TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

TSGRP#7(00)0081

Title: **Agreed CRs to TS 25.413**

Source: **TSG-RAN WG3**

Agenda item: **6.4.3**

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-000913	25.413	061	1	Handling of possible inconsistencies between LAC and SAI in Initial UE message	F	agreed	3.0.0	3.1.0
R3-000914	25.413	016	2	CR to 25.413: Correcting the conditions for RAB information in Relocation Request Acknowledge message	F	agreed	3.0.0	3.1.0
R3-000920	25.413	057	2	CR to 25.413: Clarification of CN actions for RAB Release Request	D	agreed	3.0.0	3.1.0
R3-000924	25.413	001	3	Correction CR on CN broadcast procedure. Part of the Iu subworking group.	C	agreed	3.0.0	3.1.0

3GPP TSG-RA WG3 Meeting #11
Sophia Antipolis, France, 28 Feb–3 March 2000

***Document* R3-000913**
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.

25.413	CR	061r1	Current Version:	3.0.0

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

For submission to: RAN#7 *list expected approval meeting # here ↑*	for approval	X	strategic		*(for SMG use only)*
	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: RAN-WG3 **Date:** 2000-03-02

Subject: Handling of possible inconsistencies between LAC and SAI in Initial UE message

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 IEs of INITIAL UE MESSAGE contain the LAC twice, within *SAI* IE and *LAI* IE.
It should be clearly stated within RANAP specification, which LAC information is valid for the mobility management instances within CN.

Revision 1: tries to clarify also the usage of the SAI IE.

Clauses affected: 8.22.2

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.

8.22 Initial UE Message

8.22.1 General

The purpose of the Initial UE Message procedure is to establish an Iu signalling connection between a CN domain and the RNC. The procedure uses connection oriented signalling.

8.22.2 Successful Operation

Figure 1~~2~~4: Initial UE Message procedure.

When RNC has received from Uu interface a NAS message to be forwarded to CN domain to which the Iu signalling connection for the UE does not exist, RNC shall initiate the Initial UE Message procedure and send the INITIAL UE MESSAGE to the CN.

In addition to the received NAS-PDU, RNC shall add following information to the INITIAL UE MESSAGE:

- CN domain indicator, indicating the CN domain towards which this message is sent.
- For CS domain, the same LAI which was the last LAI indicated to the UE by UTRAN.
- For PS domain, the same LAI+RAC which were the last LAI+RAC indicated to the UE by UTRAN.
- Service Area corresponding to the cells from which the UE is consuming radio resources.

Whereas several processing entities within the CN (e.g. charging, interception, etc.) may make use of the location information given in the *SAI* IE and the *LAI* (and *RAC*) IE, ~~T~~the mobility management within the CN shall rely on the information~~value~~ given within the *LAI* IE (resp. *LAI* and *RAC* IEs) only.

3GPP TSG-RA WG3 Meeting #11
Sophia Antipolis, France, 28 Feb–3 March 2000

***Document* R3-000914**
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.

25.413	CR	016r2	Current Version:	3.0.0

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

For submission to: RAN#7	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, RAN-WG3 AG	**Date:**	2000-03-02

Subject:	CR to 25.413: Correcting the conditions for RAB information in Relocation Request Acknowledge message

Work item:	

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

In Relocation Request Acknowledge message the conditions for 'RABs Setup' and 'RABs failed to setup' groups are set so that for CS domain it is not possible to indicate which U-Plane protocol version has been selected and it is always mandatory to use 'RABs failed to setup' group. This should be aligned with RAB Assignment procedure, i.e. the U-Plane protocol version indication should be possible also for CS domain, and the usage of 'RABs failed to setup' group should be conditional to the existence of other groups.

Revision 1:

In the tabular description of the RELOCATION REQUEST ACKNOWLEDGE message, as proposed in CR016 (R3-000153), there is the possibility to indicate, that none of the requested RAB's have been successfully setup, although the procedural description in chapter 8.7.3 forsees the RELOCATION FAILURE message to be sent in that case.

This CR revision proposes to avoid this ambiguity by re-defining the presence conditions of the RAB lists.

Revision 2:

After discussions, it was agreed to leave the presence information of the *RABs Setup* and *RABs Failed to Setup* groups blank. Compared to revision 1 (R3-000680), the Reason for change section has been arranged in a way that one can follow the CR history.

