

**TSG RAN Meeting #16  
Biarritz, France  
3rd-6th September 2002**

**RP-020654**

**Title** CRs (R'99 and Rel-4/Rel-5 Category A) to TS 25.331  
**Source** Alcatel, Fujitsu  
**Agenda Item** X.X.X

<b>RAN2 Tdoc</b>	<b>Spec</b>	<b>Curr Ver</b>	<b>New Ver</b>	<b>CR</b>	<b>R</b>	<b>Cat</b>	<b>Ph</b>	<b>Title</b>	<b>Acronym</b>
	25.331	3.b.0	3.c.0	1609	1	F	R99	Clarification of SRNS Relocation Info	TEI
	25.331	4.5.0	4.6.0	1610	1	A	Rel-4	Clarification of SRNS Relocation Info	TEI
	25.331	5.1.0	5.2.0	1611	1	A	Rel-5	Clarification of SRNS Relocation Info	TEI

## CHANGE REQUEST

# **TS 25.331 CR 1609** # rev **1** # Current version: **3.11.0** #

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

**Proposed change affects:** UICC apps#  ME  Radio Access Network  Core Network

<b>Title:</b>	# Clarification of SRNS Relocation Info		
<b>Source:</b>	# Alcatel, Fujitsu Ltd.		
<b>Work item code:</b>	# TEI	<b>Date:</b>	# 20/08/2002
<b>Category:</b>	# <b>F</b>	<b>Release:</b>	# R99
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)	2	(GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)	R96	(Release 1996)
	<b>B</b> (addition of feature),	R97	(Release 1997)
	<b>C</b> (functional modification of feature)	R98	(Release 1998)
	<b>D</b> (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Rel-4	(Release 4)
		Rel-5	(Release 5)
		Rel-6	(Release 6)

<b>Reason for change:</b>	# 1. The parameter value "await RB Release Complete" is not included in ASN.1 of SRNS Relocation Info although it is included in the tabular. This value would be needed when RB release procedure is used to switch the UE to CELL_FACH and trigger SRNS relocation upon the following cell update message.
	2. With the current standard in the IE "SRNS Relocation info" in the list "Cipherring info per radio bearer" there should be an IE "RB Id" giving the RB identity of the radio bearer for which this information is valid.
<b>Summary of change:</b>	# 1. The parameter value "awaitRRC-ConnectionRe-establishmentComplete" is redefined as "awaitRB-ReleaseComplete"
	2. It is clarified that the order of occurrence of the IE "Cipherring info per radio bearer" in the "SRNS Relocation Info" IE is the same as in the IE "Signalling RB information list" and the RBs in the IE "RAB information list". The signalling RBs are supposed to be listed first. Only UM and AM RBs that are ciphpered are supposed to be listed.
	Changes in the first revision are highlighted in blue
	<b>Isolated Impact analysis</b>
	No impact on a UE implementations because neither procedure nor parameter related to UE is changed.
	It would not have any impact on UTRAN implementations behaving like specified in this CR, a UTRAN implementation that does not behave according this CR may not be able to succeed this type of relocation when the UE is switched to CELL_FACH.
<b>Consequences if not approved:</b>	# SRNS Relocation in CELL_FACH triggered by a RB Release will not work.

<b>Clauses affected:</b>	⌘	11.5, 14.12.4.2										
<b>Other specs affected:</b>	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
		Y	N									
		<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
Test specifications												
O&M Specifications												
<b>Other comments:</b>	⌘											

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.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://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

## 11.5 RRC information between network nodes

```

Internode-definitions DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS

    HandoverToUTRANCommand,
    MeasurementReport,
    PhysicalChannelReconfiguration,
    RadioBearerReconfiguration,
    RadioBearerRelease,
    RadioBearerSetup,
    RRC-FailureInfo,
    TransportChannelReconfiguration
FROM PDU-definitions

-- Core Network IEs :
    CN-DomainIdentity,
    CN-DomainInformationList,
    CN-DRX-CycleLengthCoefficient,
    NAS-SystemInformationGSM-MAP,
-- UTRAN Mobility IEs :
    CellIdentity,
    URA-Identity,
-- User Equipment IEs :
    C-RNTI,
    DL-PhysChCapabilityFDD-v380ext,
    FailureCauseWithProtErr,
    RRC-MessageSequenceNumber,
    STARTList,
    STARTSingle,
    START-Value,
    U-RNTI,
    UE-RadioAccessCapability,
    UE-RadioAccessCapability-v370ext,
    UE-RadioAccessCapability-v380ext,
    UE-RadioAccessCapability-v3a0ext,
-- Radio Bearer IEs :
    PredefinedConfigStatusList,
    PredefinedConfigValueTag,
    RAB-InformationSetupList,
    RB-Identity,
    SRB-InformationSetupList,
-- Transport Channel IEs :
    CPCH-SetID,
    DL-CommonTransChInfo,
    DL-AddReconfTransChInfoList,
    DRAC-StaticInformationList,
    UL-CommonTransChInfo,
    UL-AddReconfTransChInfoList,
-- Measurement IEs :
    MeasurementIdentity,
    MeasurementReportingMode,
    MeasurementType,
    AdditionalMeasurementID-List,
    PositionEstimate,
-- Other IEs :
    InterRAT-UE-RadioAccessCapabilityList
FROM InformationElements

    maxCNdomains,
    maxNoOfMeas,
    maxRB,
    maxSRBsetup
FROM Constant-definitions;

-- Part 1: Class definitions similar to what has been defined in 11.1 for RRC messages
-- Information that is tranferred in the same direction and across the same path is grouped
-- *****
--
-- RRC information, to target RNC
--

