TSGS#25(04)0595

Source: **SA5 (Telecom Management)**

Title: **3 Rel-6 CR 32.642/43/45 Include ATM in Configuration Management (CM); UTRAN network resources IRP**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-Level	Doc-2nd-Level	Spec	CR	Rev	Phase	Subject	Cat	Ver-Cur	Wi
SP-040595	S5-048645	32.642	023	--	Rel-6	Include ATM in CM UTRAN network resources IRP NRM	B	6.1.0	OAM-NIM
SP-040595	S5-048646	32.643	012	--	Rel-6	Include ATM in CM UTRAN network resources IRP CORBA Solution Set	B	6.1.0	OAM-NIM
SP-040595	S5-048647	32.645	014	--	Rel-6	Include ATM in CM UTRAN network resources IRP XML Schema definition	B	6.0.0	OAM-NIM

3GPP TSG-SA5 (Telecom Management) **S5-048645**
Meeting #39, Montreal, Canada, 16 ñ 20 August 2004

CR-Form-v7

CHANGE REQUEST

⌘ **32.642** **CR** **023** ⌘ **rev** **-** ⌘ Current version: **6.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: | UICC apps⌘ ☐ ME ☐ Radio Access Network **X** Core Network ☐

Title:	⌘	Include ATM in CM UTRAN network resources IRP NRM
Source:	⌘	SA5 (tapinder.pal@t-mobile.de)
Work item code:	⌘	OAM-NIM
Date:	⌘	16/08/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	Inclusion of ATM interface IOC in UTRAN NRM.
Summary of change:	⌘	The relation to IOC ATMChannelTerminationPoint has been included in the UTRAN NRM.
Consequences if not approved:	⌘	ATM aspects will not be modelled, thus excluding an important management aspect of UTRAN-Transport Network interface functionality.

Clauses affected:	⌘	6

Y	N			
	X	Other core specifications	⌘	
	X	Test specifications		
X		O&M Specifications		Rel-6 32.643, 32.645

Other specs affected:

Other comments: ⌘ Parent to Rel-6 32.643, 32.645 CRs in S5-048646/7.

Change in Clause 6

6 IRP Information Model

6.1 Information entities imported and local labels

None.

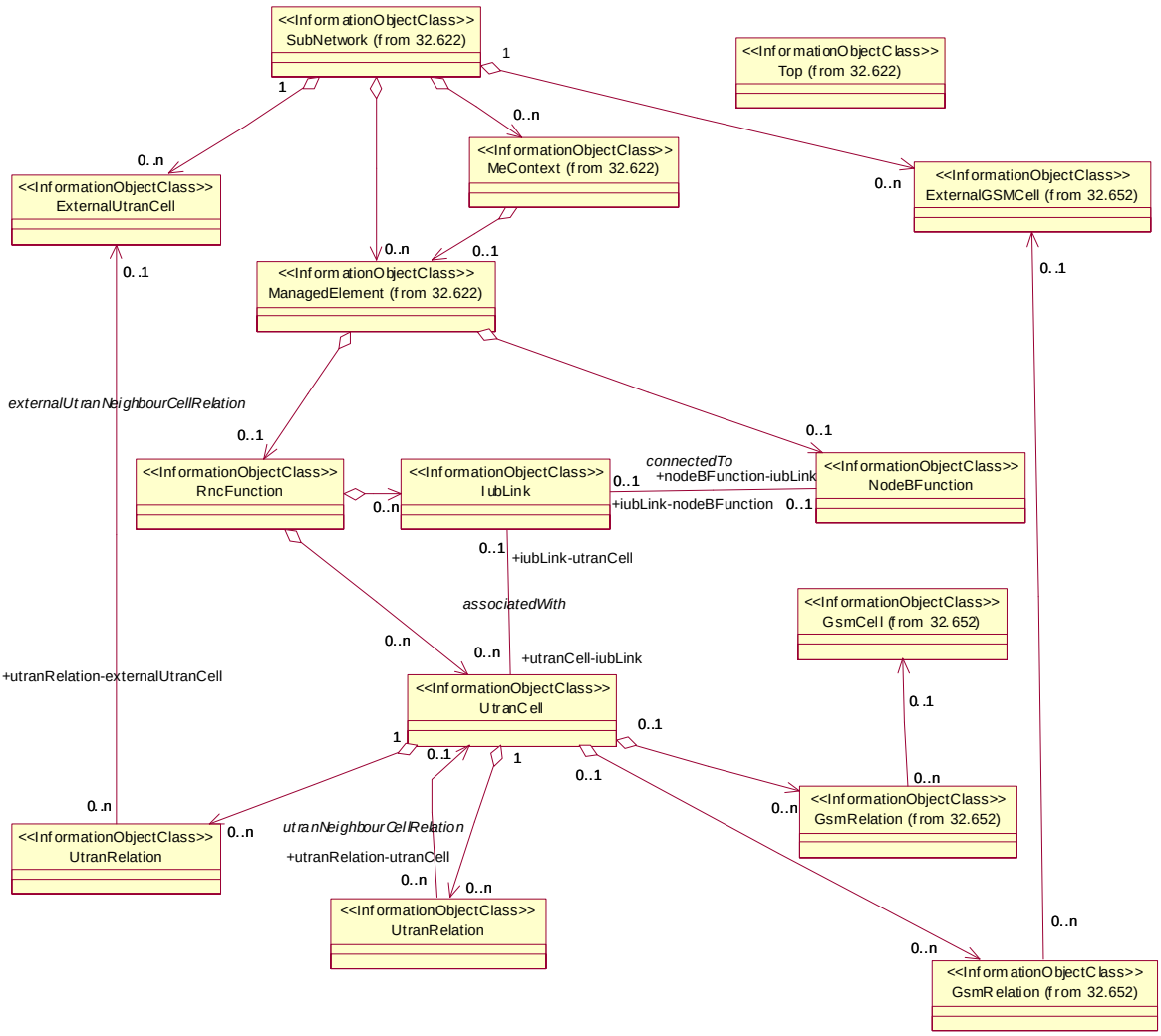
6.2 Class diagram

6.2.1 Attributes and relationships

This clause depicts the set of IOCs that encapsulate information relevant for this service. This clause provides the overview of all information object classes in UML. Subsequent clauses provide more detailed specification of various aspects of these information object classes.

Figure 6.1 show the name-containment relation and other types of relations of the UTRAN NRM.

NOTE: The name-containment relations between IOCs are indicated by UML "unidirectional aggregation by reference" ("hollow diamonds").



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

NOTE 2: The relation between GsmRelation and GsmCell is optional. It may be present if both the UtranCell and the GsmCell are managed by the same management node.