Finally, within the ASN.1 part, the presence indication of *RABs Setup* group is set to *mandatory*, the presence of the *RABs Failed to Setup* group is set to *optional.*

Clauses affected:	9.1.9			
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.

9.1.9 RELOCATION REQUEST ACKNOWLEDGE

This message is sent by the target RNC to inform the CN about the result of the resource allocation for the requested relocation.

Direction: RNC → CN

Signalling bearer mode: Connection oriented.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M		9.2.1.1	
Target RNC to Source RNC Transparent Container	C - IfApplNotOtherCN		9.2.1.30	
RABs setup	~~MC – ifNoOtherGroupifPS~~	0 to <maxnoofRABs		
RAB ID	M		9.2.1.2	
Chosen UP Version	O		9.2.1.20	Included at least when a choice is made by UTRAN.
Transport Layer Address	~~M~~C – ifPS		9.2.2.1	
Iu Transport Association	~~M~~C – ifPS		9.2.2.2	
RABs failed to setup	~~OC – ifNoOtherGroup~~	0 to <maxnoofRABs		
RAB ID	M		9.2.1.2	
Cause	M		9.2.1.4	
Chosen Integrity Protection Algorithm	M		9.2.1.13	Indicates which algorithm that will be used by the target RNC.
Chosen Encryption Algorithm	O		9.2.1.14	Indicates which algorithm that will be used by the target RNC.
Criticality Diagnostics	O		9.2.1.35	

Condition	Explanation
IfPS	This ~~Group~~ IE is only present for RABs towards the PS domain.
~~IfNoOtherGroup~~	~~This group must be present at least when no other group is present, i.e. at least one group must be present.~~
IfApplNotOtherCN	Must be included if applicable and if not sent via the other CN.

Range bound	Explanation
maxnoofRABs	Maximum no. of RABs for one UE. Value is 256.

