Technical Specification Group Radio Access Network
Marco Island, USA 4 - 7 June 2002

***RP#16(02) 0423***

| TSG_Doc_Num | Specification | CR_Num | Revision_Num | 3G_Release | CR_Subject | CR_Category | Cur_Ver_Num | New_Ver_Num | Tdoc_Num | WorkItem |
|---|---|---|---|---|---|---|---|---|---|---|
| RP-020423 | 25.413 | 404 | 6 | Rel-5 | Release 5 additions of ROHC context relocation support during | B | 5.0.0 | 5.1.0 | R3-021654 | RANimp-RABSE5 |

**3GPP TSG-RAN WG3 Meeting #29**
**Gyeongju, South Korea, 13th – 17th May 2002**

***Tdoc R3-021654***
***revision of Tdoc R3-021311***

*CR-Form-v4*

# CHANGE REQUEST

⌘ **25.413** **CR** **404** ⌘ rev **6** ⌘ Current version: **5.0.0** ⌘

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

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

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Release 5 additions of ROHC context relocation support during SRNS relocation |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | RANimp-RABSE5 |
| ***Date:*** | ⌘ | 29 May 2002 |
| ***Category:*** | ⌘ | **B** |
| ***Release:*** | ⌘ | REL-5 |

*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)*

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | New Release 5 feature called ROHC context relocation (UTRAN RNC using RFC 3095 => UTRAN RNC using RFC 3095) requires some RANAP additions. |
| ***Summary of change:*** | ⌘ | RANAP messages (FORWARD SRNS CONTEXT and RANAP RELOCATION INFORMATION) that carry RAB contexts during SRNS relocation are updated to carry also the Source RNC PDCP context info.<br><br>Procedure text, tabular format section and ASN.1 are therefore updated accordingly<br><br>Impact Analysis:<br>Impact assessment towards the previous version of the specification (previous release):<br>This CR has no impact with the previous version of the specification (previous release) because this an optional new feature and the ASN.1 changes are made based on ASN.1 backward compatibility mechanisms (e.g. extension containers, ellipsis notation). |
| ***Consequences if not approved:*** | ⌘ | |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.13, 8.14, 9.1.22, 9.1.43, 9.2.1 (new 9.2.1.X), 9.3.3, 9.3.6 and 11.2 | | |
| ***Other specs affected:*** | ⌘ | **X** Other core specifications | ⌘ | 25.303, 25.306, 25.323, 25.331, 25.844 and 23.060 |
| | | ☐ Test specifications | | |
| | | ☐ O&M Specifications | | |
| ***Other comments:*** | ⌘ | | | |

# 8.13 SRNS Context Forwarding from Source RNC to CN

## 8.13.1 General

The purpose of this procedure is to transfer SRNS contexts from the source RNC to the CN (PS domain) in case of handover via the CN. The procedure uses connection oriented signalling. SRNS contexts are sent for each concerned RAB among those that are supported by the target system, and for which at least either GTP-PDU or PDCP sequence numbering is available. The SRNS contexts contain the sequence numbers of the GTP-PDUs next to be transmitted in the uplink and downlink directions, if available, and the next PDCP sequence numbers that would have been used to send and receive data from the UE, if available. Source RNC PDCP context info shall be sent if available.

## 8.13.2 Successful Operation

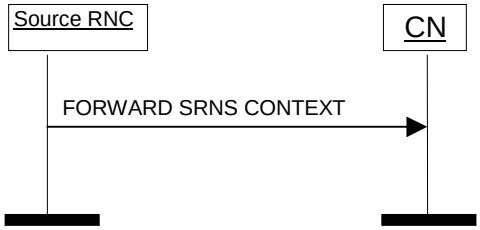


**Figure 1: SRNS Context forwarding from source RNC to CN. Successful operation.**

The source RNC initialises the procedure by sending FORWARD SRNS CONTEXT message to the CN. The FORWARD SRNS CONTEXT message contains the RAB Context information for each referenced RAB. For each RAB the following information shall be included:

- RAB ID
- always when available, the sequence number for the next downlink GTP-PDU to be sent to the UE, and
- always when available, the sequence number for the next uplink GTP-PDU to be tunnelled to the GGSN;
- always when available, the radio interface sequence number (PDCP) [17] of the next uplink N-PDU (PDCP SDU) that would have been expected from the UE by a source system i.e. *UL N-PDU Sequence Number* IE;
- always when available, the radio interface sequence number (PDCP) [17] of the next downlink N-PDU (PDCP SDU) that would have been sent to the UE by a source system i.e. *DL N-PDU Sequence Number* IE.

