TSG-RAN Meeting #10
Bangkok, Thailand, 6 - 8 December 2000

TSGRP#10(00)0607

Title: **Agreed CRs to TS 25.401**

Source: **TSG-RAN WG3**

Agenda item: **5.3.3**

Tdoc_Num	Specification	CR_Num	Revision_Nu	CR_Subject	CR_Categor	WG_Status	Cur_Ver_Nu	New_Ver_Nu
R3-002869	25.401	018	2	Clarification to the Definition and Usage of Binding Id	F	agreed	3.4.0	3.5.0
R3-003049	25.401	019		Correction to CN distribution function	F	agreed	3.4.0	3.5.0

3GPP TSG RAN WG3 Meeting #16
Windsor, UK, 16-20 October 2000

***Document* R3-002869**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.401	CR	18r2	Current Version:	3.4.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	RAN#10	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [X]

Source: R-WG3 **Date:** 17.10.2000

Subject: Clarification to the Definition and Usage of Binding Id

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	[X]	**Release:**	Phase 2	[ ]
A	Corresponds to a correction in an earlier release	[ ]		Release 96	[ ]
B	Addition of feature	[ ]		Release 97	[ ]
C	Functional modification of feature	[ ]		Release 98	[ ]
D	Editorial modification	[ ]		Release 99	[X]
				Release 00	[ ]

Reason for change:

The purpose of Binding Id is to create association between procedures in Control Plane and the corresponding procedures in Transport Network Control Plane. Later on, the resulting U-Plane connection is addressed with an explicit Id allocated to it in both control planes (e.g. RAB Id in RANAP and CI in AAL2). However, 25.401 section 6.1.8.3 mentions that "the Binding Id shall be memorised", and it is not clear for how long. This CR proposes a small correction clarifying that the binding Id can be released after the associated procedures are completed, but the association shall be memorised.

In addition, the allocation and usage of Binding ID is clarified.

If this correction is not made, it is not clear from the specifications when the Binding Id can be released. This at minimum may lead into unnecessary restrictions in the Binding Id Allocation, or even confusion in different implementations.

Clauses affected: 6.1.8.3

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

help.doc

<---------- double-click here for help and instructions on how to create a CR.

6.1.8.3 Binding Iidentifier

Binding Identifier (Binding ID) is used to initialise the linkage between ALCAP and Application Part (RANAP, RNSAP, NBAP) identifiers. Binding Iidentifier 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 Bbinding 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 bearerstransmission links.

Binding ID for each transport bearertransmission link shall be allocated before the setup or modification of that transport bearertransmission link. Reserved Binding IDs and the associated transport link shall be memorised by both peers of each reference point.

The Binding ID is sent on one direction using the Application Part protocol and is returned 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 identityBinding 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 circuitchannel 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 theat corresponding transport bearertransmission link.

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

Figure 6 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:

