

ISO/IEC 8825-8:2018-10 (E)

Information technology - ASN.1 encoding rules - Part 8: Specification of JavaScript Object Notation Encoding Rules (JER)

Contents		Page
1	Scope	1
2	Normative references	1
2.1	Identical Recommendations International Standards	1
2.2	Additional references	1
3	Definitions.....	2
3.1	Specification of Basic Notation	2
3.2	Information Object Specification.....	2
3.3	Constraint Specification.....	2
3.4	Parameterization of ASN.1 Specification	2
3.5	Basic Encoding Rules (BER).....	2
3.6	Packed Encoding Rules (PER).....	2
3.7	Additional definitions	2
4	Abbreviations	3
5	Encodings specified by this Recommendation International Standard.....	3
6	Conformance	4
7	General provisions	4
7.1	Use of the type notation	4
7.2	Constraints	4
7.3	Type and value model used for encoding.....	6
7.4	Types to be encoded.....	6
7.5	Encoding instructions.....	6
7.6	Production of a complete JER encoding	7
8	Notation, lexical items and keywords used in JER encoding instructions	7
9	Specifying JER encoding instructions.....	8
10	Assigning a JER encoding instruction using a type prefix	9
11	Assigning a JER encoding instruction using a JER encoding control section.....	9
12	Identification of the targets for a JER encoding instruction	9
12.1	General rules	9
12.2	Types defined in the module	10
12.3	Built-in types.....	10
12.4	Types imported from another module.....	10

13	Multiple assignment of JER encoding instructions	10
	13.1 Order in which multiple assignments are considered	10
	13.2 Effect of assigning a negating encoding instruction.....	11
	13.3 Multiple assignment of JER encoding instructions of the same category	11
14	The ARRAY encoding instruction	11
	14.1 General	11
	14.2 Restrictions	11
15	The BASE64 encoding instruction.....	11
	15.1 General	11
	15.2 Restrictions	12
16	The NAME encoding instruction.....	12
	16.1 General	12
	16.2 Restrictions	13
17	The OBJECT encoding instruction.....	13
	17.1 General	13
	17.2 Restrictions	13
18	The TEXT encoding instruction.....	13
	18.1 General	13
	18.2 Restrictions	14
19	The UNWRAPPED encoding instruction.....	14
	19.1 General	14
	19.2 Restrictions	14
20	Encoding of boolean values	14
21	Encoding of integer values	15
22	Encoding of enumerated values	15
23	Encoding of real values	15
	23.1 General	15
	23.2 Encoding of the special real values	15
	23.3 Encoding as a JSON number.....	16
	23.4 Encoding as a JSON object.....	16
24	Encoding of bitstring values.....	16
	24.1 General	16
	24.2 Encoding of bitstring types with a fixed size	16
	24.3 Encoding of bitstring types with a variable size.....	16
25	Encoding of octetstring values	16
26	Encoding of the null value	17

27	Encoding of sequence values	17
	27.1 General	17
	27.2 Array-based encoding	17
	27.3 Object-based encoding	17
28	Encoding of sequence-of values	17
29	Encoding of set values.....	18
30	Encoding of set-of values	18
	30.1 General	18
	30.2 Array-based encoding	18
	30.3 Object-based encoding	18
31	Encoding of choice values.....	18
	31.1 General	18
	31.2 Unwrapped encoding	18
	31.3 Wrapped encoding	18
32	Encoding of object identifier values.....	19
33	Encoding of relative object identifier values.....	19
34	Encoding of values of the internationalized resource reference type	19
35	Encoding of values of the relative internationalized resource reference type	19
36	Encoding of values of the embedded-pdv type	19
37	Encoding of values of the external type	19
38	Encoding of values of the restricted character string types	19
39	Encoding of values of the unrestricted character string type.....	20
40	Encoding of values of the time types	20
41	Encoding of open type values	20
	Annex A – Examples of JER encodings	21
	A.1 ASN.1 description of the record structure.....	21
	A.2 ASN.1 description of a record value	21
	A.3 Example JER representation of this record value.....	21
	A.4 Additional examples of JER encodings	22
	Annex B – Examples of JER encoding instructions and their effect on the encodings	25
	B.1 ASN.1 description of the record structure.....	25
	B.2 ASN.1 description of a record value	25
	B.3 JER representation of this record value.....	26
	B.4 Additional examples of JER encodings	26
	B.5 Examples of JER encodings of choice types.....	28