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AMENDMENT 1
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Information technology — Abstract Syntax Notation One (ASN.1): Specification of basic notation

AMENDMENT 1: Relaxing imports clause to allow importation of definitions from new versions of a given module

Technologies de l'information — Notation de syntaxe abstraite numéro un (ASN.1): Spécification de la notation de base

AMENDEMENT 1: .

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This document was prepared by ITU-T (as X.680 (2015)/Amd.1) and drafted in accordance with its editorial rules. It was assigned to Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*, and adopted under the "fast-track procedure".

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INTERNATIONAL STANDARD ISO/IEC 8824-1
RECOMMENDATION ITU-T X.680

Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation

Amendment 1

Relaxing IMPORTS clause to allow importation of definitions from new versions of a given module

Summary

Amendment 1 to Rec. ITU-T X.680 | ISO/IEC 8824-1 relaxes the IMPORTS clause to allow importation of definitions from new versions of a given module.

History

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1.3	ITU-T X.680 (1994) Technical Cor. 2	1997-12-12	7	11.1002/1000/4180
1.4	ITU-T X.680 (1994) Amd. 1/Technical Cor.1	1997-12-12	7	11.1002/1000/4179
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* 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.

FOREWORD

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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.

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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, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation

Amendment 1

Relaxing IMPORTS clause to allow importation of definitions from new versions of a given module

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

1 Clause 13

In clause 13 modify the SymbolsFromModule production as follows:

SymbolsFromModule ::=
SymbolList FROM **GlobalModuleReference** **SelectionOption**

SelectionOption ::=
empty
| **WITH "SUCCESSORS"**
| **WITH "DESCENDANTS"**

Modify clause 13.16 as follows (adding bullet f):

13.16 When the "SymbolsImported" alternative of "Imports" is selected:

a) Each "Symbol" in "SymbolsFromModule" shall either be defined in the module body, or be present in the "Imports" clause, of the module denoted by the "GlobalModuleReference" in "SymbolsFromModule". Importing a "Symbol" present in the "Imports" clause of the referenced module is only allowed if there is only one occurrence of the "Symbol" in that clause, and the "Symbol" is not defined in the referenced module.

NOTE 1 – This does not prohibit the same symbol name defined in two different modules from being imported into another module. However, if the same "Symbol" name appears more than once in the "Imports" clause of module A, that "Symbol" name cannot be exported from A for import to another module B.

b) If the "SymbolsExported" alternative of "Exports" is selected in the definition of the module denoted by the "GlobalModuleReference" in "SymbolsFromModule" the "Symbol" shall appear in its "SymbolsExported".

c) Only those "Symbol"s that appear amongst the "SymbolList" of a "SymbolsFromModule" may appear as the symbol in any "External<X>Reference" which has the "modulereference" denoted by the "GlobalModuleReference" of that "SymbolsFromModule" (where <X> is "Value", "Type", "Object", "Objectclass", or "Objectset").

d) If there are no such "Symbol"s, then the "empty" alternative of "SymbolsImported" shall be selected.

NOTE 2 – An effect of c) and d) is that the statement **IMPORTS;** implies that the module cannot contain an "External<X>Reference".

e) All the "SymbolsFromModule" in the "SymbolsFromModuleList" shall include occurrences of "GlobalModuleReference" such that:

i) the "modulereference" in them are all different from each other and from the "modulereference" associated with the referencing module; and

ii) the "AssignedIdentifier", when non-empty, denotes object identifier values which are all different from each other and from the object identifier value (if any) associated with the referencing module.

f) If the "SymbolsFromModule" has a non-empty "SelectionOption", the "AssignedIdentifier" in the "GlobalModuleReference" shall not be empty, and the referenced module shall be determined as follows:

i) If the "SelectionOption" is **WITH SUCCESSORS**, the module denoted by the "GlobalModuleReference" is the one that has a DefinitiveIdentification with an object identifier whose last node may be

incremented zero or more times. If multiple modules meet this criterion, the denoted module is the one whose object identifier has the last node with the greatest number of increments.

ii) If the "SelectionOption" is **WITH DESCENDANTS**, the module denoted by the "GlobalModuleReference" is the one that has a DefinitiveIdentification that identifies the node identified by the "GlobalModuleReference" or one of its subordinates. If multiple modules meet this criterion, the denoted module is the one with the largest object identifier. For this comparison, the arcs are compared successively until one arc is different (selecting the largest arc) or the end of one object identifier is reached (selecting the longer object identifier).

