

# ETSI TS 128 732 V13.4.0 (2024-10)



**Universal Mobile Telecommunications System (UMTS);  
LTE;  
Telecommunication management;  
Transport Network (TN)  
interface Network Resource Model (NRM)  
Integration Reference Point (IRP);  
Information Service (IS)  
(3GPP TS 28.732 version 13.4.0 Release 13)**



---

**Reference**

RTS/TSGS-0528732vd40

---

**Keywords**

LTE,UMTS

**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

---

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° w061004871

---

**Important notice**

The present document can be downloaded from the  
ETSI [Search & Browse Standards application](#).

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#).

Users should be aware that the present document may be revised or have its status changed,  
this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to  
the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our  
[Coordinated Vulnerability Disclosure \(CVD\)](#) program.

---

**Notice of disclaimer & limitation of liability**

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

---

**Copyright Notification**

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2024.  
All rights reserved.

---

## Intellectual Property Rights

### Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

### Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

---

## Legal Notice

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found under <https://webapp.etsi.org/key/queryform.asp>.

---

## Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

# Contents

Intellectual Property Rights .....	2
Legal Notice .....	2
Modal verbs terminology.....	2
Foreword.....	4
Introduction .....	4
1 Scope .....	5
2 References .....	5
3 Definitions and abbreviations.....	6
3.1 Definitions .....	6
3.2 Abbreviations .....	6
4 Model .....	7
4.1 Imported information entities and local labels .....	7
4.2 Class diagram .....	7
4.2.1 Relationships.....	7
4.2.2 Inheritance .....	8
4.3 Class definitions .....	8
4.3.1 TransportNetworkInterface.....	8
4.3.1.1 Definition .....	8
4.3.1.2 Attributes.....	8
4.3.1.3 Attribute constraints .....	8
4.3.1.4 Notifications.....	8
4.3.2 ATMChannelTerminationPoint .....	8
4.3.2.1 Definition .....	8
4.3.2.2 Attributes.....	9
4.3.2.3 Attribute constraints .....	9
4.3.2.4 Notifications.....	9
4.3.3 ATMPATHTerminationPoint .....	9
4.3.3.1 Definition .....	9
4.3.3.2 Attributes.....	9
4.3.3.3 Attribute constraints .....	10
4.3.3.4 Notifications.....	10
4.4 Attribute definitions .....	10
4.4.1 Attribute properties .....	10
4.4.2 Constraints .....	12
4.5 Common notifications .....	13
4.5.1 Alarm notifications .....	13
4.5.2 Configuration notifications .....	13
<b>Annex A (informative): Example Configuration of ATM Transport Network in UTRAN.....</b>	<b>14</b>
<b>Annex B (informative): Change history .....</b>	<b>15</b>
History .....	16

---

# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

---

# Introduction

The present document is part of a TS-family covering the 3<sup>rd</sup> Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

28.731 Transport Network (TN) interface Network Resource Model (NRM) Integration Reference Point (IRP); Requirements.

**28.732 Transport Network (TN) interface Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS).**

28.733 Transport Network (TN) interface Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions.

---

# 1 Scope

The present document specifies the Transport Network (TN) interface Network Resource Model (NRM) that can be communicated between an IRP Agent and an IRP Manager for telecommunication network management purposes, including management of converged networks.

This document specifies the semantics and behaviour of information object class attributes and relations visible across the reference point in a protocol and technology neutral way. It does not define their syntax and encoding.

The "Transport Network (TN) Interface Network Resource Model (NRM) IRP" comprises a set of specifications defining Requirements, a protocol neutral Network Resource Model (NRM) and corresponding Solution Set(s).

The present document:

- Specifies the protocol neutral Transport Network (TN) interface Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS). It reuses relevant parts of the generic NRM in TS 28.622 [6], either by direct reuse or sub-classing, and in addition to that defines Transport specific Managed Object Classes.

The Configuration Management (CM) area is very large. The intention is to split the specification of the related interfaces in several IRPs - as described in the Introduction clause above. An important aspect of such a split is that the Network Resource Models (NRMs) defined in different IRPs containing NRMs are consistent, and that NRMs supported by an IRP Agent implementation can be accessed as one coherent model through one IRP Information Service.

