TSG-RAN Meeting #15
Cheju, Korea, 5 - 8 March 2002

TSGRP#15(02) 0221

Title: **Agreed CRs to TS 25.401**

Source: **TSG-RAN WG3**

Agenda item: **7.3.3/7.3.4**

RP_Num	Tdoc_Num	Specification	CR_Num	Revision_Num	3G_Release	CR_Subject	CR_Category	Cur_Ver_Num	Workitem
RP-020221	R3-020473	25.401	042		R99	New UE identifier for MAC-c/sh multiplexing for DSCH	F	3.8.0	TEI
RP-020221	R3-020474	25.401	043		Rel-4	New UE identifier for MAC-c/sh multiplexing for DSCH	A	4.2.0	TEI
RP-020221	R3-020900	25.401	046		Rel-5	New UE identifier for MAC-c/sh multiplexing for DSCH	A	5.1.0	TEI

3GPP TSG-RAN3 #27 Meeting
Orlando, USA, February 18th – 22nd 2002

Tdoc R3-020473

CR-Form-v3

CHANGE REQUEST

⌘ **25.401** **CR** **042** ⌘ rev ⌘ Current version: **3.8.0** ⌘

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Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network ☐

Title:	⌘	New UE identifier for MAC-c/sh multiplexing for DSCH
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	February 2002
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(essential correction)*
A *(corresponds to a correction in an earlier release)*
B *(Addition of feature),*
C *(Functional modification of feature)*
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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)*

Reason for change:	⌘	MAC-c/sh multiplexing requires a UE identifier in the MAC-c/sh header for DSCH. At the current state of 3GPP specs, only U-RNTI can be used for this purpose, given that there is no notion for C-RNTI identifier in the RRC Cell_DCH state. U-RNTI is 4-octet long and thus not bandwidth efficient. Moreover, TS 25.321 seems to restrict the use of U-RNTI only to the case where DCCH is mapped on a common transport channel. It is therefore proposed to introduce a new identifier for the purpose of DSCH MAC-c/sh multiplexing. The proposed DSCH-RNTI identifier is 2-octet long. It is allocated by the CRNC and is passed along to the SRNC within the RADIO LINK SETUP RESPONSE and RADIO LINK RECONFIGURATION READY messages. This proposal is part of a joint RAN2/RAN3 effort.
Summary of change:	⌘	Definition of the new identifier DSCH-RNTI in section 6.1.7
Consequences if not approved:	⌘	The DSCH functionality will remain downgraded due to inefficient use of bandwidth. Impact Analysis: Corrected functionality: DSCH handling. Correction to a function where the specification contained some contradictions. Would not affect implementations behaving like indicated in the CR; would affect implementations supporting the corrected functionality otherwise.

Clauses affected:	⌘	6.1.7			
Other specs	⌘	**X**	Other core specifications	⌘	TS 25.401 v4.2.0 CR043 TS 25.423 v3.8.0 CR573 TS 25.423 v4.3.0 CR574
affected:			Test specifications		
			O&M Specifications		
Other comments:	⌘				

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6.1 UTRAN Identifiers

6.1.1 PLMN Identity

A Public Land Mobile Network is uniquely identified as define in [6] sub-clause 12.1.

6.1.2 CN Domain Identifier

A CN Domain Edge Node is identified as defined in [6] sub-clause 12.2.

6.1.3 RNC Identifier

An RNC node is uniquely identified within UTRAN as defined in [6] sub-clause 12.3.

6.1.4 Service Area Identifier

The Service Area Identifier (SAI) is defined in [6] sub-clause 12.4.

6.1.5 Cell Identifier

The Cell identifer (C-Id) is used to uniquely identify a cell within an RNS. The Cell-Id together with the identifier of the controlling RNC (CRNC-Id) constitutes the UTRAN Cell Identity (UC-Id) and is used to identify the cell uniquely within UTRAN. UC-Id or C-Id is used to identify a cell in UTRAN Iub and Iur interfaces.

- **UC-Id = RNC-Id + C-Id.**

The C-Id is defined by the operator, and set in the RNC via O&M. The C-Id is set in a Node B by its C-RNC.

6.1.6 Local Cell Identifier

The Local Cell identifier is used to uniquely identify the set of resources within a Node B required to support a cell (as identified by a C-Id). As a minimum it shall be unique within the Node B, but it is also capable of supporting uniqueness within the UTRAN for management system purposes.