************ **NEXT MODIFIED SECTION** ************

9.3.3 PDU Definitions

****** LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.3 REMOVED ******

```
-- **************************************************************
--
-- RELOCATION RESOURCE ALLOCATION ELEMENTARY PROCEDURE
--
-- **************************************************************

-- **************************************************************
--
-- Relocation Request
--
-- **************************************************************

RelocationRequest ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container       { {RelocationRequestIEs} },
    protocolExtensions      ProtocolExtensionContainer { {RelocationRequestExtensions} }                 OPTIONAL,
    ...
}

RelocationRequestIEs RANAP-PROTOCOL-IES ::= {
    { ID id-PermanentNAS-UE-ID          CRITICALITY ignore  TYPE PermanentNAS-UE-ID            PRESENCE conditional
    -- This IE is only present if available at the sending side --                                        } |
    { ID id-Cause                   CRITICALITY ignore  TYPE Cause                 PRESENCE mandatory    } |
    { ID id-CN-DomainIndicator          CRITICALITY ignore  TYPE CN-DomainIndicator            PRESENCE mandatory    } |
    { ID id-SourceRNC-ToTargetRNC-TransparentContainer
                            CRITICALITY reject  TYPE SourceRNC-ToTargetRNC-TransparentContainer PRESENCE mandatory    } |
    { ID id-RAB-SetupList-RelocReq          CRITICALITY ignore  TYPE RAB-SetupList-RelocReq         PRESENCE mandatory      } |
    { ID id-IntegrityProtectionInformation      CRITICALITY ignore  TYPE IntegrityProtectionInformation         PRESENCE mandatory      } |
    { ID id-EncryptionInformation           CRITICALITY ignore  TYPE EncryptionInformation          PRESENCE optional },

    ...
}

RAB-SetupList-RelocReq                  ::= RAB-IE-ContainerList { {RAB-SetupItem-RelocReq-IEs} }

RAB-SetupItem-RelocReq-IEs RANAP-PROTOCOL-IES ::= {
    { ID id-RAB-SetupItem-RelocReq          CRITICALITY reject  TYPE RAB-SetupItem-RelocReq         PRESENCE mandatory      },
    ...
}

RAB-SetupItem-RelocReq ::= SEQUENCE {
    rAB-ID                      RAB-ID,
    nAS-BindingInformation              NAS-BindingInformation,
    rAB-Parameters                  RAB-Parameters,
    dataVolumeReportingIndication           DataVolumeReportingIndication   OPTIONAL
    -- This IE is only present if available at the sending side --,
    userPlaneInformation                UserPlaneInformation,
```

```
    transportLayerAddress               TransportLayerAddress,
    iuTransportAssociation              IuTransportAssociation,
    iE-Extensions                   ProtocolExtensionContainer { {RAB-SetupItem-RelocReq-ExtIEs} }              OPTIONAL,
    ...
}

RAB-SetupItem-RelocReq-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

UserPlaneInformation ::= SEQUENCE {
    userPlaneMode                   UserPlaneMode,
    uP-ModeVersions                 UP-ModeVersions,
    iE-Extensions                   ProtocolExtensionContainer { {UserPlaneInformation-ExtIEs} }               OPTIONAL,
    ...
}

UserPlaneInformation-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

RelocationRequestExtensions RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- Relocation Request Acknowledge
--
-- **************************************************************

RelocationRequestAcknowledge ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container       { {RelocationRequestAcknowledgeIEs} },
    protocolExtensions      ProtocolExtensionContainer { {RelocationRequestAcknowledgeExtensions} }             OPTIONAL,
    ...
}

RelocationRequestAcknowledgeIEs RANAP-PROTOCOL-IES ::= {
    { ID id-TargetRNC-ToSourceRNC-TransparentContainer
                        CRITICALITY ignore  TYPE TargetRNC-ToSourceRNC-TransparentContainer PRESENCE conditional
    -- Must be included if applicapble and if not sent via the other CN --                                  } |
    { ID id-RAB-SetupList-RelocReqAck       CRITICALITY ignore  TYPE RAB-SetupList-RelocReqAck           PRESENCE mandatory~~conditional~~
    ~~-- This group must be present at least when no other group is present, i.e. at least one group must be present~~This Group is only present for RABs towards the PS domain ~~-------------------------------------------~~                                  } |
    { ID id-RAB-FailedList              CRITICALITY ignore  TYPE RAB-FailedList             PRESENCE optional~~conditional~~
    ~~-- This group must be present at least when tno other group is present, i.e. at least one group must be present ----------~~                                  } |
    { ID id-ChosenIntegrityProtectionAlgorithm  CRITICALITY ignore  TYPE ChosenIntegrityProtectionAlgorithm          PRESENCE mandatory      } |
    { ID id-ChosenEncryptionAlgorithm       CRITICALITY ignore  TYPE ChosenEncryptionAlgorithm           PRESENCE optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics              PRESENCE optional },