In order to access the information defined by this NRM, an IRP Information Service (IS) is needed, such as the Basic CM IRP: IS (TS 32.602 [7]) or the Bulk CM IRP: IS (TS 32.612 [8]). However, which Information Service that is applicable is outside the scope of this document.

Finally, regarding the support of the State Management IRP: IS (TS 28.625 [16]), all NRM's of one release shall support the same State Management IRP version.

This specification is related to 3GPP TS 28.625 [16].

---

# 2 References

The following documents 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, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

•

[1] 3GPP TS 32.101: "Telecommunication Management, Principles and high level requirements".

[2] 3GPP TS 32.102: "Telecommunication management; Architecture".

[3] Void.

[4] 3GPP TS 32.300: "Telecommunication management; Configuration Management (CM); Name convention for Managed Objects".

[5] ITU-T Recommendation I.361 (11/95): "B-ISDN ATM Layer Specification".

[6] 3GPP TS 28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

- [7] 3GPP TS 32.602: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP) Information Service (IS)".
- [8] 3GPP TS 32.612: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP): Information Service (IS)".
- [9] 3GPP TS 25.430: "UTRAN Iub interface:general aspects and principles".
- [10] 3GPP TS 25.431: "UTRAN Iub interface Layer 1".
- [11] 3GPP TS 25.411: "UTRAN Iu interface Layer 1".
- [12] 3GPP TS 28.652: "UTRAN Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".
- [13] 3GPP TS 32.111-2: "Telecommunication management; Fault Management; Part 2: Alarm Integration Reference Point (IRP): Information Service (IS)".
- [14] 3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Information Service (IS)".
- [15] 3GPP TS 32.662: "Telecommunication management; Configuration Management (CM); Kernel CM Information Service (IS)".
- [16] 3GPP TS 28.625: "Telecommunication management; State Management Integration Reference Point (IRP): Information Service (IS)".
- [17] 3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) concept and definitions".

---

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the following definitions and abbreviations apply. For definitions and abbreviations not found here, please refer to 3GPP TS 32.101 [1], 3GPP TS 32.102 [2], 3GPP TS 32.150 [17] and 3GPP TS 28.622 [6].

**Association:** See definition in TS 28.622 [6].

**Network Resource Model (NRM):** See definition in TS 28.622 [6].

### 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TS 32.101 [1], 3GPP TS 32.102 [2], 3GPP TS 32.150 [17] and the following apply:

DN	Distinguished Name (see 3GPP TS 32.300 [4])
IOC	Information Object Class
IRP	Integration Reference Point
ITU-T	International Telecommunication Union, Telecommunication Sector
Iub	Interface between RNC and Node B
NRM	Network Resource Model
RDN	Relative Distinguished Name (see 3GPP TS 32.300 [4])
RNC	Radio Network Controller
UML	Unified Modelling Language

## 4 Model

### 4.1 Imported information entities and local labels

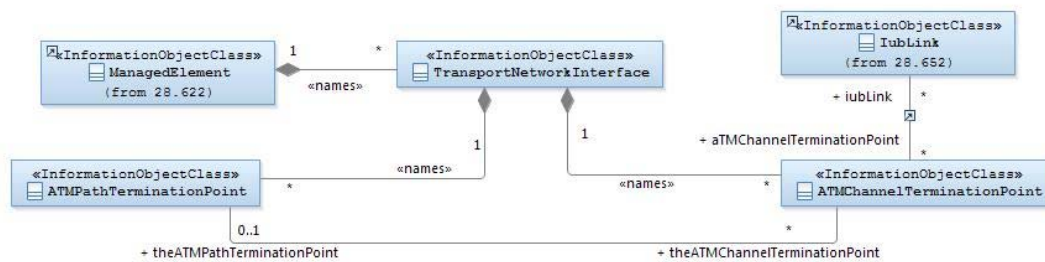
Label reference	Local label
3GPP TS 28.622 [6], IOC, ManagedElement	ManagedElement
3GPP TS 28.652 [12], IOC, IubLink	IubLink
3GPP TS 28.622 [6], IOC, VsDataContainer	VsDataContainer

### 4.2 Class diagram

#### 4.2.1 Relationships

This clause depicts the set of classes (e.g. IOCs) that encapsulates information relevant for this IRP. This subclause provides the overview of the relationships of relevant classes in UML. Subsequent subclasses provide more detailed specification of various aspects of these classes.