The Local Cell Identifier is used for the initial configuration of a Node B when no C-Id is defined. The Local Cell identifier is defined by the operator, and set in both the Node B and its C-RNC via O&M. The relationship between the Local Cell Identifier and C-Id is set in the C-RNC via O&M.

6.1.7 UE Identifiers

Radio Network Temporary Identities (RNTI) are used as UE identifiers within UTRAN and in signalling messages between UE and UTRAN.

Four types of RNTI exist:

1) Serving RNC RNTI (s-RNTI);
2) Drift RNC RNTI (d-RNTI);
3) Cell RNTI (c-RNTI);
4) UTRAN RNTI (u-RNTI);

[FDD - 5) DSCH RNTI (DSCH-RNTI);]

s-RNTI is used:

- by UE to identify itself to the Serving RNC;

- by SRNC to address the UE;

- by DRNC to identify the UE to Serving RNC.

s-RNTI is allocated for all UEs having a RRC connection, it is allocated by the Serving RNC and it is unique within the Serving RNC. s-RNTI is reallocated always when the Serving RNC for the RRC connection is changed.

d-RNTI is used:

- by serving RNC to identify the UE to Drift RNC.

NOTE: The d-RNTI is never used on Uu.

d-RNTI is allocated by drift RNC upon drift UE contexts establishment and it shall be unique within the drift RNC. Serving RNC shall know the mapping between s-RNTI and the d-RNTIs allocated in Drift RNCs for the same UE. Drift RNC shall know the s-RNTI and SRNC-ID related to existing d-RNTI within the drift RNC.

c-RNTI is used:

- by UE to identify itself to the controlling RNC;

- by controlling RNC to address the UE.

c-RNTI is allocated by controlling RNC upon UE accessing a new cell. C-RNTI shall be unique within the accessed cell. Controlling RNC shall know the d-RNTI associated to the c-RNTI within the same logical RNC (if any).

u-RNTI

The u-RNTI is allocated to an UE having a RRC connection and identifies the UE within UTRAN.

u-RNTI is composed of:

- SRNC identity;

- s-RNTI.

[FDD - DSCH-RNTI is used:

- by controlling RNC to address the UE on the DSCH.

DSCH-RNTI is allocated by controlling RNC upon UE establishing a DSCH channel. DSCH-RNTI shall be unique within the cell carrying the DSCH. DSCH-RNTI is used as UE identifier in the MAC-c/sh header over DSCH. It is used only in the downlink.]

Each RNC has a unique identifier within the UTRAN part of the PLMN, denoted by RNC identifier (RNC-ID). This identifier is used to route UTRAN interface messages to correct RNC. RNC-ID of the serving RNC together with the s-RNTI is a unique identifier of the UE in the UTRAN part of the PLMN.

6.1.7.1 Usage of RNTI

u-RNTI is used as a UE identifier for the first cell access (at cell change) when a RRC connection exists for this UE and for UTRAN originated paging including associated response messages. RNC-ID is used by Controlling RNC to route the received uplink messages towards the Serving RNC.

NOTE: For the initial access a unique core network UE identifier is used.

c-RNTI is used as a UE identifier in all other DCCH/DTCH common channel messages on air interface.

6.1.8 Identifiers for dedicated resources within UTRAN

6.1.8.1 Radio Network Control Plane identifiers

Each addressable object in each reference point has an application part level identifier. This identifier is allocated autonomously by the entity responsible for initiation of the setup of the object. This application part identifier will be used as a reference to the object that is setup. Both ends of the reference point shall memorise the AP Identifier during the lifetime of the object. Application part identifier can be related to a specific ALCAP identifier and that relationship shall also be memorised by both ends.

Table 1 lists the basic AP level identifiers in each reference point.

Table 1: Basic AP level identifiers in each reference point

Object	Identifier	Abbreviation	Valid for
Radio Access Bearer	Radio Access Bearer ID	RAB-ID	Iu
Dedicated Transport channel	DCH-ID	DCH-ID	Iur, Iub
Downlink Shared Channel	DSCH-ID	DSCH-ID	Iur, Iub
[TDD Uplink Shared Channel]	USCH-ID	USCH-ID	Iur, Iub

6.1.8.2 Transport Network Control Plane identifiers

ALCAP identifier is used only in Transport Network Control plane (ALCAP protocol, if exist) and may be used in User Plane in the actual data transmission using the transport link. ALCAP identifier identifies the transport link according to the naming conventions defined for the transport link type in question. Both ends of the reference point of the ALCAP shall memorise the ALCAP identifier during the lifetime of the transport link. Each ALCAP identifier can be binded to an Application Part identifier.