## 8.13.3 Abnormal Conditions

Not applicable.

# 8.14 SRNS Context Forwarding to Target RNC from CN

## 8.14.1 General

The purpose of this procedure is to transfer SRNS contexts from the CN (PS domain) to the target RNC in case of handover via the CN. The procedure uses connection oriented signalling. SRNS contexts are sent for each referenced RAB, for which at least either GTP-PDU or PDCP sequence numbering is available. The SRNS contexts contain the sequence numbers of the GTP-PDUs next to be transmitted in the uplink and downlink directions, if available, and the next PDCP sequence numbers that would have been used to send and receive data from the UE, if available. Source RNC PDCP context info shall be sent if available.

## 8.14.2 Successful Operation

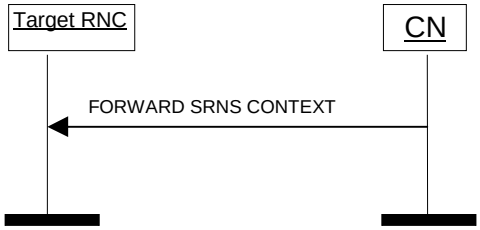


**Figure 2: SRNS Context forwarding to target RNC from CN. Successful operation.**

The CN initialises the procedure by sending FORWARD SRNS CONTEXT message to the target RNC. The FORWARD SRNS CONTEXT message contains the RAB Context information for each referenced RAB. For each RAB the following information shall be included:

- RAB ID
- always when available, the sequence number for the next downlink GTP-PDU to be sent to the UE, and
- always when available, the sequence number for the next uplink GTP-PDU to be tunnelled to the GGSN;
- always when available, the radio interface sequence number (PDCP) [17] of the next uplink N-PDU (PDCP SDU) that would have been expected from the UE by a source system i.e. *UL N-PDU Sequence Number* IE;
- always when available, the radio interface sequence number (PDCP) [17] of the next downlink N-PDU (PDCP SDU) that would have been sent to the UE by a source system i.e. *DL N-PDU Sequence Number* IE.

## 8.14.3 Abnormal Conditions

Not applicable.

## 9.1.22 FORWARD SRNS CONTEXT

This message is sent either by source RNC to the CN or by the CN to target RNC.

Direction: CN → RNC and RNC → CN.

Signalling bearer mode: Connection oriented.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Type | M | | 9.2.1.1 | | YES | ignore |
| **RAB Contexts List** | M | | | | YES | ignore |
| **>RAB Contexts Item IEs** | | 1 to <maxnoofRABs> | | | EACH | ignore |
| >>RAB ID | M | | 9.2.1.2 | | - | |
| >>DL GTP-PDU Sequence Number | O | | 9.2.2.3 | | - | |
| >>UL GTP-PDU Sequence Number | O | | 9.2.2.4 | | - | |
| >>DL N-PDU Sequence Number | O | | 9.2.1.33 | | - | |
| >>UL N-PDU Sequence Number | O | | 9.2.1.34 | | - | |
| Source RNC PDCP context info | O | | 9.2.1.X | | YES | ignore |

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

## 9.1.43 RANAP RELOCATION INFORMATION

This message is part of a special RANAP Relocation Information procedure, and is sent between RNCs during Relocation.

Direction: RNC - RNC.

Signalling bearer mode: Not applicable.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Type | M | | 9.2.1.1 | | YES | ignore |
| **Direct Transfer Information List** | O | | | | YES | ignore |
| **>Direct Transfer Information Item IEs** | | 1 to <maxnoofDT> | | Information received in one or more DIRECT TRANSFER messages and that needs to be transferred to target RNC for further transmission to the UE. | EACH | ignore |
| >>NAS-PDU | M | | 9.2.3.5 | | - | |
| >>SAPI | M | | 9.2.3.8 | | - | |
| >>CN Domain Indicator | M | | 9.2.1.5 | | - | |
| **RAB Contexts List** | O | | | | YES | ignore |
| **>RAB Contexts Item IEs** | | 1 to <maxnoofRABs> | | | EACH | ignore |
| >>RAB ID | M | | 9.2.1.2 | | - | |
| >>DL GTP-PDU Sequence Number | O | | 9.2.2.3 | | - | |
| >>UL GTP-PDU Sequence Number | O | | 9.2.2.4 | | - | |
| >>DL N-PDU Sequence Number | O | | 9.2.1.33 | | - | |
| >>UL N-PDU Sequence Number | O | | 9.2.1.34 | | - | |
| Source RNC PDCP context info | O | | 9.2.1.X | | YES | ignore |