```

```

-- *****
-- RRC Information to target RNC sent either from source RNC or from another RAT

ToTargetRNC-Container ::= CHOICE {
    interRATHandover          InterRATHandoverInfoWithInterRATCapabilities,
    srncRelocation            SRNC-RelocationInfo,
    extension                  NULL
}

-- *****
--
-- RRC information, target RNC to source RNC
--
-- *****

TargetRNC-ToSourceRNC-Container ::= CHOICE {
    radioBearerSetup          RadioBearerSetup,
    radioBearerReconfiguration RadioBearerReconfiguration,
    radioBearerRelease        RadioBearerRelease,
    transportChannelReconfiguration TransportChannelReconfiguration,
    physicalChannelReconfiguration PhysicalChannelReconfiguration,
    rrc-FailureInfo           RRC-FailureInfo,
    extension                  NULL
}

-- Part2: Container definitions, similar to the PDU definitions in 11.2 for RRC messages
-- In alphabetical order

-- *****
--
-- Handover to UTRAN information
--
-- *****

InterRATHandoverInfoWithInterRATCapabilities ::= CHOICE {
    r3          SEQUENCE {
        -- IE InterRATHandoverInfoWithInterRATCapabilities-r3-IEs also
        -- includes non critical extensions
        interRATHandoverInfo-r3          InterRATHandoverInfoWithInterRATCapabilities-r3-IEs,
        v390NonCriticalExtensions        SEQUENCE {
            interRATHandoverInfoWithInterRATCapabilities-v390ext
        }
        InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs,
        -- Reserved for future non critical extension
        nonCriticalExtensions            SEQUENCE {} OPTIONAL
    }
    },
    criticalExtensions                  SEQUENCE {}
}

InterRATHandoverInfoWithInterRATCapabilities-r3-IEs ::= SEQUENCE {
    -- The order of the IEs may not reflect the tabular format
    -- but has been chosen to simplify the handling of the information in the BSC
    -- Other IEs
    ue-RATSpecificCapability            InterRAT-UE-RadioAccessCapabilityList OPTIONAL,
    -- interRATHandoverInfo, Octet string is used to obtain 8 bit length field prior to
    -- actual information. This makes it possible for BSS to transparently handle information
    -- received via GSM air interface even when it includes non critical extensions.
    -- The octet string shall include the InterRATHandoverInfo information
    -- The BSS can re-use the 04.18 length field received from the MS
    interRATHandoverInfo                OCTET STRING (SIZE (0..255))
}

InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs ::= SEQUENCE {
    -- User equipment IEs
    failureCauseWithProtErr             FailureCauseWithProtErr             OPTIONAL
}

-- *****
--
-- SRNC Relocation information
--
-- *****

SRNC-RelocationInfo ::= CHOICE {
    r3          SEQUENCE {
        srnc-RelocationInfo-r3          SRNC-RelocationInfo-r3-IEs,

