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ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.691

Corrigendum 3
(03/2001)

SERIES X: DATA NETWORKS AND OPEN SYSTEM
COMMUNICATIONS

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

Information technology – ASN.1 encoding rules:
specification of packed encoding rules (PER)

Corrigendum 3

CAUTION !

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TITLE: Draft Technical Corrigendum 3 to ITU-T Recommendation X.691 | ISO/IEC 8825-2, Information technology — ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)

Summary

This Technical Corrigendum to ITU-T Rec. X.691 | ISO/IEC 8825-2:

- a) clarifies the term "effective SizeConstraint";
- b) clarifies PER-visible extensibility of constraints

INFORMATION TECHNOLOGY – ASN.1 ENCODING RULES:
SPECIFICATION OF PACKED ENCODING RULES (PER)

TECHNICAL CORRIGENDUM 3 TO X.691

1) Subclause 3.7.8:

Relabel the current note on 3.7.8 as “Note 1”.

Add a new note on 3.7.8 as follows:

NOTE 2 – The effective SizeConstraint is used only to determine the encoding of lengths (and not to determine the set of abstract values).

2) Subclause 3.7.9:

Relabel the current note on 3.7.9 as “Note 1”.

Add a new note on 3.7.9 as follows:

NOTE 2 – The effective PermittedAlphabet constraint is used only to determine the encoding of characters (and not to describe the set of abstract values).

3) Subclause 3.7.11:

Add a note on 3.7.11 as follows:

NOTE – In clause 9.6, the extensibility bit will be set to 1 if the value to be encoded is not in the extension root of the constructed or constrained type as it is defined in the ASN.1 specification, without considering the possible effective constraints associated to the type.

4) Subclause 9.3.9:

Replace 9.3.9 with the following:

9.3.9 PermittedAlphabet constraints on known-multiplier character string types which are not extensible after application of 47.3 to 47.5 of ITU-T Rec. X.680 | ISO/IEC 8824-1, are PER-visible.

5) Subclause 9.3.13bis:

Add a new subclause 9.3.13bis as follows:

9.3.13bis If a subtype constraint is made of a serial application of constraints, the constraints which are not PER-visible, if any, are simply ignored.

NOTE – For example:

A ::= IA5String(SIZE(1..4))(FROM(“ABCD”,...))

has an effective PermittedAlphabet constraint that consists of the entire IA5String alphabet since the extensible PermittedAlphabet constraint is not PER-visible. It has nevertheless an effective SizeConstraint which is SIZE(1..4).

Similarly,

B ::= IA5String(A)

has the same effective SizeConstraint and the same effective PermittedAlphabet constraint.

6) Subclause 9.3.13ter:

Add a new subclause 9.3.13ter as follows:

9.3.13ter If any subtype constraint is textually dependent, by way of set arithmetic, on a constraint which is defined in 9.3 to be not PER-visible, then the outer constraint is not PER-visible. If the outer constraint is extensible, this rule only applies if the non PER-visible constraint appears in the extension root of the outer constraint.

NOTE – For example:

A ::= IA5String(SIZE(1..4) INTERSECTION FROM(“ABCD”,...))

has no effective SizeConstraint and an effective PermittedAlphabet constraint that consists on the entire IA5String alphabet, because the constraint combination is not PER-visible since it depends on an extensible PermittedAlphabet constraint which is not PER-visible.

Hence,

B ::= IA5String(A INTERSECTION SIZE(3..10))

has an effective SizeConstraint which is SIZE(3..10) (but not an effective PermittedAlphabet constraint) because the ContainedSubtype constraint, which is PER-visible, restricts in no way the effective constraints (PermittedAlphabet or SizeConstraint).

7) Subclause 9.3.15:

Replace the text of subclause 9.3.15 with the following:

If a PER-visible constraint is extensible after application of 47.3 to 47.5, then the type is defined to be extensible for PER-encodings.

Replace notes 1 and 2 by the following new note:

NOTE – This property is determined based on the type definition as it appears in the ASN.1 specification without consideration given to the possible effective constraints (see 3.7.8 and 3.7.9) associated with this type.
