3 | ITU-T G.994.1 (2012) Amd. 3 | 2014-01-13 | 15 | 11.1002/1000/12093 |
| 6.4 | ITU-T G.994.1 (2012) Amd. 4 | 2014-12-05 | 15 | 11.1002/1000/12094 |
| 6.5 | ITU-T G.994.1 (2012) Amd. 5 | 2015-02-13 | 15 | 11.1002/1000/12373 |
| 6.6 | ITU-T G.994.1 (2012) Amd. 6 | 2015-08-29 | 15 | 11.1002/1000/12564 |

^{*} To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, http://handle.itu.int/11.1002/1000/11830-en.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). 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, 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/.

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Recommendation ITU-T G.994.1

Handshake procedures for digital subscriber line transceivers

Amendment 6 – Codepoints for the support of ITU-T G.993.2 profile 35b

1) Clause 2, References

Update the following reference as shown:

[ITU-T G.993.2] Recommendation ITU-T G.993.2 (20062015), Very high speed digital subscriber line transceivers 2 (VDSL2).

2) Codepoints for the support of G.993.2 Annex Q (Profile 35b)

Modify Table 11.68.1.1 as follows:

Table 11.68.1.1 – Standard information field – ITU-T G.993.2 profiles NPar(3) coding – Octet 2

| | Bits | | | | | | | TOTAL TO C. 002.2 and Class NID and 20 and 4.2 | | | |
|---|------|---|---|---|---|---|---|--|--|--|--|
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | ITU-T G.993.2 profiles NPar(3)s – Octet 2 | | | |
| X | Х | Х | Х | Х | Х | Х | 1 | Profile 17a | | | |
| Х | Х | Х | Х | Х | Х | 1 | Х | Profile 30a | | | |
| Х | Х | Х | Х | Х | 1 | Х | Х | Reserved for allocation by ITU-TProfile 35b | | | |
| Х | Х | Х | Х | 1 | Х | Х | Х | Reserved for allocation by ITU-T | | | |
| Х | Х | Х | 1 | Х | Х | Х | Х | Reserved for allocation by ITU-T | | | |
| Х | Х | 1 | Х | Х | Х | Х | Х | Reserved for allocation by ITU-T | | | |
| Х | Х | 0 | 0 | 0 | 0 | 0 | 0 | No parameters in this octet | | | |

Modify Table 11.68.5 as follows:

Table 11.68.5 – Standard information field – ITU-T G.993.2 initial IDFT size NPar(3) coding

| Bits | | | | | | | | TOUT C 002 2 initial IDET vine NDen(2) | | |
|------|---|---|---|---|---|---|---|---|--|--|
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | ITU-T G.993.2 initial IDFT size NPar(3)s | | |
| Х | Х | | | Х | Х | Х | Х | IDFT size $2N = 2^n$ (n = 6 to 13, bits 4 to 1) | | |
| Х | Х | | 1 | | | | | Reserved for allocation by ITU-TExtended IDFT size with profile 35b | | |
| Х | Х | 1 | | | | | | Reserved for allocation by ITU-T | | |
| Х | Х | 0 | 0 | 0 | 0 | 0 | 0 | No parameters in this octet | | |

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| Series E | Overall network operation, telephone service, service operation and human factors |
| Series F | Non-telephone telecommunication services |
| Series G | Transmission systems and media, digital systems and networks |
| Series H | Audiovisual and multimedia systems |
| Series I | Integrated services digital network |
| Series J | Cable networks and transmission of television, sound programme and other multimedia signals |
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| Series L | Environment and ICTs, climate change, e-waste, energy efficiency; construction, installation and protection of cables and other elements of outside plant |
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| Series Z | Languages and general software aspects for telecommunication systems |
| | |