INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Amendment 1
X.720
(11/95)

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

OSI MANAGEMENT

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – STRUCTURE OF MANAGEMENT INFORMATION: MANAGEMENT INFORMATION MODEL

AMENDMENT 1: GENERALIZATION OF TERMS

Amendment 1 to
ITU-T Recommendation X.720

(Previously "CCITT Recommendation")

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. Some 179 member countries, 84 telecom operating entities, 145 scientific and industrial organizations and 38 international organizations participate in ITU-T which is the body which sets world telecommunications standards (Recommendations).

The approval of Recommendations by the Members of ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, 1993). In addition, the World Telecommunication Standardization Conference (WTSC), which meets every four years, approves Recommendations submitted to it and establishes the study programme for the following period.

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. The text of ITU-T Recommendation X.720, Amendment 1, was approved on 21st of November 1995. The identical text is also published as ISO/IEC International Standard 10165-1.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized private operating agency.

ITU-T X-SERIES RECOMMENDATIONS

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

(February 1994)

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Summary

This amendment to Rec. X.720 | ISO/IEC 10165-1 covers the generalization of terms so that these terms and concepts can be reused in the General Relationship Model (see Recommendation X.725). It is intended that the generalization in terms does not change the semantics in the Management Information Model (see Recommendation X.720). The general approach for the specified terms (characteristics, inheritance, hierarchy, multiple inheritance and specialization) is to remove the term “managed objet class” and use the more general term “class”. It is beneficial if the General Relationship Model does not have different terminology for the same general concepts as the Management Information Model.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – STRUCTURE OF MANAGEMENT INFORMATION: MANAGEMENT INFORMATION MODEL

AMENDMENT 1
Generalization of Terms

1) *Replace 3.8.10 with the following:*

3.8.10 **behaviour**: The way defined elements of management information relate to resources they model and to each other.

2) *Replace 3.8.11 with the following:*

3.8.11 **characteristic**: An element of a class definition.

3) *Replace 3.8.16 with the following:*

3.8.16 **inheritance**: The conceptual mechanism by which characteristics are acquired by a subclass from its superclass.

4) *Replace 3.8.17 with the following:*

3.8.17 **inheritance hierarchy**: An hierarchical arrangement of like classes where the hierarchy is organized on the basis of the class specialization.

5) *Add the following between the current 3.8.19 and 3.8.20:*

3.8.20 **invariant**: A logical predicate that must remain true for a specified scope.

6) *Replace the current 3.8.22 with the following:*

3.8.22 **multiple inheritance**: A conceptual mechanism that allows a subclass to acquire characteristics from more than one like superclass.

7) *Add the following between the current 3.8.28 and 3.8.29:*

3.8.30 **pre-condition**: A logical predicate that must be true immediately before the execution of an operation or immediately before the emission of a notification.

3.8.31 **post-condition**: A logical predicate that must be true immediately after the execution of an operation or immediately after the emission of a notification.

8) *Replace the current 3.8.31 with the following:*

3.8.31 **specialization**: The technique of deriving a new class from one or more existing like classes by inheritance and by the addition of new characteristics.

9) *Renumber 3.8 accordingly. The following provides the new numbering:*

3.8.1-**3.8.19** remain the same

3.8.20 Invariant:

3.8.21 Managed object boundary:

3.8.22 Mandatory package:

3.8.23 Multiple inheritance:

3.8.24 Name binding:

3.8.25 Naming schema:

3.8.26 Naming tree:

3.8.27 Package:

3.8.28 Parameter:

3.8.29 Permitted value set:

3.8.30 Pre-condition:

3.8.31 Post-condition:

3.8.32 Relative distinguished name:

3.8.33 Required value set:

3.8.34 Specialization:

3.8.35 Subclass:

3.8.36 Superclass:

3.8.37 Superior object:

3.8.38 Subordinate object:

3.8.39 Uninstantiable managed object class:

10) *At the end of 3.8, add the word* "NOTES"**,** *then change the existing word* "NOTE" *to* "1"**.** *Then add a second Note as follows:*

2 The term "class" is used when it is intended to be non-specific about the kind of class. The term "class" may refer to a managed object class or some other kind of class (e.g. managed relationship class). The term "like (super) classes" means (super) classes of the same kind.

11) *Add the following sentence after the first sentence of 5.1.2:*

The characteristics of a managed object class comprise attributes, attribute groups, actions, notifications, behaviour and packages.

12) *Replace the first sentence of 5.1.2.1 with the following:*

A package is a collection of attributes, attribute groups, actions, notifications and behaviour, which is an integral module of a managed object class definition.