NOTE 3: The UtranRelation and GsmRelation can be name-contained under IOCs defined in other NRMs.

Figure 6.1: UTRAN NRM Containment/Naming and Association diagram

Each IOC is identified with a Distinguished Name (DN) according to 3GPP TS 32.300 [13] that expresses its containment hierarchy. As an example, the DN of an IOC representing a cell could have a format like:

SubNetwork=Sweden,MeContext=MEC-Gbg-1,ManagedElement=RNC-Gbg-1, RncFunction=RF-1,UtranCell=Gbg-1.

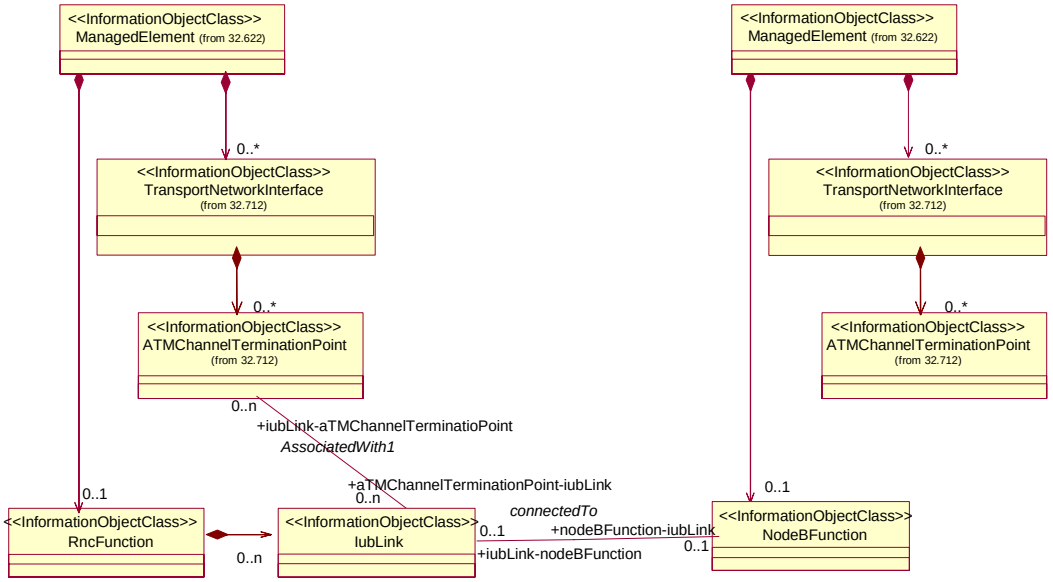


Figure 6.2: UTRAN Transport Network NRM Containment/Naming and Association diagram

NOTE 1: The ATMChannelTerminationPoint is name-contained under IOCs defined in the Transport Network NRM.
NOTE 2: The group of ATMChannelTerminationPoints associated with an IubLink (the relation AssociatedWith1) represent the RNC end of the ATM Virtual Channel Connections (transport connection) between an RNC and a NodeB.
NOTE 3: An ATMChannelTermiationPoint can be associated with more than one IubLink for the case of AAL2 multiplexing/switching, i.e. to allow an ATM Channel at the RNC to be connected to multiple NodeBs.

6.2.2 Inheritance

This clause depicts the inheritance relationships that exist between IOCs.

Figure 6.~~2~~ 3 shows the inheritance hierarchy for the UTRAN NRM.

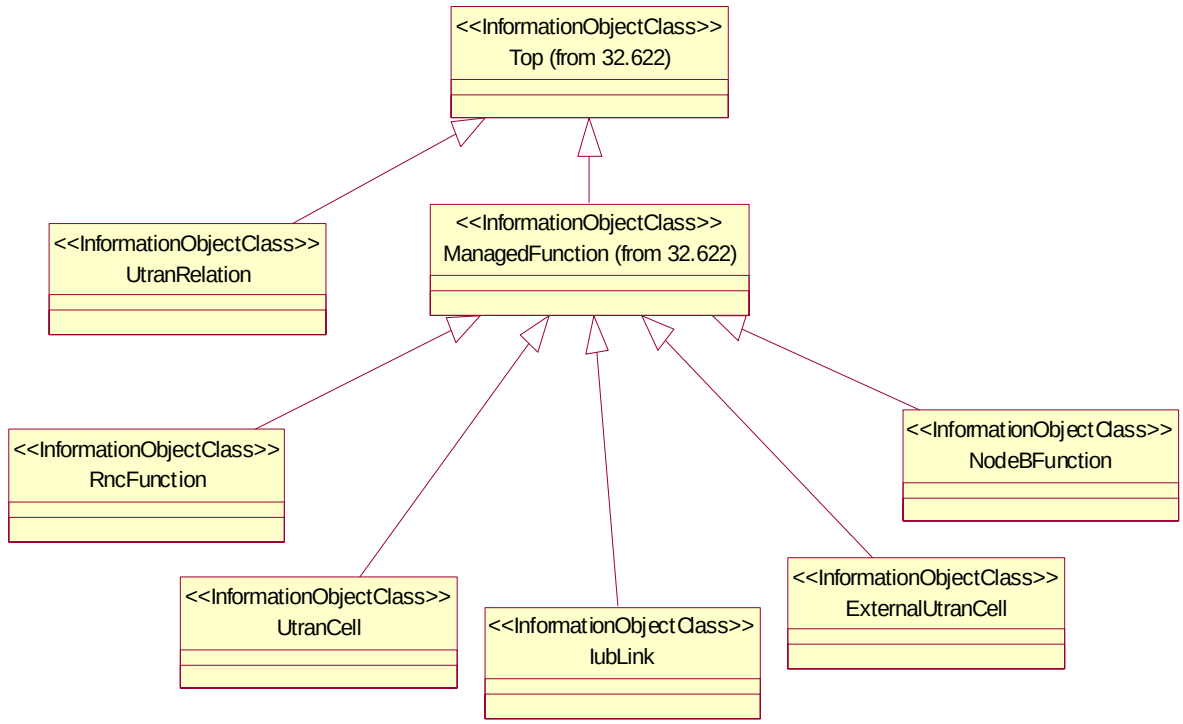
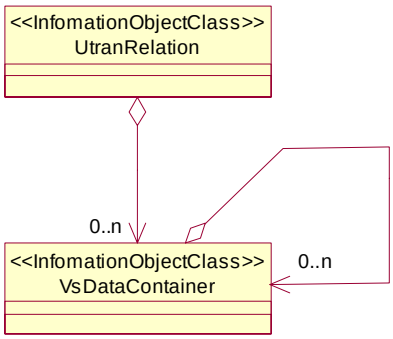


Figure 6.~~2~~3: UTRAN NRM Inheritance Hierarchy



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

NOTE 2: Each instance of the vsDataContainer shall only be contained under one IOC. The vsDataContainer can be contained under IOCs defined in other NRMs.