    ...
}

RAB-SetupList-RelocReqAck               ::= RAB-IE-ContainerList { {RAB-SetupItem-RelocReqAck-IEs} }

RAB-SetupItem-RelocReqAck-IEs RANAP-PROTOCOL-IES ::= {
    { ID id-RAB-SetupItem-RelocReqAck       CRITICALITY reject  TYPE RAB-SetupItem-RelocReqAck           PRESENCE mandatory      },
```

```
    ...
}

RAB-SetupItem-RelocReqAck ::= SEQUENCE {
    rAB-ID                      RAB-ID,
    chosenUP-Version                ChosenUP-Version        OPTIONAL,
    transportLayerAddress               TransportLayerAddress   OPTIONAL,
    --This IE is only present for RABS towards the PS Domain
    iuTransportAssociation              IuTransportAssociation  OPTIONAL,
    --This IE is only present for RABS towards the PS Domain
    iE-Extensions                   ProtocolExtensionContainer { {RAB-SetupItem-RelocReqAck-ExtIEs} }                OPTIONAL,
    ...
}

RAB-SetupItem-RelocReqAck-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

RAB-FailedList                      ::= RAB-IE-ContainerList { {RAB-FailedItemIEs} }

RAB-FailedItemIEs RANAP-PROTOCOL-IES ::= {
    { ID id-RAB-FailedItem              CRITICALITY ignore  TYPE RAB-FailedItem             PRESENCE mandatory  },
    ...
}

RAB-FailedItem ::= SEQUENCE {
    rAB-ID                      RAB-ID,
    cause                       Cause,
    iE-Extensions                   ProtocolExtensionContainer { {RAB-FailedItem-ExtIEs} }          OPTIONAL,
    ...
}

RAB-FailedItem-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

RelocationRequestAcknowledgeExtensions RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- Relocation Failure
--
-- **************************************************************

RelocationFailure ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container       { {RelocationFailureIEs} },
    protocolExtensions      ProtocolExtensionContainer { {RelocationFailureExtensions} }                OPTIONAL,
    ...
}

RelocationFailureIEs RANAP-PROTOCOL-IES ::= {
    { ID id-Cause                   CRITICALITY ignore  TYPE Cause                  PRESENCE mandatory    } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics             PRESENCE optional },
    ...
```

```
}

RelocationFailureExtensions RANAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

****** LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.3 REMOVED ******

3GPP TSG-RA WG3 Meeting #11
Sophia Antipolis, France, 28 Feb - 3 Mar 2000

***Document* R3-000920**
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.

25.413	CR	57r2	Current Version:	3.0.0

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

For submission to:	RAN#7	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: RAN WG3 **Date:** 23.02.2000

Subject: CR to 25.413: Clarification of CN actions for RAB Release Request

Work item:

Category: *(only one category shall be marked with an X)*				**Release:**	
F	Correction			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	X		Release 99	X
				Release 00	

Reason for change: The position of the CN is clarified when responding to the RAB Release Request message. A statement is added in the RAB Release Request procedure that the CN decides how to react, and the possible interaction with RAB Assignment procedure is clarified.

Clauses affected: 8.3.2

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: Note: This CR shown some changes that are also presented in the R3 approved CR#20. This is done to make this CR self standing i.e. to keep the CRs independent of each other (i.e. if CR#20 is not approved, it is still possible to approved this).

help.doc

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

8.3 RAB Release Request

8.3.1 General

The purpose of the RAB Release Request procedure is to enable UTRAN to request the release of one or several radio access bearers. The procedure uses connection oriented signalling.

8.3.2 Successful Operation

Figure 1: RAB Release Request procedure. Successful Operation.

The RNC shall initiate the procedure by generating a RAB RELEASE REQUEST message towards the CN. The *RABs to be released* IE shall indicate the list of RABs requested to release and the *Cause* IE associated to each RAB shall indicate the reason for the release.

Upon reception of the RAB RELEASE REQUEST message, the CN ~~shall~~ should initiate the appropriate release procedure for the identified RABs in the RAB RELEASE REQUEST message. It is up to the CN to decide how to react to the request~~, and if accepted, which release procedure to use.~~ ~~The CN shall pass the cause value indicated in the RAB RELEASE REQUEST message unchanged (TBD) in the initiated release procedure.~~

Interaction with RAB Assignment (release RAB):

~~The CN shall analyse the cause for sending the RAB RELEASE REQUEST, and i~~If the CN decides to release ~~the~~ some or all indicated RABs, the CN may decide to invoke the RAB Assignment procedure (release RAB) to this effect.

8.3.3 Abnormal Conditions

3GPP-RAN-WG3 Meeting #11
Sophia-Antipolis, 28 Feb - 3 Mar 2000

TSGR3#11
Document (00)0924