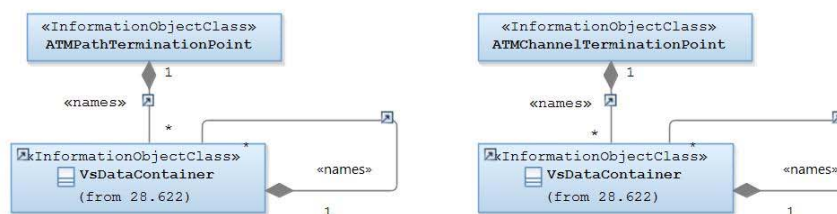
Figure 4.2.1.1 shows the name-containment relation and other types of relations of the Transport Network NRM.



**Figure 4.2.1.1: Transport Network NRM Containment/Naming and Association diagram**

Each IOC is identified with a Distinguished Name (DN) according to 3GPP TS 32.300 [4] that expresses its containment hierarchy. As an example, the DN of a IOC representing a **ATMPPathTerminationPoint** could have a format like:

SubNetwork=Sweden,meContext=MEC-Gbg-1,ManagedElement=RNC-Gbg-1, TransportNetworkInterface=ATM-1, ATMPPathTerminationPoint=Gbg-1.



NOTE 1: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.

**Figure 4.2.1.2: vsDataContainer in name-containment diagram**



## 4.2.2 Inheritance

This subclause depicts the inheritance relationships that exist between IOCs.

Figure 4.2.2.1 shows the inheritance hierarchy for the Transport Network NRM.

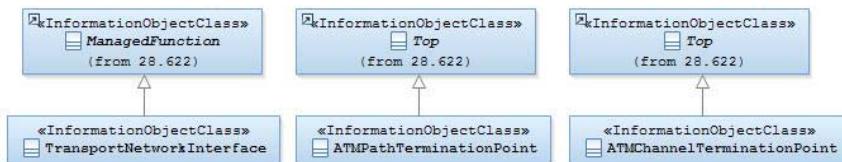


Figure 4.2.2.1: Transport Network NRM Inheritance Hierarchy

## 4.3 Class definitions

### 4.3.1 TransportNetworkInterface

#### 4.3.1.1 Definition

This IOC represents the Transport Network Interface technology (e.g. ATM, IP).

#### 4.3.1.2 Attributes

Attribute name	Support Qualifier	isReadable	isWritable	isInvariant	isNotifiable
transportNetworkType	M	M	-	-	M

#### 4.3.1.3 Attribute constraints

None.

#### 4.3.1.4 Notifications

The common notifications defined in subclause 4.5 are valid for this IOC, without exceptions or additions.

### 4.3.2 ATMChannelTerminationPoint

#### 4.3.2.1 Definition

This IOC represents a bi-directional ATM Virtual Channel Connection Termination Point.

### 4.3.2.2 Attributes

Attribute name	Support Qualifier	isReadable	isWritable	isInvariant	isNotifiable
usageChannel	M	M	-	-	M
virtualPathId	M	M	O	-	M
virtualChannelId	M	M	O	-	M
physicalPortId	M	M	O	-	M
physicalInterfaceType	M	M	O	-	M
serviceCategoryIn	M	M	O	-	M
ServiceCategoryEg	M	M	O	-	M
usedAAL	M	M	O	-	M
peakCellRateIn	M	M	O	-	M
peakCellRateEg	M	M	O	-	M
sustainableCellRateIn	O	M	O	-	M
sustainableCellRateEg	O	M	O	-	M
maximumBurstSizeIn	M	M	O	-	M
maximumBurstSizeEg	M	M	O	-	M
minimumDesiredCellRateIn	O	M	O	-	M
minimumDesiredCellRateEg	O	M	O	-	M
minimumCellRateIn	O	M	O	-	M
minimumCellRateEg	O	M	O	-	M
<b>Attribute related to role</b>					
theATMPATHTerminationPoint	M	M	-		
theIubLink	M	M	-		

### 4.3.2.3 Attribute constraints

Name	Definition
virtualPathId, virtualChannelId, physicalPortId, physicalInterfaceType, serviceCategoryIn/Eg, usedAAL, peakCellRateIn/Eg, sustainableCellRateIn/Eg, and maximumBurstSizeIn/Eg O Write qualifier	The Write Qualifier shall be supported if these attributes can be set over ltf-N.
sustainableCellRateIn/Eg, maximumBurstSizeIn/Eg	Only applicable for ServiceCategory values RT-VBR, NRT-VBR.
minimumCellRateIn/Eg	Only applicable for Service Category values ABR, GFR.

