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

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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.


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, radioSPITTSinkSource,
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) informationModel(0)
managedObjectClass(3)};
END

5 Packages

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

6 Parameters

BEGIN
IMPORTSGDMO
radioProtectionStatusParameter
FROM {itu-t(0) recommendation(0) g(7) g774(774) informationModel(0)
asn1Module(2) sdhRadioProtASN1(1) parameter(5)};
END
7 Name bindings

BEGIN
IMPORTSGDMO
radioSPITPSink-managedElement,
radioSPITTPSource-managedElement,
rsCTPSink-radioSPITPSink,
rsCTPSource-radioSPITTPSource,
rsTTPSink-rsCTPSink,
rsTTPSource-rsCTPSource,
rsTTPSink-sdhNE,
rsTTPSource-sdhNE,
v4HopCTPSink-sdhNE,
v4HopCTPSource-sdhNE,
augSink-msTcTTPSink,
augSource-msTcTTPSource,
msTcCTPSink-rsTTPSink,
msTcCTPSource-rsTTPSource,
msTcTTPSink-sdhNE,
msTcTTPSource-sdhNE,
vc4HopTTPSink-sdhNE,
vc4HopTTPSource-sdhNE,
augSink-augSink,
augSource-augSource
FROM {itu-t(0) recommendation(0) g744(774) informationModel(0) nameBinding(6)};
END

8 Attributes

BEGIN
IMPORTSGDMO
atpcImplemented,
radioHoldOffTime,
radioProtectionStatus,
rfSummaryStatus,
exerciseOn,
radioFrequency,
radioSPITTPId ,
hitless,
radioSPITTPId
FROM {itu-t(0) recommendation(0) g744(774) informationModel(0) attribute(7)};
END

9 Actions

BEGIN
IMPORTSGDMO
invokeRadioExercise
FROM {itu-t(0) recommendation(0) g744(774) informationModel(0) action(9)};
END
Bibliography

- ETS 300 304: "Transmission and Multiplexing (TM); Synchronous Digital Hierarchy (SDH); SDH information model for the Network Element (NE) view".
- ITU-T Recommendation G.781: "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.784: "Synchronous digital hierarchy (SDH) management".
- ITU-T Recommendation G.810: "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".
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