EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 412

May 1995

Source: ETSI TC-TM

Reference: DE/TM-02217

ICS: 33.080

Key words: Information model, NE

Transmission and Multiplexing (TM); Payload configuration information model for the Network Element (NE) view

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Transmission and Multiplexing (TM) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS describes the information model for Network Elements (NEs) for the payload configuration.

Proposed transposition dates	
Date of latest announcement of this ETS (doa):	31 August 1995
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 August 1995
Date of withdrawal of any conflicting National Standard (dow):	29 February 1996

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1 Scope

This European Telecommunication Standard (ETS) provides an information model for the payload configuration management of Synchronous Digital Hierarchy (SDH) networks. This model describes the managed object classes and their properties for the payload configuration function as related to SDH Network Elements (NEs). These objects are useful to describe information exchanged across interfaces defined in CCITT Recommendation M.3010 [1] Telecommunications Management Network (TMN) architecture for the management of the payload configuration function.

This ETS defines:

- an information model, as related to the payload configuration for the SDH.

This ETS does not define:

- the protocol stack to be used for message communication;
- the network level management processes;
- the application contexts;
- the conformance requirements to be met by an implementation of this information model;
- information models for other systems or equipment.

The information model defined here (and the corresponding message set) is concerned with the management of NEs, the equipment by which they are implemented and the functions contained within them. More precisely, it applies to an equipment domain visible at the element manager to element interface and is only concerned with information available within that domain. Information proper to the domain of a network level management process is not included within this model.

2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1] CCITT Recommendation M.3010 (1994): "Principles for a telecommunications management network".

[2] ITU-T Recommendation G.774.2 (1994): "Synchronous digital hierarchy (SDH) configuration of the payload structure for the network element view".

3 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

au	administrative unit
aug	administrative unit group
CTP	Connection Termination Point
ms	multiplexer section
NE	Network Element
rs	regenerator section
SDH	Synchronous Digital Hierarchy
SPI	Synchronous Physical Interface
TMN	Telecommunication Management Network
TTP	Trail Termination Point
tu	tributary unit
tug	tributary unit group
VCn	Virtual Container n

4 Payload configuration management model

The SDH payload configuration management requirements are described in ITU-T Recommendation G.774.2 [2], § 5.

5 Managed object class definitions

In the context of this ETS, the IMPORTS clause specifies the object classes which can be instantiated in the scope of this ETS. The IMPORTS clause does not include uninstantiated superclasses.

```
BEGIN
IMPORTS
modifiableTug3Bidirectional,
modifiableTug3Sink,
modifiableTug3Source,
modifiableTug2Bidirectional,
modifiableTug2Sink,
modifiableTug2Source,
modifiableVC4TTPBidirectional,
modifiableVC4TTPSink,
modifiableVC4TTPSource,
modifiableVC2TTPBidirectional,
modifiableVC2TTPSink,
modifiableVC2TTPSource,
modifiableVC12TTPBidirectional,
modifiableVC12TTPSink,
modifiableVC12TTPSource,
modifiableVC11TTPBidirectional,
modifiableVC11TTPSink,
modifiableVC11TTPSource
FROM {itu(0) recommendation(0) g(7) g774(774) hyphen(127) conf(02) informationModel(0)
managedObjectClass(3) }
;
END
```

6 Packages

None.

7 Attributes

None.

8 Actions

```
BEGIN
IMPORTS
defineVC4Structure,
defineTug3Structure,
defineTug2Structure,
defineClientType
FROM {itu(0) recommendation(0) g(7) g774(774) hyphen(127) conf(02) informationModel(0)
action(9) }
;
END
```

9 Notifications

None.