### 4.3.2.4 Notifications

The common notifications defined in subclause 4.5 are valid for this IOC, without exceptions or additions.

## 4.3.3 ATMPATHTerminationPoint

### 4.3.3.1 Definition

This IOC represents a bi-directional ATM Virtual Path Connection Termination Point.

### 4.3.3.2 Attributes

Attribute name	Support Qualifier	isReadable	isWritetable	isInvariant	isNotifiable
virtualPathId	M	M	O	-	M
physicalPortIdList	M	M	O	-	M
peakCellRateIn	M	M	O	-	M
peakCellRateEg	M	M	O		
<b>Attribute related to role</b>					
theATMChannelTerminationPoint	M	M	-	-	M

NOTE: The attribute peakCellRateIn, peakCellRateEg of ATM Path is the maximum Peak Cell Rate of its channels.

### 4.3.3.3 Attribute constraints

Name	Definition
for attributes virtualPathId, physicalPortIdList, peakCellRateIn, peakCellRateEg O Write qualifier	The Write Qualifier shall be supported if these attributes can be written/set over Itf-N.

### 4.3.3.4 Notifications

The common notifications defined in subclause 4.5 are valid for this IOC, without exceptions or additions.

## 4.4 Attribute definitions

### 4.4.1 Attribute properties

The following table defines the attributes that are present in several IOCs of the present document.

Attribute Name	Documentation and Allowed Values	Properties
transportNetworkType	The type of underlying transport network, i.e. ATM, IP. allowedValues: ATM, IP	type: <<enumeration>> multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
usageChannel	The logical channel using the transport network connection. Ref. 3GPP TS 25.430 [9]. allowedValues: examples are "lub-NBAP", "lub-ALCAP".	type: String multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
virtualPathId	The ATM Virtual Path Identifier (VPI). Ref. ITU-T Recommendation I.361[5]. allowedValues: N/A	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
virtualChannelId	The ATM Virtual Channel Identifier (VCI). Ref. ITU-T Recommendation I.361 [5]. allowedValues: N/A	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
physicalPortIdList	The list of identifiers of the ATM physical port containing termination points. allowedValues: N/A	type: String multiplicity: 1..* isOrdered: False isUnique: True defaultValue: None isNullable: False
physicalPortId	The identifier of the ATM physical port containing termination points. allowedValues: N/A	type: String multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False

Attribute Name	Documentation and Allowed Values	Properties
physicalInterfaceType	The ATM physical interface type. Ref. 3GPP TS 25.431[10], 3GPP TS 25.411[11]. allowedValues: Examples are 'E1', 'STM1'.	type: String multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
serviceCategoryIn	The ATM Service Category used for the virtual connection Ingress (incoming) traffic. Ref. ITU-T Recommendation I.361[5]. allowedValues: CBR, RT-VBR, NRT-VBR, ABR, UBR, GFR	type: <<enumeration>> multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
serviceCategoryEg	The ATM Service Category used for the virtual connection Egress (outgoing) traffic. Ref. ITU-T Recommendation I.361[5] allowedValues: CBR, RT-VBR, NRT-VBR, ABR, UBR, GFR	type: <<enumeration>> multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
usedAAL	The ATM Adaptation Layer (AAL) used for the virtual connection. Ref. ITU-T Recommendation I.361[5]. allowedValues: Null, AAL1,.....	type: <<enumeration>> multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
peakCellRateIn	Peak Cell Rate (PCR) in kbits/sec for Ingress traffic. Ref. ITU-T Recommendation I.361 [5]. allowedValues: N/A	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
peakCellRateEg	Peak Cell Rate (PCR) in kbits/sec for Egress traffic. Ref. ITU-T Recommendation I.361 [5]. allowedValues: N/A	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
sustainableCellRateIn	Sustainable Cell Rate (SCR) in kbits/sec for Ingress traffic. Ref. ITU-T Recommendation I.361 [5]. allowedValues: 1..n	type: Integer Multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
sustainableCellRateEg	Sustainable Cell Rate (SCR) in kbits/sec for Egress traffic. Ref. ITU-T Recommendation I.361 [5]. allowedValues: 1..n	type: Integer Multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
maximumBurstSizeIn	Maximum Burst Size (MBS) for VBR Service Categories for Ingress traffic. Ref. ITU-T Recommendation I.361 [5]. allowedValues: 1..n	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False