| Range bound | Explanation |
|---|---|
| maxnoofDT | Maximum no. of DT information. Value is 15. |
| maxnoofRABs | Maximum no. of RABs for one UE. Value is 256. |

## 9.2.1 Radio Network Layer Related IEs

Lots of unaffected parts in 9.2.1 not shown

### 9.2.1.53 Non Real-Time Load Information

The *Non Real-Time Load Information* IE indicates the load situation on the cell for the Non Real-Time traffic. Non Real Time traffic corresponds to the Interactive and Background traffic classes.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Non Real Time Load Information | M | | ENUMERATED (Low, Medium, High, Overloaded, ...) | |

### 9.2.1.X Source RNC PDCP context info

The purpose of the *Source RNC PDCP context info* IE is to transfer RNC PDCP context information from source RNC to target RNC during SRNS relocation.

This IE is transparent to CN.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| RRC Container | M | | OCTET STRING | |

## 9.3.3 PDU Definitions

```
-- **************************************************************
--
-- PDU definitions for RANAP.
--
-- **************************************************************

RANAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) ranap (0) version1 (1) ranap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- IE parameter types from other modules.
--
-- **************************************************************

IMPORTS
    BroadcastAssistanceDataDecipheringKeys,
    LocationRelatedDataRequestType,
    DataVolumeReference,
    CellLoadInformation,
    AreaIdentity,
    CN-DomainIndicator,
    Cause,
    CriticalityDiagnostics,
    ChosenEncryptionAlgorithm,
    ChosenIntegrityProtectionAlgorithm,
    ClassmarkInformation2,
    ClassmarkInformation3,
    DL-GTP-PDU-SequenceNumber,
    DL-N-PDU-SequenceNumber,
    DataVolumeReportingIndication,
    DRX-CycleLengthCoefficient,
    EncryptionInformation,
    GlobalCN-ID,
    GlobalRNC-ID,
    IntegrityProtectionInformation,
    InterSystemInformation-TransparentContainer,
    IuSignallingConnectionIdentifier,
    IuTransportAssociation,
    KeyStatus,
    L3-Information,
    LAI,
    LastKnownServiceArea,
    NAS-PDU,
```

```
    NAS-SynchronisationIndicator,
    NewBSS-To-OldBSS-Information,
    NonSearchingIndication,
    NumberOfSteps,
    OMC-ID,
    OldBSS-ToNewBSS-Information,
    PagingAreaID,
    PagingCause,
    PDP-TypeInformation,
    PermanentNAS-UE-ID,
    RAB-ID,
    RAB-Parameters,
    RAC,
    RelocationType,
    RequestType,
    Requested-RAB-Parameter-Values,
    SAI,
    SAPI,
    Service-Handover,
    SourceID,
    SourceRNC-ToTargetRNC-TransparentContainer,
    SourceRNC-PDCP-context-info,
    TargetID,
    TargetRNC-ToSourceRNC-TransparentContainer,
    TemporaryUE-ID,
    TraceReference,
    TraceType,
    UnsuccessfullyTransmittedDataVolume,
    TransportLayerAddress,
    TriggerID,
    UE-ID,
    UL-GTP-PDU-SequenceNumber,
    UL-N-PDU-SequenceNumber,
    UP-ModeVersions,
    UserPlaneMode,
    Alt-RAB-Parameters,
    Ass-RAB-Parameters
FROM RANAP-IEs


    PrivateIE-Container{},
    ProtocolExtensionContainer{},
    ProtocolIE-ContainerList{},