Figure 6.~~3~~4: vsDataContainer Containment/Naming and Association in UTRAN NRM diagram

The vsDataContainer is only used for the Bulk CM IRP.

6.3 Information object classes definition

6.3.1 RncFunction

6.3.1.1 Definition

This IOC represents RNC functionality. For more information about the RNC, see 3GPP TS 23.002 [15].

6.3.1.2 Attributes

Table 6.1: Attributes of RncFunction

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
rncFunctionId	+	M	M	-
userLabel	+	M	M	M
mcc	+	M	M	M
mnc	+	M	M	M
rncId	+	M	M	M

Table 6.2: Notifications of `RncFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	
notifyComments	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAlarmListRebuilt	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyPotentialFaultyAlarmList	See Alarm IRP (3GPP TS 32.111-2 [11])	

6.3.2 NodeBFunction

6.3.2.1 Definition

This IOC represents Node B functionality. For more information about the Node B, see 3GPP TS 23.002 [15].

6.3.2.2 Attributes

Table 6.3: Attributes of NodeBFunction

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
nodeBFunctionId	+	M	M	-
userLabel	+	M	M	M
nodeBFunction-IubLink	+	M	M	-

Table 6.4 Notifications of `NodeBFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	
notifyComments	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAlarmListRebuilt	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyPotentialFaultyAlarmList	See Alarm IRP (3GPP TS 32.111-2 [11])	

6.3.3 UtranCell

6.3.3.1 Definition

This IOC represents a radio cell controlled by the RNC. For more information about radio cells, see 3GPP TS 23.002 [15].

The cell may be an FDD mode cell, a 1.28 Mcps TDD mode cell or a 3.84 Mcps TDD mode cell.

6.3.3.2 Attributes

Table 6.5: Attributes of UtranCell

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
utranCellId	+	M	M	-
userLabel	+	M	M	M
cId	+	M	M	M
localCellId	+	M	M	M
uarfcnUl	+	O	M	M
uarfcnDl	+	O	M	M
primaryScramblingCode	+	O	M	M
primaryCpichPower	+	O	M	M
maximumTransmissionPower	+	M	M	M
primarySchPower	+	O	M	M
secondarySchPower	+	O	M	M
bchPower	+	O	M	M
cellMode	+	M	M	-
uarfcn	+	O	M	M
cellParameterId	+	O	M	M
primaryCcpchPower	+	O	M	M
dwPchPower	+	O	M	M
timeSlotList	+	O	M	M
schPower	+	O	M	M
lac	+	M	M	M
rac	+	M	M	M
rac	+	M	M	M
uraList	+	M	M	M
utranCell-IubLink	+	M	M	-

Table 6.6: Additional attributes of UtranCell for the support of the State Management IRP

Attribute Name	Support Qualifier	READ	WRITE
operationalState	O	M	_
NOTE: No state propagation shall be implied.			

Table 6.7: Notifications of `UtranCell`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	
notifyComments	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAlarmListRebuilt	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyPotentialFaultyAlarmList	See Alarm IRP (3GPP TS 32.111-2 [11])	

6.3.3.3 Attribute constraints

The following optional attributes shall be supported for corresponding modes as described below:

for FDD mode only: uarfcnUl, uarfcnDl, primaryScramblingCode, primaryCpichPower, primarySchPower, secondSchPower, bchPower;

for 1.28 Mcps TDD mode only: uarfcn, cellParameterId, primaryCcpchPower, timeSlotList , dwPchPower;

for 3.84 Mcps TDD mode only: uarfcn, cellParameterId, primaryCcpchPower, timeSlotList , schPower.

6.3.4 IubLink

6.3.4.1 Definition

This IOC represents the logical link to a Node B as seen from the RNC. For more information about the RNC, see 3GPP TS 23.002 [15].

6.3.4.2 Attributes

Table 6.8: Attributes of IubLink

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
iubLinkId	+	M	M	-
userLabel	+	M	M	M
iubLink-UtranCell	+	M	M	M
iubLink-NodeBFunction	+	M	M	-
iubLink-aTMChannelTerminationPoint	+	M	M	-

Table 6.9: Notifications of `IubLink`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	
notifyComments	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAlarmListRebuilt	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyPotentialFaultyAlarmList	See Alarm IRP (3GPP TS 32.111-2 [11])	

6.3.5 UtranRelation

6.3.5.1 Definition

The UtranRelation IOC contains radio network related parameters for the relation to the UtranCell or ExternalUtranCell IOC. The UtranCell and the ExternalUtranCell may be an FDD mode cell, a 1.28 Mcps TDD mode cell or a 3.84 Mcps TDD mode cell.

NOTE: In handover relation terms, the cell containing the UTRAN Relation object is the source cell for the handover. The cell referred to in the UTRAN relation object is the target cell for the handover. This defines a one-way handover relation where the direction is *from* source cell *to* target cell.

6.3.5.2 Attributes

Table 6.10: Attributes of UtranRelation

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
utranRelationId	+	M	M	-
adjacentCell	+	M	M	M
cellMode	+	M	M	-
uarfcnUl	+	O	M	-
uarfcnDl	+	O	M	-
primaryScramblingCode	+	O	M	-
primaryCpichPower	+	O	M	-
lac	+	O	M	-
uarfcn	+	O	M	-
cellParameterId	+	O	M	-
primaryCcpchPower	+	O	M	-

Table 6.11: Notifications of `UtranRelation`

Name	Qualifier	Notes
notifyAttributeValueChange	O	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.5.3 Attribute constraints

The optional attributes should be included as described below according to each mode, only when the EM can not guarantee consistency between the cell definition and what is broadcast on system information. Otherwise they shall not be included.

The attributes for FDD mode are: uarfcnUl, uarfcnDl, primaryScramblingCode, primaryCpichPower, lac.

The attributes for 1.28 Mcps TDD mode and 3.84 Mcps TDD are: uarfcn, cellParameterId, primaryCcpchPower, lac.

6.3.6 ExternalUtranCell

6.3.6.1 Definition

This IOC represents a radio cell controlled by another IRPAgent. This IOC has necessary attributes for inter-system and intra-system handover. The external cell may be an FDD mode cell or a TDD mode cell. It contains a subset of the attributes of related IOCs controlled by another IRPAgent. The way to maintain consistency between the attribute values of these two IOCs is outside the scope of the present document.