Table 2 indicates examples of the identifiers used for different transmission link types.

Table 2: Examples of the identifiers used for different transmission link types

Transmission link type	ALCAP Identifier
AAL2	AAL2 Path ID + CID
GTP over IP	IP address + TEID

6.1.8.3 Binding identifier

Binding Identifier (Binding ID) is used to initialise the linkage between ALCAP and Application Part (RANAP, RNSAP, NBAP) identifiers. Binding identifier can be used both in Radio Network Control plane Application Part protocols and in Transport Network Control Plane's ALCAP protocol.

Binding ID binds the Radio and Transport Network Control plane identifiers together. To ensure maximal independence of those two planes, the binding ID should be used only when necessary: Binding ID shall thus be used only in Radio Network Control plane Application Part messages in which a new association between the planes is created and in ALCAP messages creating new transport bearers.

Binding ID for each transport bearer shall be allocated before the setup of that transport bearer.

The Binding ID is sent on one direction using the Application Part protocol and is return in the other direction by the ALCAP protocol.

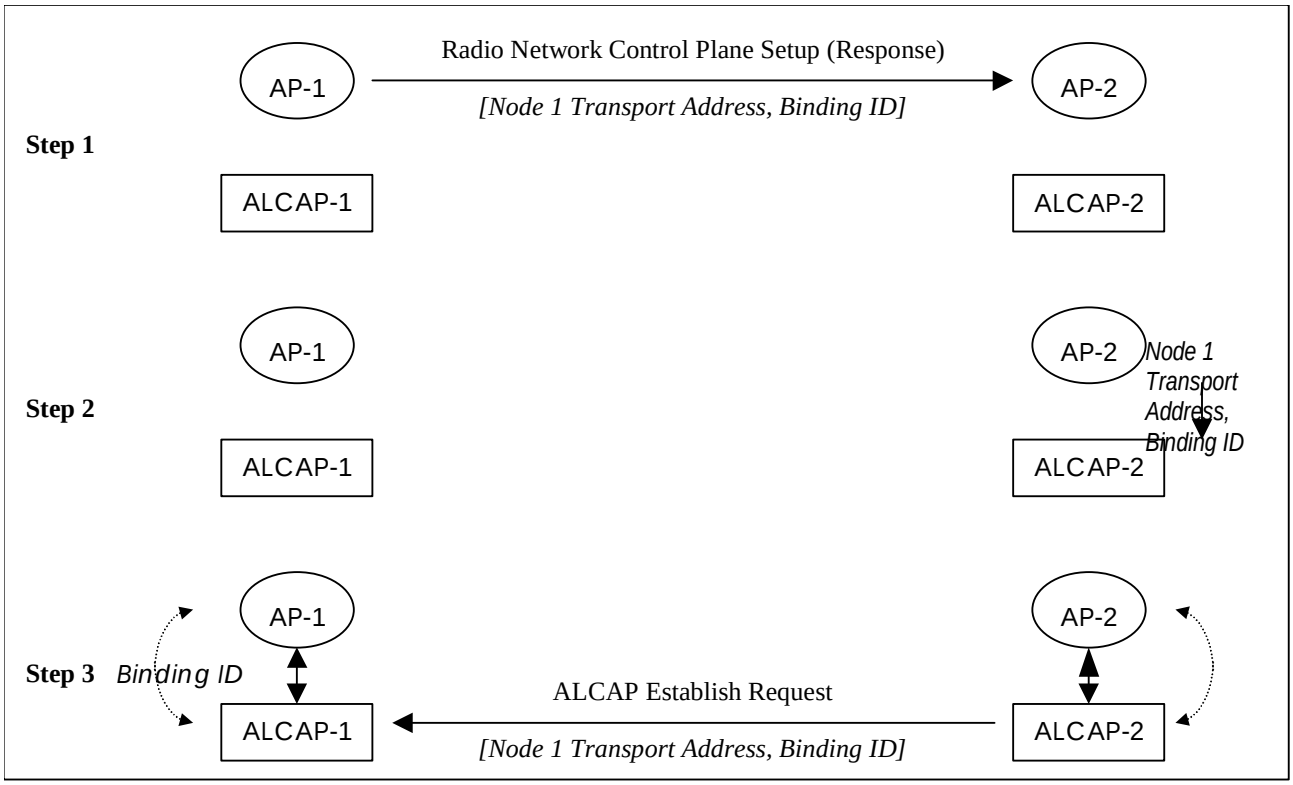
When an Application Part procedure with an allocated Binding ID is applied for modifying an existing Radio Network User Plane connection, the decision to use the Binding ID (and the ALCAP procedures) shall be done by that end of the reference point that decides whether to use the existing transport bearer or to set up a new transport bearer.