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.

25.413	CR	001r3	Current Version:	3.0.0

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

For submission to: TSG-RAN#7					
list expected approval meeting # here ↑	for approval	X	strategic		*(for SMG use only)*
	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: RAN WG3 **Date:** 02.03.2000

Subject: Clarification and correction of the CN broadcast procedure

Work item:

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

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

Reason for change: Enhancement of the CN Broadcast procedure, and completion of the coding section.

Clauses affected:

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:

8.24 CN Information Broadcast

8.24.1 General

The purpose of the CN Information Broadcast procedure is to broadcast repetitively to all users information as provided by the core network. The procedure uses connectionless signalling.

8.24.2 Successful Operation

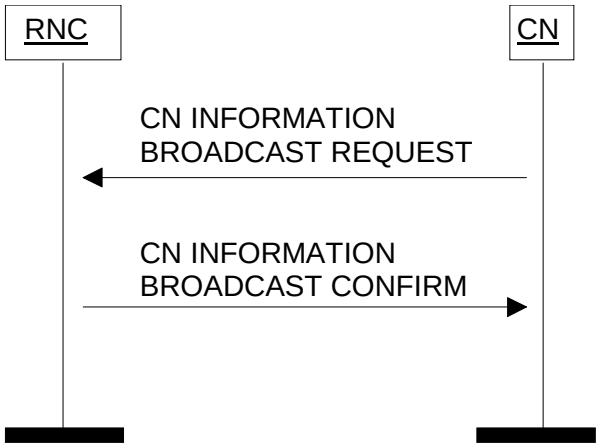

Figure 1~~27~~: CN Information Broadcast procedure. Successful operation.

A core network element sets or modifies the CN broadcast information by sending a CN INFORMATION BROADCAST REQUEST message which ~~indicates~~contains:

- The information pieces to be broadcast. The internal structure of these information pieces is transparent to UTRAN, and is specified as part of the CN-UE protocols.
- With each broadcast information piece, a geographical area where to broadcast it.
- With each broadcast information piece, ~~some categorisation parameters to be used by the UTRAN to prioritise the broadcast information on the radio interface and determine how to schedule the repetition cycle.~~a priority used by UTRAN to schedule the information
- With each broadcast information piece, a request for the UTRAN to turn on or off the broadcast of the information piece

If the UTRAN can broadcast the information as requested, a CN INFORMATION BROADCAST CONFIRM message is returned to the CN.

Whether or not UTRAN shall treat equally broadcast request from different CN and having the same priority is under operator control.

Each information piece is broadcast in the intersection between the indicated geographical area and the area under control by the receiving RNC. It is broadcast until explicitly changed or a Reset occurs~~. In case the ending of the broadcasting hasn't been indicated when setting the broadcasting, an empty bit string will be used to turn off the broadcasting. A CN element will run this procedure typically after each Reset, and whenever the information needs to be changed.~~

8.24.3 Unsuccessful Operation

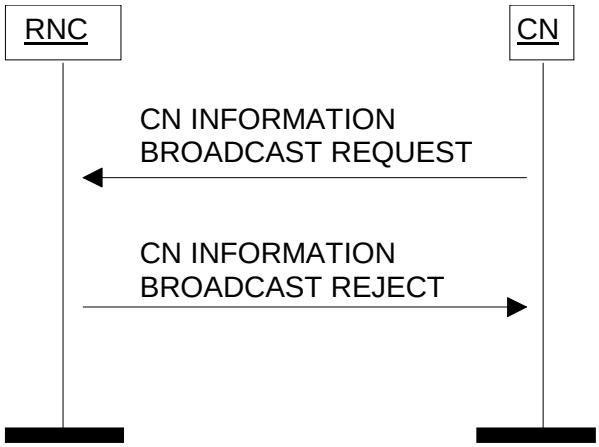

Figure 2~~28~~: CN Information Broadcast procedure. Unsuccessful operation.

If after receiving the CN INFORMATION BROADCAST REQUEST, the RNC can not broadcast the information as requested, a CN INFORMATION BROADCAST REJECT message shall be returned to the CN and the procedure is terminated.

9.1.33 CN INFORMATION BROADCAST REQUEST

This message is sent by the CN and includes information to be broadcasted to all users.

Direction: CN → RNC

Signalling bearer mode: Connectionless.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M		9.2.1.1	
CN Domain Indicator	M		9.2.1.5	
CN Broadcast Information piece		1 to <maxnoofPieces>		
Information Identity	M		9.2.3.X	
NAS Broadcast Information	~~M~~C-ifBroadcast		9.2.3.5	
Area Identity	~~M~~C-ifBroadcast		9.2.3.11	
Information Priority	C-ifBroadcast		9.2.3.X	
Information Control	M		9.2.3.X	
~~Categorisation Parameters~~	~~M~~		~~9.2.1.15~~	

Range bound	Explanation
maxnoofPieces	Maximum no. of Broadcast Information Pieces in one message. Value is 16.

Condition	Explanation
IfBroadcast	This IE is only present if CN requests the Broadcast of the corresponding information piece

~~9.2.1.15 Categorisation Parameters~~

~~With each NAS Broadcast Information, this element is used by the RNC to determine how to prioritise the information and schedule the repetition cycle.~~

~~IE/Group Name~~	~~Presence~~	~~Range~~	~~IE type and reference~~	~~Semantics description~~
~~Categorisation Parameters~~	~~M~~		~~INTEGER~~	~~Range 0..15.~~

9.2.3.X Information Identity

This element is used to identify Broadcast Information piece for a given CN.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Information Identity	M		INTEGER (0..255)	

9.2.3.X Information Priority

This element is the priority of the corresponding Information piece. Thie IE is used by UTRAN to schedule the NAS Broadcast Information.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Information Priority	M		INTEGER (0..15)	spare (0), highest (1), lowest (14), no priority used (15)} (0..15)

9.2.3.X Information Control

This element is used to control the Broadcast of an Information piece.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Information Control	M		ENUMERATED(on,off)	on: UTRAN shall start broadcasting the information piece off: UTRAN shall stop broadcasting the information piece

9.3.3 PDU Definitions