6.3.6.2 Attributes

Table 6.12: Attributes of ExternalUtranCell

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
externalUtranCellId	+	M	M	-
userLabel	+	M	M	M
cId	+	M	M	M
mcc	+	M	M	M
mnc	+	M	M	M
rncId	+	M	M	M
cellMode	+	M	M	-
uarfcnUl	+	O	M	M
uarfcnDl	+	O	M	M
primaryScramblingCode	+	O	M	M
primaryCpichPower	+	O	M	M
uarfcn	+	O	M	M
cellParameterId	+	O	M	M
primaryCcpchPower	+	O	M	M
lac	+	M	M	M
rac	+	M	M	M

Table 6.13: Notifications of `ExternalUtranCell`

Name	Qualifier	Notes
notifyAttributeValueChange	O	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.6.3 Attribute constraints

The following optional attributes shall be supported for corresponding modes as described below:

for FDD mode only: uarfcnUl, uarfcnDl, primaryScramblingCode, primaryCpichPower;

for 1.28 Mcps TDD mode and 3.84 Mcps TDD mode: uarfcn, cellParameterId, primaryCcpchPower.

6.4 Information relationships definition

6.4.1 ConnectedTo (M)

6.4.1.1 Definition

This represents a bi-directional relationship between the IubLink and Node B (through the NodeBFunction).
The role of the relation shall be mapped to a reference attribute of the IOC. The names of the reference attribute and the role are the same.

6.4.1.2 Roles

Table 6.14: Roles of the relation ConnectedTo

Name	Definition
iubLink-nodeBFunction	This role (when present) represents IubLink capability to identify one NodeBFunction. When the role is absent, the IubLink.iubLink-nodeBFunction shall contain no information. When present, it shall contain one NodeBFunction DN.
nodeBFunction-iubLink	This role (when present) represents NodeBFunction capability to identify one IubLink. When the role is absent, the NodeBFunction.nodeBFunction-iubLink shall contain no information. When present, it shall contain one IubLink DN.

6.4.1.3 Constraints

When a particular IubLink identifies a particular NodeBFunction, that particular NodeBFunction must identify the particular IubLink.

6.4.2 AssociatedWith (M)

6.4.2.1 Definition

This represents a bi-directional relation between the IubLink and UtranCell. The role of the relation shall be mapped to a reference attribute of the IOC. The name of the reference attribute shall be the role name.

6.4.2.2 Roles

Table 6.15: Roles of the relation AssociatedWith

Name	Definition
iubLink-utranCell	This role (when present) represents IubLink capability to identify the set of related UtranCell. IubLink.iubLink-utranCell shall carry the set of UtranCell DN(s).
utranCell-iubLink	This role (when present) represents UtranCell capability to identify one related IubLink. When the role is absent, the UtranCell.utranCell-iubLink shall contain no information. When it is present, it shall contain one IubLink DN.

6.4.2.3 Constraints

When a particular IubLink identifies a particular UtranCell, that particular UtranCell must have identified the particular IubLink.

6.4.3 ExternalUtranNeighbourCellRelation (M)

6.4.3.1 Definition

This represents a unidirectional relation from UtranRelation to the ExternalUtranCell. The role of the relation shall be mapped to a reference attribute, named adjacentCell, of the IOC.

6.4.3.2 Roles

Table 6.16: Roles of the relation ExternalUtranNeighbourCellRelation

Name	Definition
utranRelation-externalUtranNeighbourCell	This role (when present) represents UtranRelation capability to identify one ExternalUtranCell. When this role is present, the UtranRelation.adjacentCelll shall contain one ExternalUtranNeighbourCell DN.

6.4.3.3 Constraints

This role (for a particular UtranRelation) shall be present if the UtranNeighbourCellRelation of this particular UtranRelation is absent. This role shall be absent if the UtranNeighbourCellRelation of this particular UtranRelation is present.

6.4.4 UtranNeighbourCellRelation (M)

6.4.4.1 Definition

This represents the unidirectional relation from the UtranRelation to UtranCell. The role of the relation shall be mapped to a reference attribute, named adjacentCell, of the IOC.

6.4.4.2 Roles

Table 6.17: Roles of the relation UtranNeighbourCellRelation

Name	Definition
utranRelation-utranNeighbourCell	This role (when present) represents UtranRelation capability to identify one UtranCell. When this role is present, the UtranRelation.adjacentCell shall contain one UtranCell DN.

6.4.4.3 Constraints

This role (for a particular UtranRelation) shall be present if the ExternalUtranNeighbourCellRelation of this particular UtranRelation is absent. This role shall be absent if the ExternalUtranNeighbourCellRelation of this particular UtranRelation is present.

6.4.5 AssociatedWith1 (M)

6.4.5.1 Definition

This represents a bi-directional relation between the IubLink and ATMChannelTerminationPoint. The roles of the relation shall be mapped to a reference attribute of the IOCs. The name of the reference attribute shall be the role name.

6.4.5.2 Roles

Table 6.18: Roles of the relation AssociatedWith1

Name	Definition
iubLink-aTMChannelTerminationPoint	This role (when present) represents IubLink capability to identify the set of related ATMChannelTerminationPoint. It shall carry the set of ATMChannelTerminationPointës DN(s).
aTMChannelTerminationPoint-iubLink	This role (when present) represents ATMChannelTerminationPoint capability to identify one related IubLink. When the role is absent, the ATMChannelTerminationPoint-iubLink shall contain no information. When it is present, it shall contain one IubLink DN.

6.4.5.3 Constraints

When a particular IubLink identifies a particular ATMChannelTerminationPoint, that particular ATMChannelTerminationPoint must have identified the particular IubLink.

6.5 Information attributes definition

6.5.1 Definition and legal values

Table 6.18 defines the attributes that are present in several Information Object Classes (IOCs) of the present document.