The Binding ID shall already be assigned and tied to a radio application procedure when the first ALCAP message is received in a node.

The association between the connection Id in the Application Part protocol (e.g. identifying a RAB) and the corresponding connection Id in the ALCAP protocol (e.g. identifying the AAL2 channel for that RAB) that was created with the help of Binding ID shall be memorised by both peers of each reference point for the lifetime of the corresponding transport bearer.

The Binding ID may be released and re-used as soon as both the Application Part procedure and the ALCAP procedure that used it are completed in both peers of the reference point.

Figure 6a illustrates how application instances of the Radio Network Control Plane and instances of the Transport Network Plane are linked together through the Binding Identifier in the set-up phase.



Step 1: Application Part AP-1 assigns the Binding Identifier and sends a Radio Network Control Plane Set-up (Response) message (which of the two messages depends on the involved interface - Iu/Iur or Iub). The message contains the originating node Transport layer address and the Binding Identifier.

Step 2: Among reception of the Radio Network Control Plane Set-up message, the peer entity AP-2 requests ALCAP-2 to establish a transport bearer. The Binding Identifier is passed to ALCAP-2.

Step 3: ALCAP-2 sends an ALCAP Establish Request to the peer entity ALCAP-1. The message contains the Binding Identifier. The Binding Identifier allows correlating the incoming transport connection with the Application Part transaction in step 1.

Figure 6a: Usage of Binding ID

Table 3 indicates the binding identifier allocating entity in each interface.

Table 3: Binding identifier allocating entity in each interface

Reference point	Allocating entity	Application part message including Binding-ID
Iu	CN	Request from CN
Iur	DRNC	Response to the request from SRNC
Iub	Node-B	Response to the request from DRNC

3GPP TSG-RAN3 #27 Meeting
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Tdoc R3-020474

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CHANGE REQUEST

⌘ **25.401** **CR** **043** ⌘ rev ⌘ Current version: **4.2.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network ☐

Title:	⌘	New UE identifier for MAC-c/sh multiplexing for DSCH
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	February 2002
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(essential correction)*
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R99 *(Release 1999)*
REL-4 *(Release 4)*
REL-5 *(Release 5)*

Reason for change: ⌘

MAC-c/sh multiplexing requires a UE identifier in the MAC-c/sh header for DSCH. At the current state of 3GPP specs, only U-RNTI can be used for this purpose, given that there is no notion for C-RNTI identifier in the RRC Cell_DCH state. U-RNTI is 4-octet long and thus not bandwidth efficient. Moreover, TS 25.321 seems to restrict the use of U-RNTI only to the case where DCCH is mapped on a common transport channel.

It is therefore proposed to introduce a new identifier for the purpose of DSCH MAC-c/sh multiplexing. The proposed DSCH-RNTI identifier is 2-octet long. It is allocated by the CRNC and is passed along to the SRNC within the RADIO LINK SETUP RESPONSE and RADIO LINK RECONFIGURATION READY messages.

This proposal is part of a joint RAN2/RAN3 effort.

Summary of change: ⌘

Definition of the new identifier DSCH-RNTI in section 6.1.7

Consequences if not approved: ⌘

The DSCH functionality will remain downgraded due to inefficient use of bandwidth.

Impact Analysis:

Corrected functionality: DSCH handling.

Correction to a function where the specification contained some contradictions.

Would not affect implementations behaving like indicated in the CR; would affect implementations supporting the corrected functionality otherwise.

Clauses affected:	⌘	6.1.7			
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- **UC-Id = RNC-Id + C-Id.**

The C-Id is defined by the operator, and set in the RNC via O&M. The C-Id is set in a Node B by its C-RNC.

