EN 300 645 V1.2.1 (1998-10)
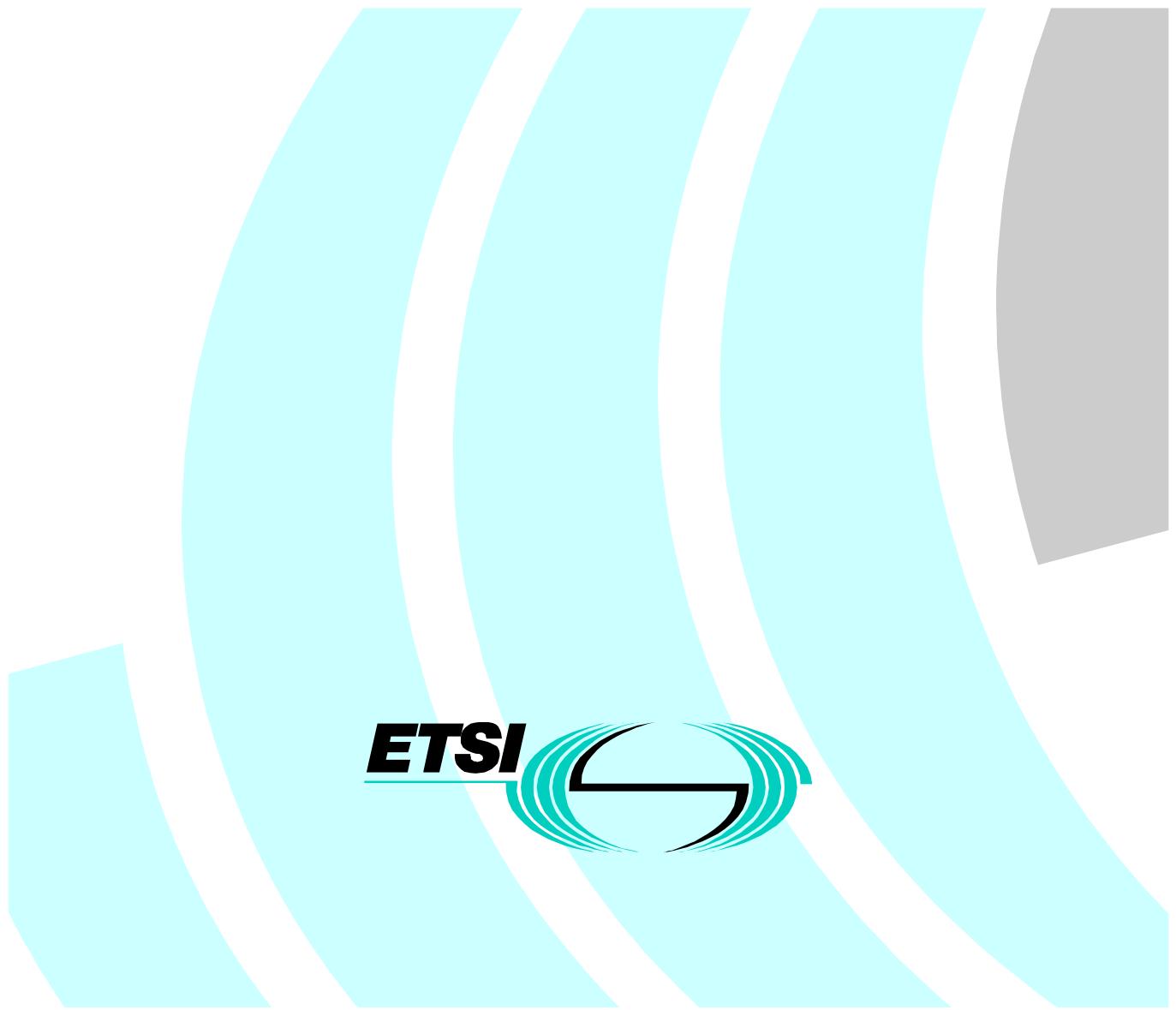
European Standard (Telecommunications series)

**Telecommunications Management Network (TMN);
Synchronous Digital Hierarchy (SDH) radio relay equipment;
Information model for use on Q-interfaces**

ETSI

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Contents

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Telecommunication Management Network (TMN).

The present document describes the information model for Radio Relay Network Elements, which use the SDH multiplexing structure, in object oriented terms, using ISO templates.

National transposition dates	
Date of adoption of this EN:	23 October 1998
Date of latest announcement of this EN (doa):	31 January 1999
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 July 1999
Date of withdrawal of any conflicting National Standard (dow):	31 July 1999

1 Scope

The present document defines the information model to be used at the interface between network elements and management systems, for the management of Radio Relays equipments which use the SDH.

The present document defines:

- the information model fragment for Radio Relay Network Elements using SDH multiplexing.

The present document 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 network elements, 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 References

The following document contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, subsequent revisions do apply.

- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

    [1]   ITU-T Recommendation G.774: "Synchronous digital hierarchy (SDH) management information model for the network element view".