    ProtocolIE-ContainerPair{},
    ProtocolIE-ContainerPairList{},
    ProtocolIE-Container{},
    RANAP-PRIVATE-IES,
    RANAP-PROTOCOL-EXTENSION,
    RANAP-PROTOCOL-IES,
    RANAP-PROTOCOL-IES-PAIR
FROM RANAP-Containers

    maxNrOfDTs,
```

```
    maxNrOfErrors,
    maxNrOfIuSigConIds,
    maxNrOfRABs,
    maxNrOfVol,

    id-AreaIdentity,
    id-Alt-RAB-Parameters,
    id-Ass-RAB-Parameters,
    id-BroadcastAssistanceDataDecipheringKeys,
    id-LocationRelatedDataRequestType,
    id-CN-DomainIndicator,
    id-Cause,
    id-ChosenEncryptionAlgorithm,
    id-ChosenIntegrityProtectionAlgorithm,
    id-ClassmarkInformation2,
    id-ClassmarkInformation3,
    id-CriticalityDiagnostics,
    id-DRX-CycleLengthCoefficient,
    id-DirectTransferInformationItem-RANAP-RelocInf,
    id-DirectTransferInformationList-RANAP-RelocInf,
    id-DL-GTP-PDU-SequenceNumber,
    id-EncryptionInformation,
    id-GlobalCN-ID,
    id-GlobalRNC-ID,
    id-IntegrityProtectionInformation,
    id-InterSystemInformation-TransparentContainer,
    id-IuSigConId,
    id-IuSigConIdItem,
    id-IuSigConIdList,
    id-IuTransportAssociation,
    id-KeyStatus,
    id-L3-Information,
    id-LAI,
    id-LastKnownServiceArea,
    id-NAS-PDU,
    id-NewBSS-To-OldBSS-Information,
    id-NonSearchingIndication,
    id-NumberOfSteps,
    id-OMC-ID,
    id-OldBSS-ToNewBSS-Information,
    id-PagingAreaID,
    id-PagingCause,
    id-PermanentNAS-UE-ID,
    id-RAB-ContextItem,
    id-RAB-ContextList,
    id-RAB-ContextFailedtoTransferItem,
    id-RAB-ContextFailedtoTransferList,
    id-RAB-ContextItem-RANAP-RelocInf,
    id-RAB-ContextList-RANAP-RelocInf,
    id-RAB-DataForwardingItem,
    id-RAB-DataForwardingItem-SRNS-CtxReq,
    id-RAB-DataForwardingList,
    id-RAB-DataForwardingList-SRNS-CtxReq,
```

```
    id-RAB-DataVolumeReportItem,
    id-RAB-DataVolumeReportList,
    id-RAB-DataVolumeReportRequestItem,
    id-RAB-DataVolumeReportRequestList,
    id-RAB-FailedItem,
    id-RAB-FailedList,
    id-RAB-FailedtoReportItem,
    id-RAB-FailedtoReportList,
    id-RAB-ID,
    id-RAB-ModifyList,
    id-RAB-ModifyItem,
    id-RAB-QueuedItem,
    id-RAB-QueuedList,
    id-RAB-ReleaseFailedList,
    id-RAB-ReleaseItem,
    id-RAB-ReleasedItem-IuRelComp,
    id-RAB-ReleaseList,
    id-RAB-ReleasedItem,
    id-RAB-ReleasedList,
    id-RAB-ReleasedList-IuRelComp,
    id-RAB-RelocationReleaseItem,
    id-RAB-RelocationReleaseList,
    id-RAB-SetupItem-RelocReq,
    id-RAB-SetupItem-RelocReqAck,
    id-RAB-SetupList-RelocReq,
    id-RAB-SetupList-RelocReqAck,
    id-RAB-SetupOrModifiedItem,
    id-RAB-SetupOrModifiedList,
    id-RAB-SetupOrModifyItem,
    id-RAB-SetupOrModifyList,
    id-RAC,
    id-RelocationType,
    id-RequestType,
    id-SAI,
    id-SAPI,
    id-SourceID,
    id-SourceRNC-ToTargetRNC-TransparentContainer,
    id-SourceRNC-PDCP-context-info,
    id-TargetID,
    id-TargetRNC-ToSourceRNC-TransparentContainer,
    id-TemporaryUE-ID,
    id-TraceReference,
    id-TraceType,
    id-TransportLayerAddress,
    id-TriggerID,
    id-UE-ID,
    id-UL-GTP-PDU-SequenceNumber
FROM RANAP-Constants;
```