```

```

v380NonCriticalExtensions          SEQUENCE {
  SRNC-RelocationInfo-v380ext SRNC-RelocationInfo-v380ext-IEs,
  -- Reserved for future non critical extension
v390NonCriticalExtensions          SEQUENCE {
  SRNC-RelocationInfo-v390ext SRNC-RelocationInfo-v390ext-IEs,
  v3a0NonCriticalExtensions        SEQUENCE {
    SRNC-RelocationInfo-v3a0ext SRNC-RelocationInfo-v3a0ext-IEs,
    v3b0NonCriticalExtensions      SEQUENCE {
      SRNC-RelocationInfo-v3b0ext SRNC-RelocationInfo-v3b0ext-IEs,
      -- Reserved for future non critical extension
      nonCriticalExtensions        SEQUENCE {} OPTIONAL
    } OPTIONAL
  } OPTIONAL
} OPTIONAL
},
criticalExtensions                SEQUENCE {}
}

SRNC-RelocationInfo-r3-IEs ::= SEQUENCE {
  -- Non-RRC IEs
  stateOfRRC                      StateOfRRC,
  stateOfRRC-Procedure             StateOfRRC-Procedure,
  -- Ciphering related information IEs
  -- If the extension v380 is included use the extension for the ciphering status per CN domain
  cipheringStatus                 CipheringStatus,
  calculationTimeForCiphering     CalculationTimeForCiphering          OPTIONAL,
  cipheringInfoPerRB-List         CipheringInfoPerRB-List              OPTIONAL,
  count-C-List                   COUNT-C-List                        OPTIONAL,
  integrityProtectionStatus       IntegrityProtectionStatus,
  srb-SpecificIntegrityProtInfo   SRB-SpecificIntegrityProtInfoList,
  implementationSpecificParams    ImplementationSpecificParams        OPTIONAL,
  -- User equipment IEs
  u-RNTI                          U-RNTI,
  c-RNTI                          C-RNTI                              OPTIONAL,
  ue-RadioAccessCapability        UE-RadioAccessCapability,
  ue-Positioning-LastKnownPos     UE-Positioning-LastKnownPos         OPTIONAL,
  -- Other IEs
  ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity                    URA-Identity                        OPTIONAL,
  -- Core network IEs
  cn-CommonGSM-MAP-NAS-SysInfo   NAS-SystemInformationGSM-MAP,
  cn-DomainInformationList       CN-DomainInformationList           OPTIONAL,
  -- Measurement IEs
  ongoingMeasRepList             OngoingMeasRepList                OPTIONAL,
  -- Radio bearer IEs
  predefinedConfigStatusList     PredefinedConfigStatusList,
  srb-InformationList            SRB-InformationSetupList,
  rab-InformationList            RAB-InformationSetupList           OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo          UL-CommonTransChInfo              OPTIONAL,
  ul-TransChInfoList            UL-AddReconfTransChInfoList       OPTIONAL,
  modeSpecificInfo              CHOICE {
    fdd                          SEQUENCE {
      cpch-SetID                 CPCH-SetID                       OPTIONAL,
      transChDRAC-Info           DRAC-StaticInformationList       OPTIONAL
    },
    tdd                          NULL
  },
  dl-CommonTransChInfo          DL-CommonTransChInfo              OPTIONAL,
  dl-TransChInfoList            DL-AddReconfTransChInfoList       OPTIONAL,
  -- Measurement report
  measurementReport              MeasurementReport                  OPTIONAL
}

SRNC-RelocationInfo-v380ext-IEs ::= SEQUENCE {
  -- Ciphering related information IEs
  cn-DomainIdentity              CN-DomainIdentity,
  cipheringStatusList            CipheringStatusList
}

SRNC-RelocationInfo-v390ext-IEs ::= SEQUENCE {
  cn-DomainInformationList-v390ext CN-DomainInformationList-v390ext  OPTIONAL,
  ue-RadioAccessCapability-v370ext UE-RadioAccessCapability-v370ext  OPTIONAL,
  ue-RadioAccessCapability-v380ext UE-RadioAccessCapability-v380ext  OPTIONAL,
  dl-PhysChCapabilityFDD-v380ext   DL-PhysChCapabilityFDD-v380ext,
  failureCauseWithProtErr         FailureCauseWithProtErr           OPTIONAL
}

