

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.696

Corrigendum 1
(05/2017)

SERIES X: DATA NETWORKS, OPEN SYSTEM
COMMUNICATIONS AND SECURITY

OSI networking and system aspects – Abstract Syntax
Notation One (ASN.1)

Information technology – ASN.1 encoding rules:
Specification of Octet Encoding Rules (OER)

Technical Corrigendum 1

Recommendation ITU-T X.696 (2015) – Technical
Corrigendum 1

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Technical Corrigendum 1

Summary

This technical corrigendum to Rec. ITU-T X.696 | ISO/IEC 8825-7 provides corrections and clarifications for encoding of IEEE Real and encoding of nested untagged choice alternatives.

History

Edition	Recommendation	Approval	Study Group	Unique ID [*]
1.0	ITU-T X.696	2014-08-29	17	11.1002/1000/12151
2.0	ITU-T X.696	2015-08-13	17	11.1002/1000/12487
2.1	ITU-T X.696 (2015) Cor. 1	2017-05-14	17	11.1002/1000/13258

^{*} 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>.

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The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information technology – ASN.1 encoding rules: Specification of Octet Encoding Rules (OER)

Technical Corrigendum 1

Conventions used in this corrigendum: Original, unchanged, text is in normal font. Deleted text is struck-through, thus: ~~deleted text~~. Inserted text is underlined, thus: inserted text.

1 Clause 12.2

Replace clause 12.2 with the following:

If all of the following are true:

- a) the lower bound of the effective value constraint of the mantissa is greater than or equal to $-2^{24} + 1$ (-16777215) and its upper bound is less than or equal to $2^{24} - 1$ (16777215);
- b) the effective value constraint of the base is the fixed value 2; and
- c) the lower bound of the effective value constraint of the exponent is greater than or equal to ~~-323426~~ and its upper bound is less than or equal to 292427 ,

then the real value shall be encoded in the binary32 (single precision) floating-point format specified in IEEE 754.

2 Clause 12.3

Replace clause 12.3 with the following:

12.3 Otherwise, if all of the following are true:

- a) the lower bound of the effective value constraint of the mantissa is greater than or equal to $-2^{53} + 1$ (-9007199254740991) and its upper bound is less than or equal to $2^{53} - 1$ (9007199254740991);
- b) the effective value constraint of the base is the fixed value 2; and
- c) the lower bound of the effective value constraint of the exponent is greater than or equal to ~~-10744022~~ and its upper bound is less than or equal to 9714023 ,

then the real value shall be encoded in the binary64 (double precision) floating-point format specified in IEEE 754.

3 Clause 16.1

Replace clause 16.1 with:

16.1 The encoding of a sequence value shall consists of the following parts, in order:

- a) preamble;
- b) encodings of the components in the extension root;
- c) extension addition presence bitmap (optional); and
- d) encodings of the extension additions (optional).

NOTE – Each of these parts occupies a whole number of octets.

4 Clause 18.1

Replace clause 18.1 with:

18.1 The value of a set type shall be encoded as if the type had been declared a sequence type, except that the components in the "RootComponentTypeList" of the set type (as well as the preamble bits) shall be encoded in the order specified in 18.2.

5 Clause 20.1

Add Note 3 at the end of clause 20.1:

NOTE 3 – If the type of the choice alternative is an untagged choice type, the outermost tag for that alternative will appear more than once in the encoding. This is different from how BER works.

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