Lots of unaffected ASN1 in 9.3.3 not shown

```
-- **************************************************************
--
-- FORWARD SRNS CONTEXT ELEMENTARY PROCEDURE
--
-- **************************************************************

-- **************************************************************
--
-- Forward SRNS Context
--
-- **************************************************************

ForwardSRNS-Context ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container       { {ForwardSRNS-ContextIEs} },
    protocolExtensions      ProtocolExtensionContainer { {ForwardSRNS-ContextExtensions} }          OPTIONAL,
    ...
}

ForwardSRNS-ContextIEs RANAP-PROTOCOL-IES ::= {
    { ID id-RAB-ContextList             CRITICALITY ignore  TYPE RAB-ContextList               PRESENCE mandatory  },
    ...
}

ForwardSRNS-ContextExtensions RANAP-PROTOCOL-EXTENSION ::= {
    { ID id-SourceRNC-PDCP-context-info     CRITICALITY ignore  EXTENSION RRC-Container PRESENCE optional},
    ...
}
```

Lots of unaffected ASN1 in 9.3.3 not shown

```
-- **************************************************************
--
-- RANAP RELOCATION INFORMATION ELEMENTARY PROCEDURE
--
-- **************************************************************

RANAP-RelocationInformation ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container       { {RANAP-RelocationInformationIEs} },
    protocolExtensions      ProtocolExtensionContainer { {RANAP-RelocationInformationExtensions} }        OPTIONAL,
    ...
}

RANAP-RelocationInformationIEs RANAP-PROTOCOL-IES ::= {
    { ID id-DirectTransferInformationList-RANAP-RelocInf
                            CRITICALITY ignore  TYPE DirectTransferInformationList-RANAP-RelocInf
                                                PRESENCE optional   } |
    { ID id-RAB-ContextList-RANAP-RelocInf      CRITICALITY ignore  TYPE RAB-ContextList-RANAP-RelocInf    PRESENCE optional },
    ...
}

DirectTransferInformationList-RANAP-RelocInf        ::= DirectTransfer-IE-ContainerList { {DirectTransferInformationItemIEs-RANAP-RelocInf} }
```

```
DirectTransferInformationItemIEs-RANAP-RelocInf RANAP-PROTOCOL-IES ::= {
    { ID id-DirectTransferInformationItem-RANAP-RelocInf
                            CRITICALITY ignore  TYPE DirectTransferInformationItem-RANAP-RelocInf
                                                                PRESENCE mandatory  },
    ...
}

DirectTransferInformationItem-RANAP-RelocInf ::= SEQUENCE {
    nAS-PDU                     NAS-PDU,
    sAPI                        SAPI,
    cN-DomainIndicator          CN-DomainIndicator,
    iE-Extensions                   ProtocolExtensionContainer { {RANAP-DirectTransferInformationItem-ExtIEs-RANAP-RelocInf} }       OPTIONAL,
    ...
}

RANAP-DirectTransferInformationItem-ExtIEs-RANAP-RelocInf RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

RAB-ContextList-RANAP-RelocInf              ::= RAB-IE-ContainerList { {RAB-ContextItemIEs-RANAP-RelocInf} }

RAB-ContextItemIEs-RANAP-RelocInf RANAP-PROTOCOL-IES ::= {
    { ID id-RAB-ContextItem-RANAP-RelocInf      CRITICALITY ignore  TYPE RAB-ContextItem-RANAP-RelocInf      PRESENCE mandatory   },
    ...
}

RAB-ContextItem-RANAP-RelocInf ::= SEQUENCE {
    rAB-ID              RAB-ID,
    dl-GTP-PDU-SequenceNumber           DL-GTP-PDU-SequenceNumber   OPTIONAL,
    ul-GTP-PDU-SequenceNumber           UL-GTP-PDU-SequenceNumber   OPTIONAL,
    dl-N-PDU-SequenceNumber             DL-N-PDU-SequenceNumber     OPTIONAL,
    ul-N-PDU-SequenceNumber             UL-N-PDU-SequenceNumber     OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RAB-ContextItem-ExtIEs-RANAP-RelocInf} }      OPTIONAL,
    ...
}

RAB-ContextItem-ExtIEs-RANAP-RelocInf RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

RANAP-RelocationInformationExtensions RANAP-PROTOCOL-EXTENSION ::= {
    { ID id-SourceRNC-PDCP-context-info     CRITICALITY ignore  EXTENSION RRC-Container PRESENCE optional},
    ...
}
```