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[FDD - 5) DSCH RNTI (DSCH-RNTI);]

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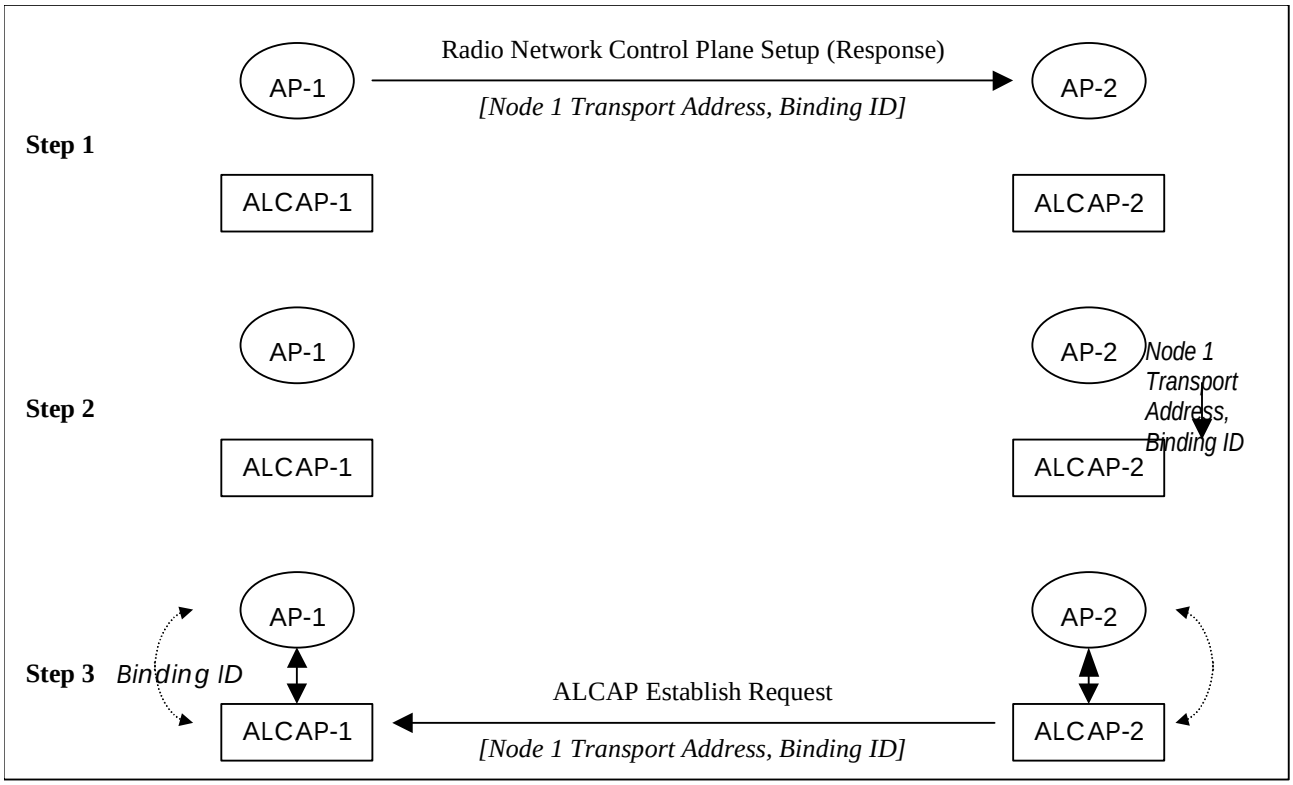

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Tdoc R3-020900

CR-Form-v3

CHANGE REQUEST

⌘ **25.401** **CR** **046** ⌘ rev ⌘ Current version: **5.1.0** ⌘

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Work item code:	⌘	TEI
Date:	⌘	February 2002
Category:	⌘	**A**
Release:	⌘	REL-5

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Reason for change: ⌘

MAC-c/sh multiplexing requires a UE identifier in the MAC-c/sh header for DSCH. At the current state of 3GPP specs, only U-RNTI can be used for this purpose, given that there is no notion for C-RNTI identifier in the RRC Cell_DCH state. U-RNTI is 4-octet long and thus not bandwidth efficient. Moreover, TS 25.321 seems to restrict the use of U-RNTI only to the case where DCCH is mapped on a common transport channel.

It is therefore proposed to introduce a new identifier for the purpose of DSCH MAC-c/sh multiplexing. The proposed DSCH-RNTI identifier is 2-octet long. It is allocated by the CRNC and is passed along to the SRNC within the RADIO LINK SETUP RESPONSE and RADIO LINK RECONFIGURATION READY messages.