Attribute Name	Documentation and Allowed Values	Properties
maximumBurstSizeEg	Maximum Burst Size (MBS) for VBR Service Categories for Egress traffic.  Ref. ITU-T Recommendation I.361 [5].  allowedValues: 1..n	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
minimumCellRateIn	Minimum Cell Rate (MCR) in kbits/sec for ABR, GFR Service Categories for Ingress traffic.  Ref. ITU-T Recommendation I.361 [5].  allowedValues: 1..n	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
minimumCellRateEg	Minimum Cell Rate (MCR) in kbits/sec for ABR, GFR Service Categories for Egress traffic.  Ref. ITU-T Recommendation I.361 [5].	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A allowedValues: 1..n isNullable: False
minimumDesiredCellRateIn	Minimum Desired Cell Rate (MDCR) in kbits/sec for UBR Service Category for Ingress traffic.  Ref. ITU-T Recommendation I.361 [5].  allowedValues: 1..n	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
minimumDesiredCellRateEg	Minimum Desired Cell Rate (MDCR) in kbits/sec for UBR Service Category for Egress traffic.  Ref. ITU-T Recommendation I.361 [5].  allowedValues: 1..n	type: Integer multiplicity: 1 isOrdered: N/A isUnique: N/A defaultValue: N/A isNullable: False
<b>Role-Attribute Name</b>		
theATMChannelTerminationPoint	It carries zero or more DNs of ATMChannelTerminationPoint.  allowedValues: N/A  Null value means no DN is carried.	type: DN multiplicity: 0..* isOrdered: False isUnique: True defaultValue: None isNullable: False
theATMPATHTerminationPoint	It carries zero or one DN of ATMPATHTerminationPoint.  allowedValues: N/A  Null value means no DN is carried.	type: DN multiplicity: 0..1 isOrdered: N/A isUnique: N/A defaultValue: None isNullable: False
theIubLink	It carries zero or more DNs of IubLink.  allowedValues: N/A  Null value means no DN is carried.	type: DN multiplicity: 0..* isOrdered: False isUnique: True defaultValue: None isNullable: False

#### 4.4.2 Constraints

None.

## 4.5 Common notifications

### 4.5.1 Alarm notifications

This subclause presents a list of notifications, defined in [13], that IRPManager can receive. The notification header attribute `objectClass/objectInstance`, defined in [14], would capture the DN of an instance of an IOC defined in this IRP specification.

Name	Qualifier	Notes
<code>notifyAckStateChanged</code>	See Alarm IRP (3GPP TS 32.111-2 [13])	
<code>notifyChangedAlarm</code>	See Alarm IRP (3GPP TS 32.111-2 [13])	
<code>notifyClearedAlarm</code>	See Alarm IRP (3GPP TS 32.111-2 [13])	
<code>notifyNewAlarm</code>	See Alarm IRP (3GPP TS 32.111-2 [13])	
<code>notifyComments</code>	See Alarm IRP (3GPP TS 32.111-2 [13])	
<code>notifyAlarmListRebuilt</code>	See Alarm IRP (3GPP TS 32.111-2 [13])	
<code>notifyPotentialFaultyAlarmList</code>	See Alarm IRP (3GPP TS 32.111-2 [13])	

### 4.5.2 Configuration notifications

This subclause presents a list of notifications, defined in [15], that IRPManager can receive. The notification header attribute `objectClass/objectInstance`, defined in [14], would capture the DN of an instance of an IOC defined in this IRP specification.