Lots of unaffected ASN1 in 9.3.3 not shown

## 9.3.6 Constant Definitions

```
-- **************************************************************
--
-- Constant definitions
--
-- **************************************************************

RANAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) ranap (0) version1 (1) ranap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

Lots of unaffected ASN1 in 9.3.6 not shown

```
-- **************************************************************
--
-- IEs
--
-- **************************************************************

id-AreaIdentity                                INTEGER ::= 0
id-CN-DomainIndicator                          INTEGER ::= 3
id-Cause                                       INTEGER ::= 4
id-ChosenEncryptionAlgorithm                   INTEGER ::= 5
id-ChosenIntegrityProtectionAlgorithm          INTEGER ::= 6
id-ClassmarkInformation2                       INTEGER ::= 7
id-ClassmarkInformation3                       INTEGER ::= 8
id-CriticalityDiagnostics                      INTEGER ::= 9
id-DL-GTP-PDU-SequenceNumber                   INTEGER ::= 10
id-EncryptionInformation                       INTEGER ::= 11
id-IntegrityProtectionInformation              INTEGER ::= 12
id-IuTransportAssociation                      INTEGER ::= 13
id-L3-Information                              INTEGER ::= 14
id-LAI                                         INTEGER ::= 15
id-NAS-PDU                                     INTEGER ::= 16
id-NonSearchingIndication                      INTEGER ::= 17
id-NumberOfSteps                               INTEGER ::= 18
id-OMC-ID                                      INTEGER ::= 19
id-OldBSS-ToNewBSS-Information                 INTEGER ::= 20
id-PagingAreaID                                INTEGER ::= 21
id-PagingCause                                 INTEGER ::= 22
id-PermanentNAS-UE-ID                          INTEGER ::= 23
id-RAB-ContextItem                             INTEGER ::= 24
id-RAB-ContextList                             INTEGER ::= 25
id-RAB-DataForwardingItem                      INTEGER ::= 26
id-RAB-DataForwardingItem-SRNS-CtxReq          INTEGER ::= 27
id-RAB-DataForwardingList                      INTEGER ::= 28
```

```
id-RAB-DataForwardingList-SRNS-CtxReq           INTEGER ::= 29
id-RAB-DataVolumeReportItem                     INTEGER ::= 30
id-RAB-DataVolumeReportList                     INTEGER ::= 31
id-RAB-DataVolumeReportRequestItem              INTEGER ::= 32
id-RAB-DataVolumeReportRequestList              INTEGER ::= 33
id-RAB-FailedItem                               INTEGER ::= 34
id-RAB-FailedList                               INTEGER ::= 35
id-RAB-ID                                       INTEGER ::= 36
id-RAB-QueuedItem                               INTEGER ::= 37
id-RAB-QueuedList                               INTEGER ::= 38
id-RAB-ReleaseFailedList                        INTEGER ::= 39
id-RAB-ReleaseItem                              INTEGER ::= 40
id-RAB-ReleaseList                              INTEGER ::= 41
id-RAB-ReleasedItem                             INTEGER ::= 42
id-RAB-ReleasedList                             INTEGER ::= 43
id-RAB-ReleasedList-IuRelComp                   INTEGER ::= 44
id-RAB-RelocationReleaseItem                    INTEGER ::= 45
id-RAB-RelocationReleaseList                    INTEGER ::= 46
id-RAB-SetupItem-RelocReq                       INTEGER ::= 47
id-RAB-SetupItem-RelocReqAck                    INTEGER ::= 48
id-RAB-SetupList-RelocReq                       INTEGER ::= 49
id-RAB-SetupList-RelocReqAck                    INTEGER ::= 50
id-RAB-SetupOrModifiedItem                      INTEGER ::= 51
id-RAB-SetupOrModifiedList                      INTEGER ::= 52
id-RAB-SetupOrModifyItem                        INTEGER ::= 53
id-RAB-SetupOrModifyList                        INTEGER ::= 54
id-RAC                                          INTEGER ::= 55
id-RelocationType                               INTEGER ::= 56
id-RequestType                                  INTEGER ::= 57
id-SAI                                          INTEGER ::= 58
id-SAPI                                         INTEGER ::= 59
id-SourceID                                     INTEGER ::= 60
id-SourceRNC-ToTargetRNC-TransparentContainer   INTEGER ::= 61
id-TargetID                                     INTEGER ::= 62
id-TargetRNC-ToSourceRNC-TransparentContainer   INTEGER ::= 63
id-TemporaryUE-ID                               INTEGER ::= 64
id-TraceReference                               INTEGER ::= 65
id-TraceType                                    INTEGER ::= 66
id-TransportLayerAddress                        INTEGER ::= 67
id-TriggerID                                    INTEGER ::= 68
id-UE-ID                                        INTEGER ::= 69
id-UL-GTP-PDU-SequenceNumber                    INTEGER ::= 70
id-RAB-FailedtoReportItem                       INTEGER ::= 71
id-RAB-FailedtoReportList                       INTEGER ::= 72
id-KeyStatus                                    INTEGER ::= 75
id-DRX-CycleLengthCoefficient                   INTEGER ::= 76
id-IuSigConIdList                               INTEGER ::= 77
id-IuSigConIdItem                               INTEGER ::= 78
id-IuSigConId                                   INTEGER ::= 79
id-DirectTransferInformationItem-RANAP-RelocInf INTEGER ::= 80
id-DirectTransferInformationList-RANAP-RelocInf INTEGER ::= 81
id-RAB-ContextItem-RANAP-RelocInf               INTEGER ::= 82
id-RAB-ContextList-RANAP-RelocInf               INTEGER ::= 83
```