Table 6.~~18~~19: Attributes

Attribute Name	Definition	Legal Values
adjacentCell	It carries the DN of the UtranCelll or the ExternalUtranCell.	
bchPower	The power of the broadcast channel in the FDD mode cell (Ref. 3GPP TS 25.433 [5]).	Type: Numeric value Range: (-35..+15 dB) Steps of 0.1dB
cellMode	An attribute that identifies the cell mode.	Type: Enumerated value Range: (ìFDD modeî, ì1.28McpsTDD modeî, ì3.84McpsTDD modeî)
cellParameterId	For IOCs **UtranCell** and **ExternalUtranCell**,this attribute identifies unambiguously the TDD mode cell (see ref. TS 25.433 [5]): • 3.84 Mcps TDD - Code Groups, Scrambling Codes, Midambles and Toffset • 1.28 Mcps TDD - SYNC-DL and SYNC-UL sequences, the scrambling codes and the midamble codes For IOC **UtranRelation**, this parameter will be broadcast in the system information of associated cell. The associated cell can be: • another UTRAN TDD cell (1.28 Mcps TDD or 3.84 Mcps TDD) • the external UTRAN TDD cell (1.28 Mcps TDD or 3.84 Mcps TDD).	Type: Integral numeric value Range: (0Ö 127)
cId	The attribute is the identifier of a cell in one RNC (Ref. 3GPP TS 25.401 [4]), 3GPP TS 25.433 [5]).	Type: Integral numeric value Range: (0Ö 65535)
dwPchPower	DwPCH Power is the power that shall be used for transmitting the DwPCH in a 1.28 Mcps TDD cell. (Ref. 3 GPP TS 25.433 [5]).	Type: Numeric value Range: (-15Ö +40 dBm) Steps of 0.1dB
externalUtranCellId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
iubLinkId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
lac	IOCs **UtranCell** and **ExternalUtranCell**: Location Area Code, LAC (Ref. 3GPP TS 23.003 [3]). IOC **UtranRelation**: Location Area Code, LAC (Ref. 3GPP TS 23.003 [3]), for another UTRAN cell or the external UTRAN Cell that is broadcast in the system information in the Cell.	Type: Integral numeric value Range: (1.. 65533, 65535)
localCellId	Local Cell id is used to uniquely identify the set of resources defined in a Node B to support a cell (as defined by a Cid Ref. 3GPP TS 25.401 [4]), 3GPP TS 25.433 [5]). It must be unique in Node B at a minimum, but may be unique in UTRAN. It can be used to tie the cell in the RNC to a specific set of resources in the Node B.	Type: Integral numeric value Range: (0Ö 268435455)
maximumTransmissionPower	The maximum transmission power of a cell. It is the maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. (Ref. 3GPP TS 25.433 [5]).	Type: Numeric value Range: (0,..50 dBm) Steps of 0.1 dB
mcc	Mobile Country Code, MCC (part of the PLMN Id, Ref. 3GPP TS 23.003 [3]).	
mnc	Mobile Network Code, MNC (part of the PLMN Id, Ref. 3GPP TS 23.003 [3]).	

primaryCcpchPower	IOCs **UtranCell** and **ExternalUtranCell**: The power of the primary CCPCH channel in the TDD cell (Ref. 3 GPP TS 25.433 [5]). IOC **UtranRelation**: The power of the primary CCPCH channel in the TDD cell (Ref. 3 GPP TS 25.433 [5]), for another UTRAN TDD cell or the external UTRAN TDD Cell that is broadcast in the system information in the Cell.	Type: Numeric value Range: (-15Ö +40 dBmÖ) Steps of 0.1dB
nodeBFunctionId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
primaryCpichPower	IOCs **UtranCell** and **ExternalUtranCell**: The power of the primary CPICH channel in the FDD mode cell (Ref. 3GPP TS 25.433 [5]). IOC **UtranRelation**: The power of the primary CPICH channel in the FDD mode cell (Ref. 3GPP TS 25.433 [5]), for another UTRAN FDD mode cell or the external UTRAN FDD mode cell that is broadcast in the system information in the cell.	Type: Numeric value Range: (-10,..,50 dBm) Steps of 0.1 dB
primarySchPower	The power of the primary synchronisation channel in the FDD mode cell, DL Power (Ref. 3GPP TS 25.433 [5]).	Type: Numeric value Range: (-35..+15 dB) Steps of 0.1dB
primaryScramblingCode	IOCs **UtranCell** and **ExternalUtranCell**: The primary DL scrambling code used by the FDD mode cell (Ref. 3GPP TS 25.433 [5]). IOC **UtranRelation**: The primary DL scrambling code used by the FDD mode cell (Ref. 3GPP TS 25.433 [5]), for another UTRAN FDD mode cell or the external UTRAN FDD mode cell that is broadcast in the system information in the cell.	Type: Integral numeric value Range: (0 ñ 511)
rac	Routing Area Code, RAC (Ref. 3GPP TS 23.003 [3]).	Type: Integral numeric value Range: (0..255)
rncFunctionId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
rncId	IOC **ExternalUtranCell**: Unique RNC ID for the associated RNC (Ref. 3GPP TS 23.003 [3]). IOC **RncFunction**: Unique RNC ID (Ref. 3GPP TS 23.003 [3]).	
sac	Service Area Code, SAC (Ref. 3GPP TS 23.003 [3]).	Type: Integral numeric value Range: (0.. 65535)
schPower	The power of the synchronisation channel in 3.84 Mcps TDD cell (Ref. 3GPP TS 25.433 [5]).	Type: Numeric Value Range: (-35Ö 15 dB) Steps of 0.1dB
secondarySchPower	The power of the secondary synchronisation channel in the cell, DL Power (Ref. 3GPP TS 25.433 [5]).	Type: Numeric value Range: (-35..+15 dB) Steps of 0.1dB
timeSlotList	This attribute defines the time slot configuration information in the TDD cell. It is a list which contains 7 (for 1.28 Mcps TDD cell) or 15 (for 3.84 Mcps TDD cell) items. Within each item there are three parts: timeSlotId, timeSlotDirection, timeSlotStatus (Ref. 3GPP TS 25.433 [5]).	timeSlotId: when applied to1.28 Mcps TDD cell: Type: Integral numeric value Range: (0Ö 6); when applied to 3.84 Mcps TDD cell: Type: Integral numeric value Rang: (0Ö 14); timeSlotDirection: Type: Enumerated value Range: (Ul, Dl); timeSlotStatus: Type: Enumerated value Range: (Active, Not active)

