INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

M.3100
Amendment 7
(12/2003)

SERIES M: TMN AND NETWORK MAINTENANCE:
INTERNATIONAL TRANSMISSION SYSTEMS,
TELEPHONE CIRCUITS, TELEGRAPHY, FACSIMILE
AND LEASED CIRCUITS

Telecommunications management network

Generic network information model
Amendment 7

ITU-T Recommendation M.3100 (1995) – Amendment 7

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TMN AND NETWORK MAINTENANCE: INTERNATIONAL TRANSMISSION SYSTEMS, TELEPHONE CIRCUITS, TELEGRAPHY, FACSIMILE AND LEASED CIRCUITS

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ITU-T Recommendation M.3100

Generic network information model

Amendment 7

Summary

ITU-T Rec. M.3100 (Generic network information model) Amendment 7 adds the following new informative clause I.13 Use of topological link, clauses **3.6.x** Alarm Reporting Control Manager, **5.x** Alarm Reporting Control List, **5.x** Alarm Reporting Control Manager Id and augments **10.2** ASN.1 module.

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.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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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)　　New clause I.13, Use of topological link

Add the following new informative clause I.13:

I.13　　Use of topological link

Whether to use topologicalLink or not is relevant to two kinds of Name Binding that linkConnection has. Moreover, as it can be hard to understand the relationship how to use logicalLink, the following guidelines are offered:

a)　　If you do not want to use topologicalLink, Name Binding between layerNetworkDomain and linkConnection is used.　　The pointer relationship between linkConnection and server trail is established by serverTrailList and clientLinkConnectionList attributes, respectively.

b)　　If you want to use topologicalLink, Name Binding between topologicalLink and linkConnection is used.　　The pointer relationship between linkConnection and server trail is not established. Instead, the pointer relationship between topologicalLink and server trail is established by serverTrail and clientLinkPointer attributes, respectively.

In either case, if you want to use logicalLink, the pointer relationship between linkConnection and logicalLink is established by linkConnectionPointerList of logicalLink.
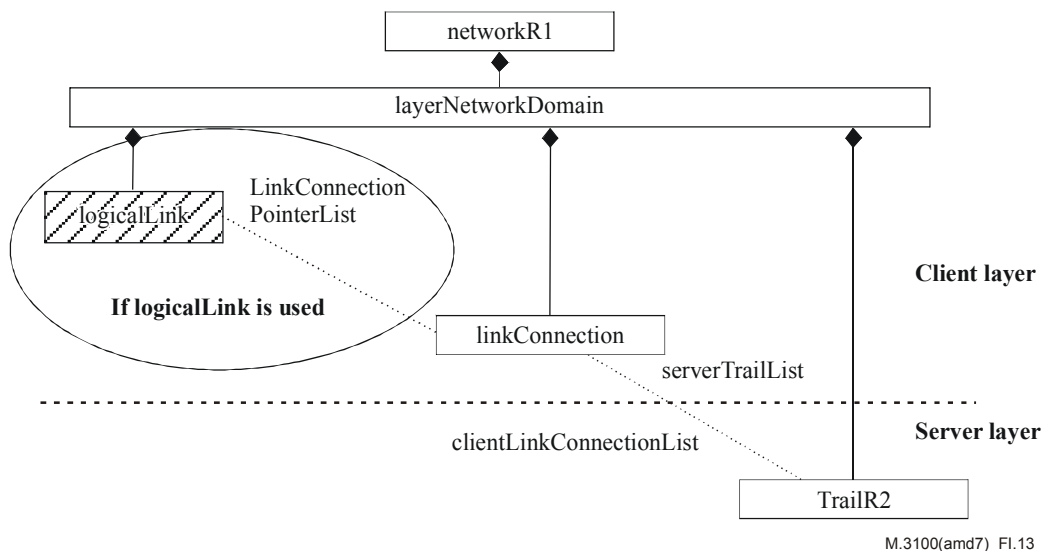
M.3100(amd7)_FI.13

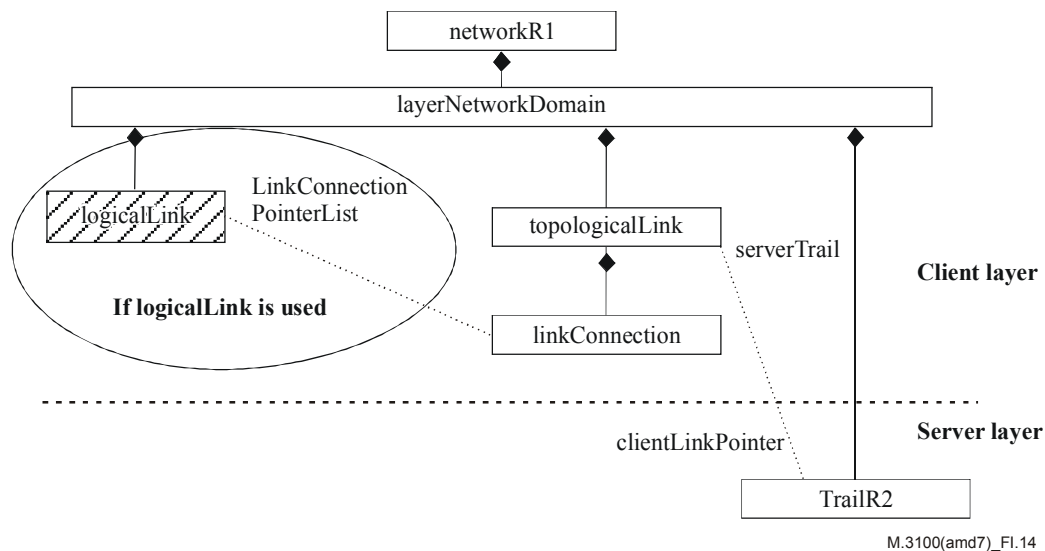**Figure I.13/M.3100 – Name binding when topologicalLink is not used**