This proposal is part of a joint RAN2/RAN3 effort.

Summary of change: ⌘

Definition of the new identifier DSCH-RNTI in section 6.1.7

Consequences if not approved: ⌘

The DSCH functionality will remain downgraded due to inefficient use of bandwidth.

Impact Analysis:

Corrected functionality: DSCH handling.

Correction to a function where the specification contained some contradictions.

Would not affect implementations behaving like indicated in the CR; would affect implementations supporting the corrected functionality otherwise.

Clauses affected:	⌘	6.1.7			
Other specs	⌘	**X**	Other core specifications	⌘	TS 25.401 v3.8.0 CR042 TS 25.401 v4.2.0 CR043 TS 25.423 v3.8.0 CR573 TS 25.423 v4.3.0 CR574
affected:			Test specifications		
			O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.1 UTRAN Identifiers

6.1.1 PLMN Identity

A Public Land Mobile Network is uniquely identified as define in [6] subclause 12.1.

6.1.2 CN Domain Identifier

A CN Domain Edge Node is identified as defined in [6] sub-clause 12.2.

6.1.3 RNC Identifier

An RNC node is uniquely identified within UTRAN as defined in [6] sub-clause 12.3.

6.1.4 Service Area Identifier

The Service Area Identifier (SAI) is defined in [6] sub-clause 12.4.

6.1.5 Cell Identifier

The Cell identifier (C-Id) is used to uniquely identify a cell within an RNS. The Cell-Id together with the identifier of the controlling RNC (CRNC-Id) constitutes the UTRAN Cell Identity (UC-Id) and is used to identify the cell uniquely within UTRAN. UC-Id or C-Id is used to identify a cell in UTRAN Iub and Iur interfaces.

- **UC-Id = RNC-Id + C-Id.**

The C-Id is defined by the operator, and set in the RNC via O&M. The C-Id is set in a Node B by its C-RNC.

6.1.6 Local Cell Identifier

The Local Cell identifier is used to uniquely identify the set of resources within a Node B required to support a cell (as identified by a C-Id). As a minimum it shall be unique within the Node B, but it is also capable of supporting uniqueness within the UTRAN for management system purposes.

The Local Cell Identifier is used for the initial configuration of a Node B when no C-Id is defined. The Local Cell identifier is defined by the operator, and set in both the Node B and its C-RNC via O&M. The relationship between the Local Cell Identifier and C-Id is set in the C-RNC via O&M.

6.1.7 UE Identifiers

Radio Network Temporary Identities (RNTI) are used as UE identifiers within UTRAN and in signalling messages between UE and UTRAN.

Four types of RNTI exist:

1) Serving RNC RNTI (s-RNTI);
2) Drift RNC RNTI (d-RNTI);
3) Cell RNTI (c-RNTI);
4) UTRAN RNTI (u-RNTI);

[FDD - 5) DSCH RNTI (DSCH-RNTI);]

s-RNTI is used:

- by UE to identify itself to the Serving RNC;

- by SRNC to address the UE;

- by DRNC to identify the UE to Serving RNC.

s-RNTI is allocated for all UEs having a RRC connection, it is allocated by the Serving RNC and it is unique within the Serving RNC. s-RNTI is reallocated always when the Serving RNC for the RRC connection is changed.

d-RNTI is used:

- by serving RNC to identify the UE to Drift RNC.

NOTE: The d-RNTI is never used on Uu.

d-RNTI is allocated by drift RNC upon drift UE contexts establishment and it shall be unique within the drift RNC. Serving RNC shall know the mapping between s-RNTI and the d-RNTIs allocated in Drift RNCs for the same UE. Drift RNC shall know the s-RNTI and SRNC-ID related to existing d-RNTI within the drift RNC.

c-RNTI is used:

- by UE to identify itself to the controlling RNC;

- by controlling RNC to address the UE.

c-RNTI is allocated by controlling RNC upon UE accessing a new cell. C-RNTI shall be unique within the accessed cell. Controlling RNC shall know the d-RNTI associated to the c-RNTI within the same logical RNC (if any).

u-RNTI

The u-RNTI is allocated to an UE having a RRC connection and identifies the UE within UTRAN.

u-RNTI is composed of:

- SRNC identity;

- s-RNTI.

[FDD - DSCH-RNTI is used:

- by controlling RNC to address the UE on the DSCH.