uarfcn	IOCs **UtranCell** and **ExternalUtranCell**: The UTRA absolute Radio Frequency Channel number for TDD mode cell, UARFCN (ref. 3 GPP TS 25.433 [5]). IOC **UtranRelation**: The UTRA absolute Radio Frequency Channel number for TDD mode cell, UARFCN (ref. 3 GPP TS 25.433 [5]), for another UTRAN TDD mode cell or the external UTRAN TDD mode Cell that is broadcast in the system information in the Cell.	Type : Integral numeric Value (0 - 16383)
uarfcnDl	IOCs **UtranCell** and **ExternalUtranCell**: The DL UTRA absolute Radio Frequency Channel number for FDD mode cell, UARFCN (Ref. 3GPP TS 25.433 [5]). IOC **UtranRelation**: The DL UTRA absolute Radio Frequency Channel number for FDD mode cell, UARFCN (Ref. 3GPP TS 25.433 [5]), for another UTRAN FDD mode cell or the external UTRAN FDD mode cell that is broadcast in the system information in the Cell.	Type: Integral numeric value Range: (0 - 16383)
uarfcnUl	IOCs **UtranCell** and **ExternalUtranCell**: The UL UTRA absolute Radio Frequency Channel number for FDD mode cell, UARFCN (Ref. 3GPP TS 25.433 [5]). IOC **UtranRelation**: The UL UTRA absolute Radio Frequency Channel number for FDD mode cell, UARFCN (Ref. 3GPP TS 25.433 [5]) for another UTRAN FDD mode cell or the external UTRAN FDD mode cell, that is broadcast in the system information in the Cell.	Type: Integral numeric value Range: (0 - 16383)
uraList	A list of UTRAN Registration Area, URA (Ref. 3GPP TS 25.331 (subclause 10.3.10)[9]), that a UtranCell can belong to.	Type: A list of Integral numeric values Range: (0..65535) for each integral numeric value.
userLabel	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.	
utranCellId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
utranRelationId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	

6.5.2 Constraints

None.

6.6 Particular information configurations

Not applicable.

End of Change in Clause 6

Annex B (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Mar 2004	S_23	SP-040129	019	--	Addition of new attributes for support of both FDD and TDD modes	5.3.0	6.0.0
Jun 2004	S_24	SP-040254	021	--	Correction of the supported UMTS frequencies	6.0.0	6.1.0

3GPP TSG-SA5 (Telecom Management) **S5-048646**
Meeting #39, Montreal, Canada, 16 ñ 20 August 2004

CR-Form-v7

CHANGE REQUEST

⌘ **32.643** **CR** **012** ⌘ **rev** **-** ⌘ Current version: **6.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Include ATM in CM UTRAN network resources IRP CORBA Solution Set
Source:	⌘	SA5 (tapinder.pal@t-mobile.de)
Work item code:	⌘	OAM-NIM ***Date:*** ⌘ 16/08/2004
Category:	⌘	**B** ***Release:*** ⌘ Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Inclusion of ATM IOC relation in UTRAN NRM CORBA Solution Set.
Summary of change:	⌘	The relation to IOC ATMChannelTerminationPoint has been added to the UTRAN NRM CORBA Solution Set.
Consequences if not approved:	⌘	ATM aspects will not be modelled, thus excluding an important management aspect of UTRAN-Transport Network interface functionality.

Clauses affected:	⌘	5.2.4, Annex A

Other specs affected: ⌘	Y	N	
		X	Other core specifications ⌘
		X	Test specifications
		X	O&M Specifications

Other comments:	⌘	Parent Rel-6 32.642 CR in S5-048645.

Change in Clause 5.2.4

5.2.4 IOC IubLink

Table 5.4: Mapping from NRM IOC IubLink attributes and associations to SS equivalent MOC IubLink attributes

NRM Attributes of IOC IubLink in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
iubLinkId	iubLinkId	string	M	M	-
userLabel	userLabel	string	M	M	M
AssociatedWith/ iubLink-UtranCell	iubLinkUtranCell	GenericNRIRPSystem:: AttributeTypes::MOReferenceSet	M	M	M
ConnectedTo/ iubLink-NodeBFunction	iubLinkNodeBFunction	GenericNRIRPSystem:: AttributeTypes::MOReference	M	M	-
AssociatedWith1/ iubLink-ATMChannelTerminationPoint	iubLinkATMChannelTerminationPoint	GenericNRIRPSystem:: AttributeTypes::MOReference	M	M	-

End of Change in Clause 5.2.4

Change in Annex A

Annex A (normative): CORBA IDL, NRM definitions

A.1 IDL specification (file name "UtranNetworkResourcesNRMDefs.idl")

```
#ifndef UtranNetworkResourcesNRMDefs_idl
#define UtranNetworkResourcesNRMDefs_idl

#pragma prefix "3gppsa5.org"

/**
 * This module defines constants for each MO class name and
 * the attribute names for each defined MO class.
 */
module UtranNetworkResourcesNRMDefs
{



      /**
       *  Definitions for MO class RncFunction
       */
      interface RncFunction
      {
         const string CLASS = "RncFunction";
```

```
   // Attribute Names
   //
   const string rncFunctionId = "rncFunctionId";
   const string userLabel = "userLabel";
   const string mcc= "mcc";
   const string mnc= "mnc";
   const string rncId= "rncId";
};


/**
 *  Definitions for MO class UtranCell
 */
interface UtranCell
{
   const string CLASS = "UtranCell";

   // Attribute Names
   //
   const string utranCellId = "utranCellId";
   const string userLabel = "userLabel";
   const string utranCellIubLink = "utranCellIubLink";
   const string cId= "cId";
   const string localCellId= "localCellId";
   const string uarfcnUl= "uarfcnUl";
   const string uarfcnDl= "uarfcnDl";
   const string primaryScramblingCode= "primaryScramblingCode";
   const string primaryCpichPower= "primaryCpichPower";
   const string maximumTransmissionPower= "maximumTransmissionPower";
   const string primarySchPower= "primarySchPower";
   const string secondarySchPower= "secondarySchPower";
   const string bchPower= "bchPower";
   const string cellMode = "cellMode";
   const string uarfcn= "uarfcn";
   const string cellParameterId= "cellParameterId";
   const string primaryCcpchPower= "primaryCcpchPower";
   const string dwPchPower= "dwPchPower";
   const string timeSlotList= "timeSlotList";
   const string schPower= "schPower";
   const string lac= "lac";
   const string rac= "rac";
   const string sac= "sac";
   const string uraList= "uraList";

};



/**
 *  Definitions for MO class NodeBFunction
 */
interface NodeBFunction
{
   const string CLASS = "NodeBFunction";

   // Attribute Names
   //
   const string nodeBFunctionId = "nodeBFunctionId";
   const string userLabel = "userLabel";
   const string nodeBFunctionIubLink = "nodeBFunctionIubLink";
};
```

```
      /**
       *  Definitions for MO class IubLink
       */
      interface IubLink
      {
         const string CLASS = "IubLink";

         // Attribute Names
         //
         const string iubLinkId = "iubLinkId";
         const string userLabel = "userLabel";
         const string iubLinkNodeBFunction = "iubLinkNodeBFunction";
         const string iubLinkUtranCell = "iubLinkUtranCell";
         const string iubLinkATMChannelTerminationPoint =
"iubLinkATMChannelTerminationPoint";
      };

};


      /**
       *  Definitions for MO class UtranRelation
       */
      interface UtranRelation
      {
         const string CLASS = "UtranRelation";

         // Attribute Names
         //
         const string utranRelationId = "utranRelationId";
         const string adjacentCell = "adjacentCell";
         const string uarfcnUl= "uarfcnUl";
         const string uarfcnDl= "uarfcnDl";
         const string primaryScramblingCode= "primaryScramblingCode";
         const string primaryCpichPower= "primaryCpichPower";
         const string cellMode = "cellMode";
         const string uarfcn= "uarfcn";
         const string cellParameterId= "cellParameterId";
         const string primaryCcpchPower= "primaryCcpchPower";
         const string lac= "lac";
};


/**
       *  Definitions for MO class ExternalUtranCell
       */
      interface ExternalUtranCell
      {
         const string CLASS = "ExternalUtranCell";

         // Attribute Names
         //
         const string externalUtranCellId = "externalUtranCellId";
         const string userLabel = "userLabel";
         const string cId= "cId";
         const string mcc= "mcc";
         const string mnc= "mnc";
         const string rncId= "rncId";
         const string uarfcnUl= "uarfcnUl";
         const string uarfcnDl= "uarfcnDl";
         const string primaryScramblingCode= "primaryScramblingCode";
         const string primaryCpichPower= "primaryCpichPower";
```

```
         const string cellMode = "cellMode";
         const string uarfcn= "uarfcn";
         const string cellParameterId= "cellParameterId";
         const string primaryCcpchPower= "primaryCcpchPower";
         const string lac= "lac";
         const string rac= "rac";

      };

/**
    *  This module adds datatype definitions for both FDD and TDD mode
    *  attributes used in the NRM which are not the basic datatypes
    *  already defined in CORBA.
    */
module GenericNRMAttributeTypes
{

      enum CellModeEnumType
      {
         FDDMode,
         3-84McpsTDDMode,
         1-28McpsTDDMode
      };

}

/**
    *  This module adds datatype definitions for TDD mode attributes
    *  used in the NRM which are not the basic datatypes already defined
    *  in CORBA.
    */
   module TDDNRMAttributeTypes
   {

      enum TimeSlotDirectionType
      {
         UL,
         DL
      };

      enum TimeSlotStatusType
      {
         Active,
         Not-Active
      };

      struct TimeSlotConfigStructType
      {
         short timeSlotId;
         TimeSlotDirectionType timeSlotDirection;
         TimeSlotStatusType timeSlotStatus;
      };

      typedef sequence<TimeSlotConfigStructType> TimeSlotListConfigStructType;

   };

#endif
```