Figure I.14/M.3100 – Name binding when topologicalLink is used

2) New capability – Alarm Report Control Manager

Add the following to the main body of the Recommendation:

3.6.x Alarm Reporting Control Manager

```
alarmReportingControlManager  MANAGED OBJECT CLASS
        DERIVED FROM        "ITU-T Rec. X.721 | ISO/IEC 10165-2 : 1992":top;
        CHARACTERIZED BY
        alarmReportingControlManagerPackage  PACKAGE
            BEHAVIOUR
            alarmReportingControlManagerBehaviour  BEHAVIOUR
                DEFINED AS

    "The alarm reporting control manager object class is a class of management support object
     that specifies the alarm report control setting and status for the objects in the managed
     system."
    ;;
            ATTRIBUTES
                alarmReportingControlManagerId GET SET-BY-CREATE,
                arcDefaultNALMTIInterval GET-REPLACE, -- defined in Amd.3
                arcDefaultNALMCDInterval GET-REPLACE, -- defined in Amd.3
                alarmReportingControlList      GET-REPLACE  ADD-REMOVE ;
            ;;
        CONDITIONAL PACKAGES
            objectManagementNotificationsPackage  PRESENT IF "an instance supports it";
REGISTERED AS {m3100ObjectClass 78};
```

5.x   Alarm Reporting Control List

alarmReportingControlList ATTRIBUTE
    WITH ATTRIBUTE SYNTAX ASN1DefinedTypesModule.AlarmReportingControlList;
    BEHAVIOUR
        alarmReportingControlListBehaviour BEHAVIOUR
        DEFINED AS

    "The Alarm Reporting Control List is an attribute type whose value provides a list of (SET OF) ARC setting for the objects in the managed system. Each entry in the list is the setting for an individual object. The setting for an individual object includes an identify of the controlled object (e.g., a TP object intance), the controlled probable causes, the arc state, and optionally the time remaining in the arc.";;

REGISTERED AS {m3100Attribute 165};

5.x   Alarm Reporting Control Manager Id

alarmReportingControlManagerId ATTRIBUTE
    WITH ATTRIBUTE SYNTAX ASN1DefinedTypesModule.NameType;
    MATCHES FOR EQUALITY, ORDERING, SUBSTRINGS;
    BEHAVIOUR
        "ITU-T Rec. X.721 | ISO/IEC 10165-2 : 1992":rDNIdBehaviour,
        -- The above behaviour is defined as part of discriminatorId in
        -- ITU-T Rec. X.721.
        alarmReportingControlManagerIdBehaviour BEHAVIOUR
        DEFINED AS

    "The Alarm Reporting Control Manager Id is an attribute type whose distinguished value can be used as a RDN when naming an instance of the Alarm Reporting Control Manager object class.";;

REGISTERED AS {m3100Attribute 166};

3)   Clause 10.2, ASN.1 module

10.2   ASN.1 module

AlarmReportingControlList ::= SET OF AlarmReportingControl

AlarmReportingControl ::= SEQUENCE {
    controlledEntity   **ObjectInstance,**
    arcProbableCauseList   **SET OF ProbableCause,**   **-- empty means all**
    arcState   **ArcState,**   **-- the value alm(0) is not used**
    timeRemainingInARCState   **INTEGER OPTIONAL}**   **-- for TI or QI-CD**

-- Note that an empty set of arcProbableCauseList means all probable causes.

-- Note that for the field arcState, the value alm(0) is not used.

-- Once an object enters the normal reporting mode (i.e., in the alm state),

-- the corresponding AlarmReportingControl entry will be automatically removed from the
-- AlarmReportingControlList.

-- Note that the field timeRemainingInARCState is optional.

-- It is optionally applicable only when the arcState is either

-- (a) nalmQualifiedInhibit(2) and Count-Down is supported, or

-- (b) nalmTimedInhibit(4).

-- Also note that when setting up the ARC setting, this field can be used by the

-- managing system to override the default TI interval or CD interval.

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