Name	Qualifier	Notes
<code>notifyAttributeValueChange</code>	O	
<code>notifyObjectCreation</code>	O	
<code>notifyObjectDeletion</code>	O	

# Annex A (informative): Example Configuration of ATM Transport Network in UTRAN

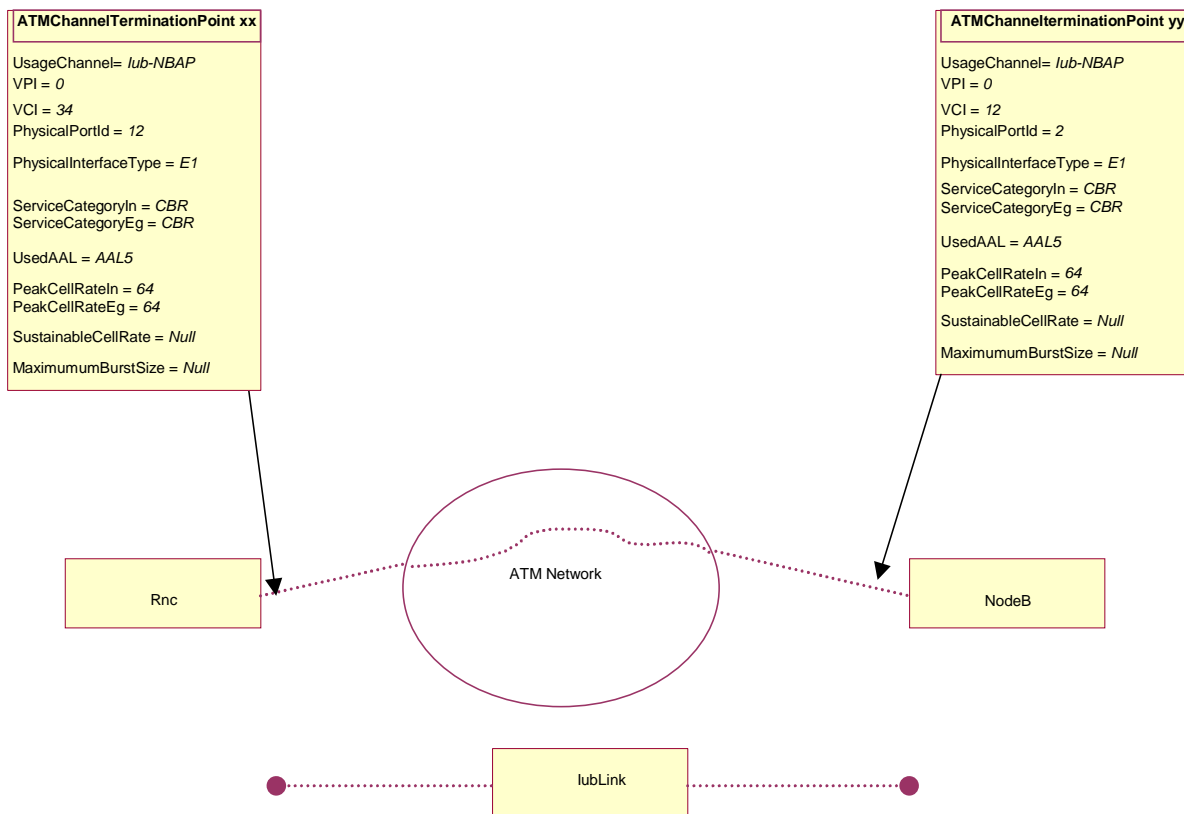


Figure A.1: Virtual connection of a logical Iub interface channel over ATM network

## Annex B (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
2013-09	SA#61	SP-130433	001	1	Removal of wrong and redundant modelling statements	F	11.0.0	11.1.0
2014-06	SA#64	SP-140358	002	-	remove the feature support statements	F	11.1.0	11.2.0
2014-10	-	-	-	-	Update to Rel-12 version (MCC)		11.2.0	<b>12.0.0</b>
2016-01	-	-	-	-	Update to Rel-13 version (MCC)		12.0.0	<b>13.0.0</b>

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2016-12	SA#74	SP-160854	0003	-	F	Correct the usage of isNullable and multiplicity property	13.1.0
2018-01	SA#78	SP-170962	0005	1	A	Update erroneous references	13.2.0
2024-06	SA#104	SP-240817	0009	1	A	Rel-13 CR TS 28.732 correction of attribute definition – the first change could not be implemented due to wrong baseline	13.3.0
2024-09	SA#105	SP-241177	0018	1	A	Rel-13 CR TS 28.732 correction of attribute definition	13.4.0



---

# History

<b>Document history</b>		
V13.0.0	January 2016	Publication
V13.1.0	January 2017	Publication
V13.2.0	January 2018	Publication
V13.3.0	July 2024	Publication
V13.4.0	October 2024	Publication