DSCH-RNTI is allocated by controlling RNC upon UE establishing a DSCH channel. DSCH-RNTI shall be unique within the cell carrying the DSCH. DSCH-RNTI is used as UE identifier in the MAC-c/sh header over DSCH. It is used only in the downlink.]

Each RNC has a unique identifier within the UTRAN part of the PLMN, denoted by RNC identifier (RNC-ID). This identifier is used to route UTRAN interface messages to correct RNC. RNC-ID of the serving RNC together with the s-RNTI is a unique identifier of the UE in the UTRAN part of the PLMN.

6.1.7.1 Usage of RNTI

u-RNTI is used as a UE identifier for the first cell access (at cell change) when a RRC connection exists for this UE and for UTRAN originated paging including associated response messages. RNC-ID is used by Controlling RNC to route the received uplink messages towards the Serving RNC.

NOTE: For the initial access a unique core network UE identifier is used.

c-RNTI is used as a UE identifier in all other DCCH/DTCH common channel messages on air interface.

6.1.8 Identifiers for dedicated resources within UTRAN

6.1.8.1 Radio Network Control Plane identifiers

Each addressable object in each reference point has an application part level identifier. This identifier is allocated autonomously by the entity responsible for initiation of the setup of the object. This application part identifier will be used as a reference to the object that is setup. Both ends of the reference point shall memorise the AP Identifier during the lifetime of the object. Application part identifier can be related to a specific ALCAP identifier and that relationship shall also be memorised by both ends.

Table 1 lists the basic AP level identifiers in each reference point.

Table 1: Basic AP level identifiers in each reference point

Object	Identifier	Abbreviation	Valid for
Radio Access Bearer	Radio Access Bearer ID	RAB-ID	Iu
Dedicated Transport channel	DCH-ID	DCH-ID	Iur, Iub
Downlink Shared Channel	DSCH-ID	DSCH-ID	Iur, Iub
[TDD Uplink Shared Channel]	USCH-ID	USCH-ID	Iur, Iub

6.1.8.2 Transport Network Control Plane identifiers

ALCAP identifier is used only in Transport Network Control plane (ALCAP protocol, if exist) and may be used in User Plane in the actual data transmission using the transport link. ALCAP identifier identifies the transport link according to the naming conventions defined for the transport link type in question. Both ends of the reference point of the ALCAP shall memorise the ALCAP identifier during the lifetime of the transport link. Each ALCAP identifier can be binded to an Application Part identifier.

Table 2 indicates examples of the identifiers used for different transmission link types.

Table 2: Examples of the identifiers used for different transmission link types

Transmission link type	ALCAP Identifier
AAL2	AAL2 Path ID + CID
GTP over IP	IP address + TEID

6.1.8.3 Binding identifier

Binding Identifier (Binding ID) is used to initialise the linkage between ALCAP and Application Part (RANAP, RNSAP, NBAP) identifiers. Binding identifier can be used both in Radio Network Control plane Application Part protocols and in Transport Network Control Plane's ALCAP protocol.

Binding ID binds the Radio and Transport Network Control plane identifiers together. To ensure maximal independence of those two planes, the binding ID should be used only when necessary: Binding ID shall thus be used only in Radio Network Control plane Application Part messages in which a new association between the planes is created and in ALCAP messages creating new transport bearers.

Binding ID for each transport bearer shall be allocated before the setup of that transport bearer.

The Binding ID is sent on one direction using the Application Part protocol and is return in the other direction by the ALCAP protocol.