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

SDH   Synchronous Digital Hierarchy
ISO   International Organisation for Standardisation

4 Object classes

The use of object identifier defined by ETSI in previous versions of the present document should be deprecated.

```
BEGIN
IMPORTSGDMO
radioSPITTPBidirectional,
radioSPITTPSink ,
radioSPITTPSource,
sdhRadioProtectionGroup,
sdhRadioProtectionUnit,
msTcCTPBidirectional,
msTcCTPSink ,
msTcCTPSource,
msTcTTPBidirectional,
msTcTTPSink,
msTcTTPSource,
au4HopcCTPBidirectional,
au4HopcCTPSink ,
au4HopcCTPSource,
vc4HopcTTPBidirectional,
vc4HopcTTPSink,
vc4HopcTTPSource,
radioUnprotectedCTPBidirectional,
radioUnprotectedCTPSink,
radioUnprotectedCTPSource,
radioProtectedTTPBidirectional,
radioProtectedTTPSink,
radioProtectedTTPSource
FROM {itu-t(0) recommendation(0) g(7) g774(774) hyphen(127) sdhRadioIM(8) informationModel(0)
managedObjectClass(3)};
END
```

5 Packages

```
BEGIN
IMPORTSGDMO
atpcPackage,
radioSPIPackage,
rxLOSNotificationPackage,
demLOSNotificationPackage,
txLOSNotificationPackage,
modLOSNotificationPackage,
exerciseOnOffPkg,
singleExercisePkg,
privilegedChannelPkg,
radioHoldOffTimePkg
FROM {itu-t(0) recommendation(0) g(7) g774(774) hyphen(127) sdhRadioIM(8) informationModel(0)
package(4)};
END
```

6 Parameters

```
BEGIN
IMPORTSGDMO
radioProtectionStatusParameter
FROM {itu-t(0) recommendation(0) g(7) g774(774) hyphen(127) sdhRadioIM(8) informationModel(0)
asn1Module(2) sdhRadioProtASN1(1) parameter(5)};
END
```

7 Name bindings

```
BEGIN
IMPORTSGDMO
radioSPITTPSink-managedElement,
radioSPITTPSource-managedElement,
rsCTPSink-radioSPITTPSink,
rsCTPSource-radioSPITTPSource,
augSink-msTcTTPSink,
augSource-msTcTTPSource,
msTcCTPSink-rsTTPSink,
msTcCTPSource-rsTTPSource,
msTcTTPSink-sdhNE,
msTcTTPSource-sdhNE,
vc4HopcTTPSink-sdhNE,
vc4HopcTTPSource-sdhNE,
au4HopcCTPSink-augSink,
au4HopcCTPSource-augSource
FROM {itu-t(0) recommendation(0) g(7) g774(774) hyphen(127) sdhRadioIM(8) informationModel(0)
nameBinding(6)};
END
```

8 Attributes

```
BEGIN
IMPORTSGDMO
atpcImplemented,
atpcEnabled,
radioFrequency,
radioSPITTPId ,
hitless,
radioHoldOffTime,
rpsSummaryStatus,
exerciseOn,
privilegedChannel,
radioProtectionStatus,
radioUnprotectedCTPId,
radioProtectedTTPId
FROM {itu-t(0) recommendation(0) g(7) g774(774) hyphen(127) sdhRadioIM(8) informationModel(0)
attribute(7)};
END
```

9 Actions

```
BEGIN
IMPORTSGDMO
invokeRadioExercise
FROM {itu-t(0) recommendation(0) g(7) g774(774) hyphen(127) sdhRadioIM(8) informationModel(0)
action(9)};
END
```

Bibliography

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-          ITU-R Recommendation 750: "Architectural and Functional Aspects of Radio-Relay Systems for SDH based Networks".

-          ITU-T Recommendation G.773: "Protocol suites for Q-interfaces for management of transmission systems".

-          ITU-T Recommendation G781: "Structure of Recommendations on equipment for the synchronous digital hierarchy (SDH)".

-          ITU-T Recommendation G.782: "Types and general characteristics of synchronous digital hierarchy (SDH) equipment".

-          ITU-T Recommendation G.783: "Characteristics of synchronous digital hierarchy (SDH) equipment functional blocks".

-          ITU-T Recommendation G.784: "Synchronous digital hierarchy (SDH) management".

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

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

-          ITU-T Recommendation M.60: "Maintenance terminology and definitions".

-          ITU-T Recommendation M.3010: "Principles for a telecommunications management network".

           ITU-T Recommendation M.3100: "Generic Network Information Model".

-          ITU-T Recommendation Q.811: "Lower layer protocol profiles for the Q3 X interface".

-          ITU-T Recommendation Q.812: "Upper layer protocol profiles for the Q3 and X interface".

-          ITU-T Recommendation X.701: "Information technology; Open Systems Interconnection; Systems management overview".

-          ITU-T Recommendation X.710: "Common management information service definition for CCITT applications".

-          ITU-T Recommendation X.711: "Common management information protocol specification for CCITT applications".

-          ITU-T Recommendation X.720: "Information technology; Open Systems Interconnection; Structure of management information: Management information model".

-          ITU-T Recommendation X.721: "Information technology; Open Systems Interconnection; Structure of management information: Definition of management information".

-          ITU-T Recommendation X.722: "Information technology; Open Systems Interconnection; Structure of Management Information: Guidelines for the definition of managed objects".

-          ITU-T Recommendation X.730: "Information technology; Open Systems Interconnection; Systems Management: Object management function".

-          ITU-T Recommendation X.731: "Information technology; Open Systems Interconnection; Systems Management: State management function".

- ITU-T Recommendation X.733: "Information technology; Open Systems Interconnection; Systems Management: Alarm reporting function".

- ITU-T Recommendation X.734: "Information technology ;Open Systems Interconnection; Systems Management: Event report management function".

- ITU-T Recommendation X.735: "Information technology; Open Systems Interconnection; Systems Management: Log control function".

History

Document history				
V1.1.1	May 1998	One-step Approval Procedure	OAP 9841:	1998-05-20 to 1998-10-16
V1.2.1	October 1998	Publication		