```
IMPORTS
    DataVolumeReference,
    AreaIdentity,
    CN-DomainIndicator,
    ~~CategorisationParameters,~~
    Cause,
    CriticalityDiagnostics,
    ChosenEncryptionAlgorithm,
    ChosenIntegrityProtectionAlgorithm,
    ChosenUP-Version,
    ClassmarkInformation2,
    ClassmarkInformation3,
    DL-GTP-PDU-SequenceNumber,
    DL-N-PDU-SequenceNumber,
    DataVolumeReportingIndication,
    EncryptionInformation,
    IntegrityProtectionInformation,
    IuTransportAssociation,
    L3-Information,
    LAI,
    NAS-BindingInformation,
    NAS-BroadcastInformation,
    InformationIdentity,
    InformationPriority,
    InformationControl,
```

```
    NAS-PDU,
    NonSearchingIndication,
    NumberOfSteps,
    OMC-ID,
    OldBSS-ToNewBSS-Information,
    PagingAreaID,
    PagingCause,
    PermanentNAS-UE-ID,
    RAB-ID,
    RAB-Parameters,
    RAC,
    RelocationType,
    RequestType,
    SAI,
    SAPI,
    SourceID,
    SourceRNC-ToTargetRNC-TransparentContainer,
    TargetID,
    TargetRNC-ToSourceRNC-TransparentContainer,
    TemporaryUE-ID,
    TraceReference,
    TraceType,
    UnsuccessfullyTransmittedDataVolume,
    TransportLayerAddress,
    TriggerID,
    UE-ID,
    UL-GTP-PDU-SequenceNumber,
    UL-N-PDU-SequenceNumber,
    UP-ModeVersions,
    UserPlaneMode
FROM RANAP-IEs


-- **************************************************************
--
-- CN Information Broadcast Request
--
-- **************************************************************

CN-InformationBroadcastRequest ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container       { {CN-InformationBroadcastRequestIEs} },
    protocolExtensions      ProtocolExtensionContainer { {CN-InformationBroadcastRequestExtensions}
}       OPTIONAL,
    ...
}

CN-InformationBroadcastRequestIEs RANAP-PROTOCOL-IES ::= {
    { ID id-CN-DomainIndicator          CRITICALITY ignore  TYPE CN-DomainIndicator
    PRESENCE mandatory  } |
    { ID id-CN-BroadcastInformationPieceList    CRITICALITY ignore  TYPE CN-
BroadcastInformationPieceList       PRESENCE mandatory  },
    ...
}

CN-BroadcastInformationPieceList            ::= CN-BroadcastInfPiece-IE-ContainerList { {CN-
BroadcastInformationPieceIEs} }

CN-BroadcastInformationPieceIEs RANAP-PROTOCOL-IES ::= {
    { ID id-CN-BroadcastInformationPiece        CRITICALITY ignore  TYPE CN-
BroadcastInformationPiece       PRESENCE mandatory  },
    ...
}

CN-BroadcastInformationPiece ::= SEQUENCE {
    informationIdentity             InformationIdentity,
    nAS-BroadcastInformation            NAS-BroadcastInformation         OPTIONAL
    --Included if CN resquests UTRAN to broadcast the information piece,
    areaIdentity                    AreaIdentity         OPTIONAL
    --Included if CN resquests UTRAN to broadcast the information piece,
    informationPriority             InformationPriority     OPTIONAL
    --Included if CN resquests UTRAN to broadcast the information piece,
    informationControl              InformationControl,
    categorisationParameters            CategorisationParameters,
    iE-Extensions                   ProtocolExtensionContainer { {CN-BroadcastInformationPiece-
ExtIEs} }           OPTIONAL,
    ...
}

CN-BroadcastInformationPiece-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

CN-InformationBroadcastRequestExtensions RANAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

9.3.4 Information Element Definitions

```
-- C

CategorisationParameters          ::= INTEGER (0..15)


-- I
InformationIdentity ::= INTEGER (0..255)

InformationPriority ::= INTEGER (0..15)

InformationControl ::= ENUMERATED {
    on,
    off
}
```