End of Change in Annex A

Annex B (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2001	S_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0
Dec 2001	S_14	SP-010646	001	--	Change type "integer" to "long" in the UTRAN Network Resources IRP: CORBA SS	4.0.0	4.1.0
Sep 2002	S_17	SP-020493	002	--	Upgrade to Rel-5	4.1.0	5.0.0
Jun 2003	S_20	SP-030283	004	--	Deletion of UTRAN attribute relationType from CORBA SS.	5.0.0	5.1.0
Dec 2003	S_22	SP-030646	006	--	Correction of the number of possible URAs from 1 to 8	5.1.0	5.2.0
Mar 2004	S_23	SP-040129	007	--	Enhancement of CORBA SS for support of both FDD and TDD modes	5.2.0	6.0.0
Jun 2004	S_24	SP-040254	009	--	The specification does not support all UMTS frequency bands	6.0.0	6.1.0

3GPP TSG-SA5 (Telecom Management) **S5-048647**
Meeting #39, Montreal, Canada, 16 ñ 20 August 2004

CR-Form-v7

CHANGE REQUEST

⌘ **32.645** **CR** **014** ⌘ **rev** **-** ⌘ Current version: **6.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Include ATM in CM UTRAN network resources IRP XML Schema definition
Source:	⌘	SA5 (tapinder.pal@t-mobile.de)
Work item code:	⌘	OAM-NIM
Date:	⌘	16/08/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Inclusion of Transport Network ATM Interface in UTRAN XML Schema definition.
Summary of change:	⌘	IOC IubLink now includes an association to the Transport Network in the XML Schema.
Consequences if not approved:	⌘	The UTRAN XML Schema will not be aligned with the Transport Network NRM.

Clauses affected:	⌘	Annex A

	Y	N		
Other specs affected:	⌘		X	Other core specifications ⌘
			X	Test specifications
			X	O&M Specifications

Other comments:	⌘	Parent Rel-6 32.642 CR in S5-048645.

Change in Annex A

Annex A (normative): Configuration data file NRM-specific XML schema (file name "utranNrm.xsd")