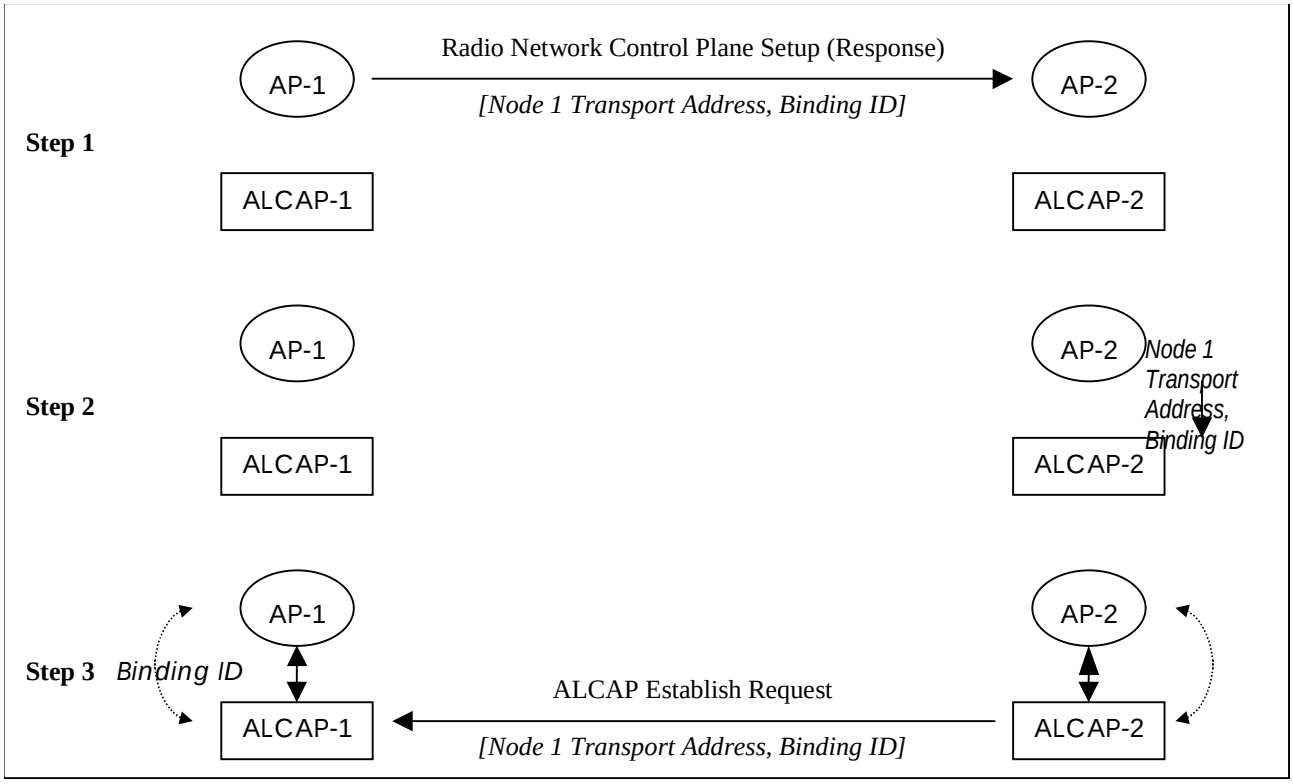

Figure 6: Usage of Binding ID

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~~transmission link~~. 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.

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-3 Meeting #17
Chicago, USA, 20 – 24 Nov 2000

Tdoc R3-003049

CR-Form-v3

CHANGE REQUEST

⌘ **25.401** **CR** **019** ⌘ rev **-** ⌘ Current version: **3.4.0** ⌘

*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 **X**

Title:	⌘	Correction to CN distribution function
Source:	⌘	R-WG3
Work item code:	⌘	***Date:*** ⌘ 2000-10-13
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)*
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)

Reason for change:	⌘	Dynamic routing based on the flow id is not required to allow considered migration scenarios. Therefore the concept is proposed to be removed and message routing will be performed using the CN domain identity.
Summary of change:	⌘	All occurrences of "*, Service Descriptor, and Flow ID*" are deleted in the affected clause.
Consequences if not approved:	⌘	25.401 would contain an obsolete concept.

Clauses affected:	⌘	7.2.4.13
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	This concept will be also removed from corresponding TS 25.331, 24.007 & 34.108.

7.2.4.13 CN Distribution function for Non Access Stratum messages

In the RRC protocol, messages from the NAS shall be transparently transferred within the Access Stratum using the Direct Transfer procedure. A distribution function in the UE and the SRNC shall handle ~~a~~ the CN domain indicator~~, Service Descriptor, and Flow ID~~ being part of the AS message to direct messages to the appropriate NAS entity i.e. the appropriate Mobility Management instance in the UE domain and the appropriate CN domain.

In the downlink direction the UE shall be provided by the SRNC with the information on the originating CN domain for the individual NAS message.

In the uplink direction, the process performed by the distribution function in the UE consists in inserting the appropriate values for the CN domain indicator~~, Service Descriptor, and Flow ID IEs~~ in the AS message and the process performed by the SRNC consists in evaluating the CN domain indicator~~, Service Descriptor, and Flow ID~~ contained in the AS message and distribute the NAS message to the corresponding RANAP instance for transfer over Iu interface.

This distribution function is located in both the UE and in the SRNC.