```
id-RAB-ContextFailedtoTransferItem              INTEGER ::= 84
id-RAB-ContextFailedtoTransferList              INTEGER ::= 85
id-GlobalRNC-ID                                 INTEGER ::= 86
id-RAB-ReleasedItem-IuRelComp                   INTEGER ::= 87
id-MessageStructure                             INTEGER ::= 88
id-Alt-RAB-Parameters                           INTEGER ::= 89
id-Ass-RAB-Parameters                           INTEGER ::= 90
id-RAB-ModifyList                               INTEGER ::= 91
id-RAB-ModifyItem                               INTEGER ::= 92
id-TypeOfError                                  INTEGER ::= 93
id-BroadcastAssistanceDataDecipheringKeys       INTEGER ::= 94
id-LocationRelatedDataRequestType               INTEGER ::= 95
id-GlobalCN-ID                                  INTEGER ::= 96
id-LastKnownServiceArea                         INTEGER ::= 97
id-InterSystemInformation-TransparentContainer  INTEGER ::= 98
id-NewBSS-To-OldBSS-Information                 INTEGER ::= 99
id-DownlinkCellLoadInformation                  INTEGER ::= 100
id-UplinkCellLoadInformation                    INTEGER ::= 101
id-SourceRNC-PDCP-context-info                  INTEGER ::= xx

END
```

# 11.2 RANAP Relocation Information

## 11.2.1 General

The purpose of the RANAP Relocation Information procedure is to handle the RANAP related information that is carried transparently during relocation from source RNC to target RNC by RNSAP via Iur Interface.

## 11.2.2 Operation

When during relocation it becomes necessary in the source RNC to generate RANAP information for transfer to the relocation target, the RNC shall form a RANAP RELOCATION INFORMATION message. The message shall be encoded according to the encoding rules specified for RANAP in the similar manner as for the normal RANAP messages. The outcome of the encoding will be an octet string, which shall not be sent to the CN via the Iu Interface, but it shall be given to the appropriate local process for transparent transfer to the target RNC.

When the RANAP process in the target RNC receives an octet string containing RANAP RELOCATION INFORMATION message that had been transparently transferred from the source RNC, it shall decode it according to the encoding rules specified for RANAP. This process is similar to receiving any normal RANAP message. The decoded information shall be passed to the appropriate processes in the RNC.

The RANAP RELOCATION INFORMATION message may contain the *Direct Transfer Information List* IE, ~~and~~ the *RAB Contexts List* IE and the *Source RNC PDCP context info* IE. If present, the *Direct Transfer Information List* IE shall contain the *NAS-PDU* IE, the *SAPI* IE and the *CN Domain Indicator* IE. If present, the *RAB Contexts List* IE shall contain for each addressed RAB the *RAB ID* IE and, if available, the *DL GTP-PDU Sequence Number* IE, the *UL GTP-PDU Sequence Number* IE, the *DL N-PDU Sequence Number* IE or the *UL N-PDU Sequence Number* IE.