INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

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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)

Technical Corrigendum 3

ITU-T Recommendation X.691 – Corrigendum 3

(Formerly CCITT Recommendation)

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INTERNATIONAL STANDARD ISO/IEC 8825-2
ITU-T RECOMMENDATION X.691

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

TECHNICAL CORRIGENDUM 3

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.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. 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.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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1)   Subclause 3.7.8

Relabel the current Note in 3.7.8 as "Note 1".

Add a new Note to 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 in 3.7.9 as "Note 1".

Add a new Note to 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 to 3.7.11 as follows:

NOTE – In 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)   New subclause 9.3.13 *bis*

Add a new subclause 9.3.13 bis as follows:

9.3.13 *bis*   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)   New subclause 9.3.13 *ter*

Add a new subclause 9.3.13 ter as follows:

9.3.13 *ter*   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 (PermittedAphabet or SizeConstraint).

7)   Subclause 9.3.15

Replace the text of 9.3.15 with the following:

If a PER-visible constraint is extensible after application of 47.3 to 47.5 of ITU-T Rec. X.680 | ISO/IEC 8824-1, 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.

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