10 Parameters

```
BEGIN
IMPORTS
defineSDHStructureError
FROM {itu(0) recommendation(0) g(7) g774(774) hyphen(127) conf(02) informationModel(0)
parameter(5) }
;
END
```

11 Name bindings

```
BEGIN
IMPORTS
augSink-msTTPSink,
augSource-msTTPSource,
electricalSPITTPSink-sdhNE,
electricalSPITTPSource-sdhNE,
msCTPSink-rsTTPSink,
msCTPSource-rsTTPSource,
msDatacomCTPSink-msTTPSink,
msDatacomCTPSource-msTTPSource,
msOrderwireCTPSink-msTTPSink,
msOrderwireCTPSource-msTTPSource,
msTTPSink-sdhNE,
msTTPSource-sdhNE,
opticalSPITTPSink-sdhNE,
opticalSPITTPSource-sdhNE,
rsCTPSink-electricalSPITTPSink,
rsCTPSink-opticalSPITTPSink,
rsCTPSource-electricalSPITTPSource,
rsCTPSource-opticalSPITTPSource,
rsDatacomCTPSink-rsTTPSink,
rsDatacomCTPSource-rsTTPSource,
rsOrderwireCTPSink-rsTTPSink,
rsOrderwireCTPSource-rsTTPSource,
rsTTPSink-sdhNE,
rsTTPSource-sdhNE,
rsUserChannelCTPSink-rsTTPSink,
rsUserChannelCTPSource-rsTTPSource,
tu12CTPSink-tug2Sink,
tu12CTPSource-tug2Source,
tu2CTPSink-tug2Sink,
tu2CTPSource-tug2Source,
tu3CTPSink-tug3Sink,
tu3CTPSource-tug3Source,
tug2Sink-tug3Sink,
tug2Sink-vc3TTPSink,
tug2Source-tug3Source,
tug2Source-vc3TTPSource,
tug3Sink-vc4TTPSink,
tug3Source-vc4TTPSource,
vc11TTPSink-sdhNE,
vc11TTPSource-sdhNE,
vc12TTPSink-sdhNE,
vc12TTPSource-sdhNE,
vc2TTPSink-sdhNE,
vc2TTPSource-sdhNE,
vc4TTPSink-sdhNE,
```

```
vc4TTPSource-sdhNE,
vcnUserChannelCTPSink-vc3TTPSink,
vcnUserChannelCTPSink-vc4TTPSink,
vcnUserChannelCTPSource-vc3TTPSource,
vcnUserChannelCTPSource-vc4TTPSource
FROM {itu(0) recommendation(0) g(7) g774(774) hyphen(127) conf(02) informationModel(0)
nameBinding(6) }
;
END
```

12 Subordination, connectivity pointer constraints rules

The connectivity pointer constraints rules are described in ITU-T Recommendation G.774.2 [2], § 13.

The subordination rules are described in ITU-T Recommendation G.774.2 [2], § 14.

Annex A (informative): Bibliography

The following references are supplied for informative purposes.

1) ITU-T Recommendation G.707 (1993): "Synchronous digital hierarchy bit rates".

2) ITU-T Recommendation G.708 (1993): "Network node interface for the synchronous digital hierarchy".

3) ITU-T Recommendation G.709 (1993): "Synchronous multiplexing structure".

4) CCITT Recommendation G.783 (1990): "Characteristics of synchronous digital hierarchy (SDH) multiplexing equipment functional blocks".

5) CCITT Recommendation G.784 (1990): "Synchronous digital hierarchy (SDH) management".

6) ITU-T Recommendations G.803 (1993): "Architectures of transport networks based on the synchronous digital hierarchy".

7) ITU-T Recommendations G.831 (1993): "Management capabilities of transport networks based on the synchronous digital hierarchy".

8) CCITT Recommendation M.3100 (1992): "Generic network information model".

9) CCITT Recommendation X.208 (1990): "Specification of Abstract Syntax Notation One (ASN.1)".

10) CCITT Recommendation X.701 (1992): "Information technology - Open Systems Interconnection - Systems management overview".

11) CCITT Recommendation X.720 (1992): "Information technology - Open Systems Interconnection - Structure of management information: Management information model".

12) CCITT Recommendation X.721 (1992): "Information technology - Open Systems Interconnection - Structure of management information: Definition of management information".

13) CCITT Recommendation X.722 (1992): "Information technology - Open systems interconnection - Structure of management information: Guidelines for the definition of managed objects".

14) CCITT Recommendation X.730 (1992): "Information technology - Open Systems Interconnection - Systems management: Object management function".

History

Document history	
May 1995	First Edition
December 1995	Converted into Adobe Acrobat Portable Document Format (PDF)

ISBN 2-7437-0134-X
Dépôt légal : Mai 1995