

CONTENTS

Page

- 1 Scope 1
- 2 Normative references 1
 - 2.1 Identical Recommendations | International Standards 1
 - 2.2 Additional references 2
- 3 Definitions 2
 - 3.1 ASN.1 Basic Encoding Rules (BER) 2
 - 3.2 Additional definitions 2
- 4 Abbreviations 4
- 5 Encodings specified by this Recommendation | International Standard 4
- 6 Encoding instructions specified by this Recommendation | International Standard 5
- 7 Conformance 5
- 8 Basic XML encoding rules 5
 - 8.1 Production of a complete BASIC-XER encoding 5
 - 8.2 The XML prolog 6
 - 8.3 The XML document element 6
 - 8.4 Encoding of the EXTERNAL type 7
 - 8.5 Encoding of the open type 7
 - 8.6 Decoding of types with extension markers 7
- 9 Canonical XML encoding rules 7
 - 9.1 General rules for canonical XER 7
 - 9.2 Real values 8
 - 9.3 Bitstring value 8
 - 9.4 Octetstring value 8
 - 9.5 Sequence value 8
 - 9.6 Set value 8
 - 9.7 Set-of value 8
 - 9.8 Object identifier value 9
 - 9.9 Relative object identifier value 9
 - 9.10 GeneralizedTime 9
 - 9.11 UTCTime 9
 - 9.12 Open type value 10
 - 9.13 The TIME type and the useful time types 10
- 10 Extended XML encoding rules 10
 - 10.1 General 10
 - 10.2 EXTENDED-XER conformance 11
 - 10.3 Structure of an EXTENDED-XER encoding 13
- 11 Notation, character set and lexical items used in XER encoding instructions 13
- 12 Keywords 14
- 13 Assigning an XER encoding instruction to an ASN.1 type using a type prefix 15
- 14 Assigning an XER encoding instruction using an XER encoding control section 17
 - 14.1 The encoding instruction assignment list 17
 - 14.2 Identification of the targets for an XER encoding instruction using a target list 18
 - 14.2.1 General rules 18
 - 14.2.2 Target identification using an ASN.1 type reference and identifiers 20
 - 14.2.3 Target identification using a built-in type name 22
 - 14.2.4 Use of identifiers in context 23

	14.2.5	Use of imported types identification	23
15		Multiple assignment of XER encoding instructions	23
	15.1	Order in which multiple assignments are considered.....	23
	15.2	Effect of assigning a negating encoding instruction	24
	15.3	Multiple assignment of encoding instructions with multiple categories	24
	15.4	Multiple assignment of XER encoding instructions of the same category.....	24
	15.5	Permitted combinations of final encoding instructions.....	25
16		XER encoding instruction support for XML namespaces and qualified names.....	27
17		Specification of EXTENDED-XER encodings.....	28
	17.1	The XML document element	28
	17.2	The "TypeNameOrModifiedTypeName" production.....	28
	17.3	The "AttributeList" production	29
	17.4	The "ExtendedXMLValue" production	29
	17.5	The "ExtendedXMLChoiceValue" production	30
	17.6	The "ExtendedXMLSequenceValue" and "ExtendedXMLSetValue" productions	31
	17.7	The "ExtendedXMLSequenceOfValue" and "ExtendedXMLSetOfValue" productions.....	31
	17.8	The "ModifiedXMLIntegerValue" production	33
	17.9	The "ModifiedXMLRealValue" production	33
18		The ANY-ATTRIBUTES encoding instruction	34
	18.1	General.....	34
	18.2	Restrictions.....	34
	18.3	Effect on encodings.....	35
19		The ANY-ELEMENT encoding instruction	36
	19.1	General.....	36
	19.2	Restrictions.....	36
	19.3	Effect on encodings.....	37
20		The ATTRIBUTE encoding instruction	37
	20.1	General.....	37
	20.2	Restrictions.....	37
	20.3	Effect on encodings.....	38
21		The BASE64 encoding instruction	39
	21.1	General.....	39
	21.2	Restrictions.....	40
	21.3	Effect on encodings.....	40
22		The DECIMAL encoding instruction.....	40
	22.1	General.....	40
	22.2	Restrictions.....	41
	22.3	Effect on encodings.....	41
23		The DEFAULT-FOR-EMPTY encoding instruction	41
	23.1	General.....	41
	23.2	Restrictions.....	42
	23.3	Effect on encodings.....	43
24		The ELEMENT encoding instruction.....	43
	24.1	General.....	43
	24.2	Restrictions.....	44
	24.3	Effect on encodings.....	44
25		The EMBED-VALUES encoding instruction	44
	25.1	General.....	44
	25.2	Restrictions.....	44
	25.3	Effect on encodings.....	45
26		The GLOBAL-DEFAULTS encoding instruction	45
	26.1	General.....	45

26.2	Restrictions.....	46
26.3	Effect on encodings.....	46
27	The LIST encoding instruction.....	46
27.1	General.....	46
27.2	Restrictions.....	46
27.3	Effect on encodings.....	47
28	The NAME encoding instruction.....	47
28.1	General.....	47
28.2	Restrictions.....	48
28.3	Effect on encodings.....	48
29	The NAMESPACE encoding instruction.....	49
29.1	General.....	49
29.2	Restrictions.....	50
29.3	Effect on encodings.....	50
30	The PI-OR-COMMENT encoding instruction.....	50
30.1	General.....	50
30.2	Restrictions.....	51
30.3	Effect on the encodings.....	51
31	The TEXT encoding instruction.....	52
31.1	General.....	52
31.2	Restrictions.....	52
31.3	Effect on encodings.....	52
32	The UNTAGGED encoding instruction.....	53
32.1	General.....	53
32.2	Restrictions.....	54
32.3	Effect on encodings.....	54
33	The USE-NIL encoding instruction.....	55
33.1	General.....	55
33.2	Restrictions.....	55
33.3	Effect on encodings.....	56
34	The USE-NUMBER encoding instruction.....	56
34.1	General.....	56
34.2	Restrictions.....	56
34.3	Effect on encodings.....	56
35	The USE-ORDER encoding instruction.....	57
35.1	General.....	57
35.2	Restrictions.....	57
35.3	Effect on encodings.....	58
36	The USE-QNAME encoding instruction.....	58
36.1	General.....	58
36.2	Restrictions.....	59
36.3	Effect on encodings.....	59
37	The USE-TYPE encoding instruction.....	59
37.1	General.....	59
37.2	Restrictions.....	59
37.3	Effect on encodings.....	60
38	The USE-UNION encoding instruction.....	60
38.1	General.....	60
38.2	Restrictions.....	61
38.3	Effect on encodings.....	61
39	The WHITESPACE encoding instruction.....	62

39.1	General	62
39.2	Restrictions.....	62
39.3	Effect on encodings.....	63
40	Identification of the encoding rules.....	63
Annex A	Examples of BASIC-XER and CXER encodings	64
A.1	ASN.1 description of the record structure.....	64
A.2	ASN.1 description of a record value	64
A.3	Basic XML representation of this record value	64
A.4	Canonical XML representation of this record value	65
B.1	Partial XML content.....	66
B.2	Recommended restrictions on encodings producing partial XML element content	66
C.1	Introduction.....	69
C.2	Simple examples	69
	C.2.1 A base-ball card	69
	C.2.2 An employee	70
C.3	More complex examples	70
	C.3.1 Using a union of two simple types	70
	C.3.2 Using a type identification attribute	71
	C.3.3 Using enumeration values	71
	C.3.4 Using an empty encoding for a default value.....	71
	C.3.5 Using embedded-values for notification of a payment due.....	71