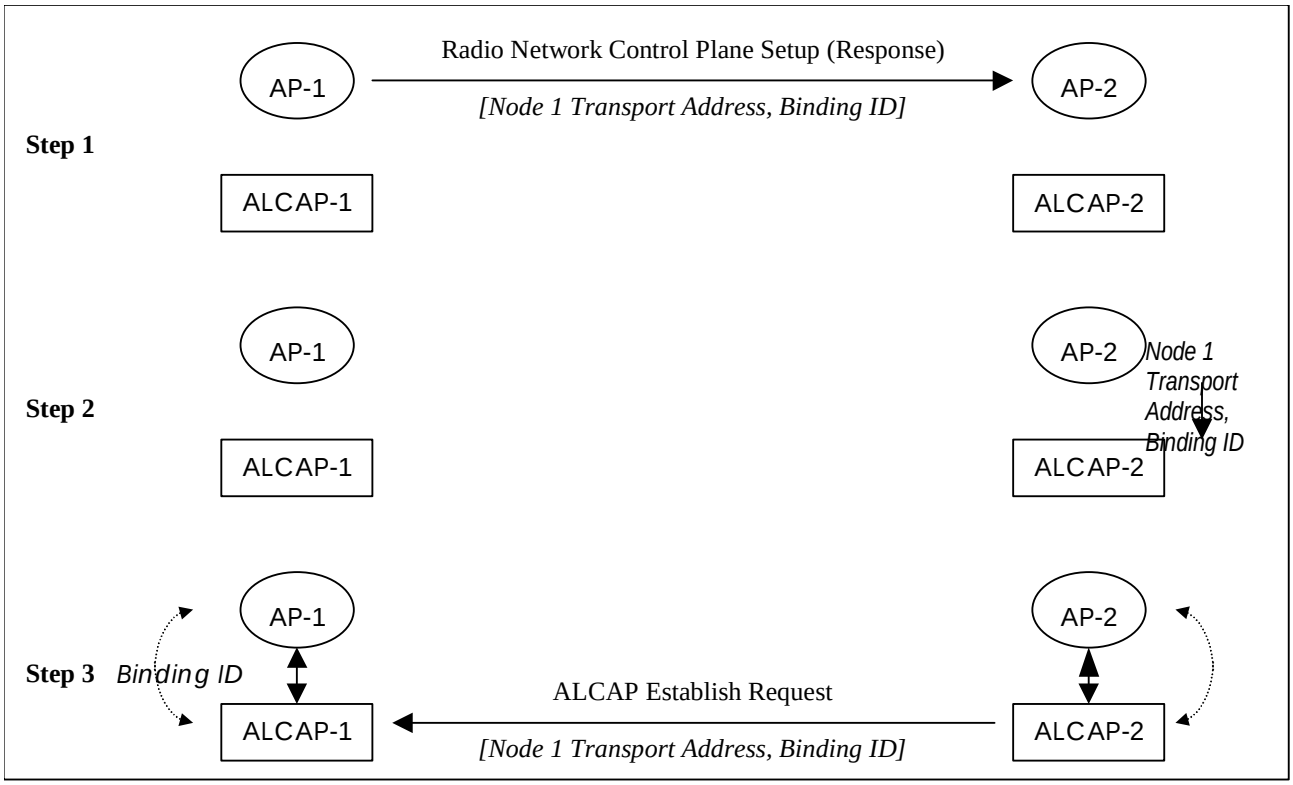
When an Application Part procedure with an allocated Binding ID is applied for modifying an existing Radio Network User Plane connection, the decision to use the Binding ID (and the ALCAP procedures) shall be done by that end of the reference point that decides whether to use the existing transport bearer or to set up a new transport bearer.

The Binding ID shall already be assigned and tied to a radio application procedure when the first ALCAP message is received in a node.

The association between the connection Id in the Application Part protocol (e.g. identifying a RAB) and the corresponding connection Id in the ALCAP protocol (e.g. identifying the AAL2 channel for that RAB) that was created with the help of Binding ID shall be memorised by both peers of each reference point for the lifetime of the corresponding transport bearer.

The Binding ID may be released and re-used as soon as both the Application Part procedure and the ALCAP procedure that used it are completed in both peers of the reference point.

Figure 6a illustrates how application instances of the Radio Network Control Plane and instances of the Transport Network Plane are linked together through the Binding Identifier in the set-up phase.



Step 1: Application Part AP-1 assigns the Binding Identifier and sends a Radio Network Control Plane Set-up (Response) message (which of the two messages depends on the involved interface - Iu/Iur or Iub). The message contains the originating node Transport layer address and the Binding Identifier.

Step 2: Among reception of the Radio Network Control Plane Set-up message, the peer entity AP-2 requests ALCAP-2 to establish a transport bearer. The Binding Identifier is passed to ALCAP-2.

Step 3: ALCAP-2 sends an ALCAP Establish Request to the peer entity ALCAP-1. The message contains the Binding Identifier. The Binding Identifier allows correlating the incoming transport connection with the Application Part transaction in step 1.

Figure 6a: Usage of Binding ID

Table 3 indicates the binding identifier allocating entity in each interface.

Table 3: Binding identifier allocating entity in each interface

Reference point	Allocating entity	Application part message including Binding-ID
Iu	CN	Request from CN
Iur	DRNC	Response to the request from SRNC
Iub	Node-B	Response to the request from DRNC