The following XML schema utranNrm.xsd is the NRM-specific schema for the UTRAN Network Resources IRP NRM defined in 3GPP TS 32.642 [1]:

```
<?xml version="1.0" encoding="UTF-8"?>

<!--
  3GPP TS 32.645 UTRAN Network Resources IRP
  Bulk CM Configuration data file NRM-specific XML schema
  utranNrm.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.645#utranNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"
  xmlns:un=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.645#utranNrm"
  xmlns:gn=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.655#geranNrm"
>

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"
  />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.655#geranNrm"

  <!-- UTRAN Network Resources IRP NRM attribute related XML types -->

  <simpleType name="localCellId">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="268435455"/>
    </restriction>
  </simpleType>

  <simpleType name="cId">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="65535"/>
    </restriction>
  </simpleType>

  <simpleType name="uarfcnAnyMode">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="16383"/>
    </restriction>
  </simpleType>

  <simpleType name="primaryScramblingCode">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="511"/>
    </restriction>
  </simpleType>

  <simpleType name="primaryCpichTxPower">
```

```
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-10"/>
    <maxInclusive value="+50"/>
  </restriction>
</simpleType>

<simpleType name="maximumTransmissionPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="0"/>
    <maxInclusive value="50"/>
  </restriction>
</simpleType>

<simpleType name="primarySchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
  </restriction>
</simpleType>

<simpleType name="secondarySchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
  </restriction>
</simpleType>

<simpleType name="bchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
  </restriction>
</simpleType>

<simpleType name="lac">
 <union>
  <simpleType>
   <restriction base="integer">
    <minInclusive value="1"/>
    <maxInclusive value="65533"/>
   </restriction>
  </simpleType>
  <simpleType>
   <restriction base="integer">
    <minInclusive value="65535"/>
    <maxInclusive value="65535"/>
   </restriction>
  </simpleType>
 </union>
</simpleType>

<simpleType name="rac">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="255"/>
  </restriction>
</simpleType>

<simpleType name="sac">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="65535"/>
  </restriction>
</simpleType>

<complexType name="uraList">
  <sequence>
    <element name="ura" minOccurs="1" maxOccurs="8">
      <simpleType>
        <restriction base="integer">
          <minInclusive value="0"/>
          <maxInclusive value="65535"/>
        </restriction>
```

```
      </simpleType>
    </element>
  </sequence>
</complexType>

<simpleType name="cellMode">
  <restriction base="string">
    <enumeration value="FDDMode"/>
    <enumeration value="3-84McpsTDDMode"/>
    <enumeration value="1-28McpsTDDMode"/>
  </restriction>
</simpleType>

<simpleType name="cellParameterId">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="127"/>
  </restriction>
</simpleType>

<simpleType name="primaryCcpchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-15"/>
    <maxInclusive value="+40"/>
  </restriction>
</simpleType>

<simpleType name="dwPchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-15"/>
    <maxInclusive value="+40"/>
  </restriction>
</simpleType>

<simpleType name="schPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
  </restriction>
</simpleType>

<complexType name="timeSlotList">
  <sequence>
    <element name="timeSlot" maxOccurs="15">
      <complexType>
        <all>
          <element name="timeSlotId" minOccurs="1">
            <simpleType>
              <restriction base="integer">
                <minInclusive value="0"/>
                <maxInclusive value="14"/>
              </restriction>
            </simpleType>
          </element>
          <element name="timeSlotDirection" minOccurs="1">
            <simpleType>
              <restriction base="string">
                <enumeration value="UL"/>
                <enumeration value="DL"/>
              </restriction>
            </simpleType>
          </element>
          <element name="timeSlotStatus" minOccurs="1">
            <simpleType>
              <restriction base="string">
                <enumeration value="Active"/>
                <enumeration value="Not-Active"/>
              </restriction>
            </simpleType>
          </element>
        </all>
      </complexType>
    </element>
  </sequence>
</complexType>
```

```
<!-- UTRAN Network Resources IRP NRM class associated XML elements -->

<element
  name="RncFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="mcc" minOccurs="0"/>
                <element name="mnc" minOccurs="0"/>
                <element name="rncId" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="un:UtranCell"/>
            <element ref="un:IubLink"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="NodeBFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="nodeBFunctionIubLink" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="UtranCell">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="cId" type="un:cId" minOccurs="0"/>
                <element
                  name="localCellId"
                  type="un:localCellId"
                  minOccurs="0"
                />
                <element
                  name="uarfcnUl"
                  type="un:uarfcnAnyMode"
                  minOccurs="0"
                />
                <element
```

```
                  name="uarfcnDl"
                  type="un:uarfcnAnyMode"
                  minOccurs="0"
                />
                <element
                  name="primaryScramblingCode"
                  type="un:primaryScramblingCode"
                  minOccurs="0"
                />
                <element
                  name="primaryCpichTxPower"
                  type="un:primaryCpichTxPower"
                  minOccurs="0"
                />
                <element
                  name="maximumTransmissionPower"
                  type="un:maximumTransmissionPower"
                  minOccurs="0"
                />
                <element
                  name="primarySchPower"
                  type="un:primarySchPower"
                  minOccurs="0"
                />
                <element
                  name="secondarySchPower"
                  type="un:secondarySchPower"
                  minOccurs="0"
                />
                <element name="bchPower" type="un:bchPower" minOccurs="0"/>
                <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
                <element
                  name="cellParameterId"
                  type="un:cellParameterId"
                  minOccurs="0"
                />
                <element
                  name="primaryCcpchPower"
                  type="un:primaryCcpchPower"
                  minOccurs="0"
                />
                <element
                  name="dwPchPower"
                  type="un:dwPchPower"
                  minOccurs="0"
                />
                <element
                  name="timeSlotList"
                  type="un:timeSlotList"
                  minOccurs="0"
                />
                <element name="schPower" type="un:schPower" minOccurs="0"/>
                <element name="lac" type="un:lac" minOccurs="0"/>
                <element name="rac" type="un:rac" minOccurs="0"/>
                <element name="sac" type="un:sac" minOccurs="0"/>
                <element name="uraList" type="un:uraList" minOccurs="0"/>
                <element name="utranCellIubLink" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="un:UtranRelation"/>
            <element ref="gn:GsmRelation"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="IubLink">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
```

```
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="iubLinkUtranCell" minOccurs="0"/>
                <element name="iubLinkATMChannelTerminationPoint" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="UtranRelation">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="adjacentCell" minOccurs="0"/>
                <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                <element
                  name="uarfcnUl"
                  type="un:uarfcnAnyMode"
                  minOccurs="0"
                />
                <element
                  name="uarfcnDl"
                  type="un:uarfcnAnyMode"
                  minOccurs="0"
                />
                <element
                  name="primaryScramblingCode"
                  type="un:primaryScramblingCode"
                  minOccurs="0"
                />
                <element
                  name="primaryCpichTxPower"
                  type="un:primaryCpichTxPower"
                  minOccurs="0"
                />
                <element name="lac" type="un:lac" minOccurs="0"/>
                <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
                <element
                  name="cellParameterId"
                  type="un:cellParameterId"
                  minOccurs="0"
                />
                <element
                  name="primaryCcpchPower"
                  type="un:primaryCcpchPower"
                  minOccurs="0"
                />
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="ExternalUtranCell"
  substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
```

```
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" minOccurs="0"/>
                  <element name="cId" type="un:cId" minOccurs="0"/>
                  <element name="mcc" minOccurs="0"/>
                  <element name="mnc" minOccurs="0"/>
                  <element name="rncId" minOccurs="0"/>
                  <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                  <element
                    name="uarfcnUl"
                    type="un:uarfcnAnyMode"
                    minOccurs="0"
                  />
                  <element
                    name="uarfcnDl"
                    type="un:uarfcnAnyMode"
                    minOccurs="0"
                  />
                  <element
                    name="primaryScramblingCode"
                    type="un:primaryScramblingCode"
                    minOccurs="0"
                  />
                  <element
                    name="primaryCpichTxPower"
                    type="un:primaryCpichTxPower"
                    minOccurs="0"
                  />
                  <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
                  <element
                    name="cellParameterId"
                    type="un:cellParameterId"
                    minOccurs="0"
                  />
                  <element
                    name="primaryCcpchPower"
                    type="un:primaryCcpchPower"
                    minOccurs="0"
                  />
                  <element name="lac" type="un:lac" minOccurs="0"/>
                  <element name="rac" type="un:rac" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

</schema>
```

End of Change in Annex A

Annex C (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2004	S_24	SP-040254	010	--	The specification does not support all UMTS frequency bands	5.4.0	5.5.0
Jun 2004	S_24	SP-040256	011	--	Add XML definitions for support of TDD modes	5.5.0	6.0.0