```

```

}

SRNC-RelocationInfo-v3a0ext-IEs ::= SEQUENCE {
    cipheringInfoForSRB1-v3a0ext      CipheringInfoPerRB-List-v3a0ext,
    ue-RadioAccessCapability-v3a0ext  UE-RadioAccessCapability-v3a0ext  OPTIONAL,
    -- cn-domain identity for IE startValueForCiphering-v3a0ext is specified
    -- in subsequent extension (SRNC-RelocationInfo-v3b0ext-IEs)
    startValueForCiphering-v3a0ext    START-Value
}

SRNC-RelocationInfo-v3b0ext-IEs ::= SEQUENCE {
    -- cn-domain identity for IE startValueForCiphering-v3a0ext included in previous extension
    cn-DomainIdentity                CN-DomainIdentity,
    -- the remaining start values are contained in IE startValueForCiphering-v3b0ext
    startValueForCiphering-v3b0ext    STARTList2                OPTIONAL
}

STARTList2 ::=
    SEQUENCE (SIZE (2..maxCNdomains)) OF
        STARTSingle

CipheringInfoPerRB-List-v3a0ext ::= SEQUENCE {
    dl-UM-SN                          BIT STRING (SIZE (7))
}

CipheringStatusList ::=
    SEQUENCE (SIZE (1..maxCNdomains)) OF
        CipheringStatusCNdomain

CipheringStatusCNdomain ::=
    SEQUENCE {
        cn-DomainIdentity              CN-DomainIdentity,
        cipheringStatus                CipheringStatus
    }

-- IE definitions

CalculationTimeForCiphering ::=
    SEQUENCE {
        cell-Id                        CellIdentity,
        sfn                             INTEGER (0..4095)
    }

CipheringInfoPerRB ::=
    SEQUENCE {
        dl-HFN                          BIT STRING (SIZE (20..25)),
        ul-HFN                          BIT STRING (SIZE (20..25))
    }

-- TABULAR: CipheringInfoPerRB-List, multiplicity value numberOfRadioBearers
-- has been replaced with maxRB.
-- The order of occurrence of the IE "Ciphering info per radio bearer" in the
-- "SRNS Relocation Info" IE is the same as in the IE "Signalling RB information
-- list" and the RBs in the IE "RAB information list". The signalling RBs are supposed
-- to be listed first. Only UM and AM RBs that are ciphered are listed here
CipheringInfoPerRB-List ::=
    SEQUENCE (SIZE (1..maxRB)) OF
        CipheringInfoPerRB

CipheringStatus ::=
    ENUMERATED {
        started, notStarted }

CN-DomainInformation-v390ext ::=
    SEQUENCE {
        cn-DRX-CycleLengthCoeff        CN-DRX-CycleLengthCoefficient
    }

CN-DomainInformationList-v390ext ::=
    SEQUENCE (SIZE (1..maxCNdomains)) OF
        CN-DomainInformation-v390ext

COUNT-C-List ::=
    SEQUENCE (SIZE (1..maxCNdomains)) OF
        COUNT-CSingle

COUNT-CSingle ::=
    SEQUENCE {
        cn-DomainIdentity              CN-DomainIdentity,
        count-C                        BIT STRING (SIZE (32))
    }

ImplementationSpecificParams ::=
    BIT STRING (SIZE (1..512))

IntegrityProtectionStatus ::=
    ENUMERATED {
        started, notStarted }

```

```

MeasurementCommandWithType ::= CHOICE {
    setup                MeasurementType,
    modify               NULL,
    release              NULL
}

OngoingMeasRep ::= SEQUENCE {
    measurementIdentity      MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType
    measurementCommandWithType MeasurementCommandWithType,
    measurementReportingMode  MeasurementReportingMode          OPTIONAL,
    additionalMeasurementID-List AdditionalMeasurementID-List  OPTIONAL
}

OngoingMeasRepList ::= SEQUENCE (SIZE (1..maxNoOfMeas)) OF
    OngoingMeasRep

SRB-SpecificIntegrityProtInfo ::= SEQUENCE {
    ul-RRC-HFN                BIT STRING (SIZE (28)),
    dl-RRC-HFN                BIT STRING (SIZE (28)),
    ul-RRC-SequenceNumber     RRC-MessageSequenceNumber,
    dl-RRC-SequenceNumber     RRC-MessageSequenceNumber
}

SRB-SpecificIntegrityProtInfoList ::= SEQUENCE (SIZE (4..maxSRBsetup)) OF
    SRB-SpecificIntegrityProtInfo

StateOfRRC ::= ENUMERATED {
    cell-DCH, cell-FACH,
    cell-PCH, ura-PCH }

StateOfRRC-Procedure ::= ENUMERATED {
    awaitNoRRC-Message,
    awaitRB-ReleaseCompleteawaitRRC-ConnectionRe-
    establishmentComplete,
    awaitRB-SetupComplete,
    awaitRB-ReconfigurationComplete,
    awaitTransportCH-ReconfigurationComplete,
    awaitPhysicalCH-ReconfigurationComplete,
    awaitActiveSetUpdateComplete,
    awaitHandoverComplete,
    sendCellUpdateConfirm,
    sendUraUpdateConfirm,
    dummySendRrcConnectionReestablishment,
    otherStates
}

UE-Positioning-LastKnownPos ::= SEQUENCE {
    sfn                INTEGER (0..4095),
    cell-id            CellIdentity,
    positionEstimate   PositionEstimate
}

END

```



## 14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation.

Direction: source RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
<b>Non RRC IEs</b>				
>State of RRC	MP		RRC state indicator, 10.3.3.35a	
>State of RRC procedure	MP		Enumerated (await no RRC message, <del>Complete</del> , await RB Release <del>Complete</del> , await RB Setup Complete, await RB Reconfiguration Complete, <del>await RB Release Complete</del> , await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)	
<b>Ciphering related information</b>				
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>		
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>Ciphering status	MP		Enumerated( Not started, Started)	
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
>Latest configured CN domain	MP		CN domain identity 10.3.1.1	Value contained in the variable of the same name.
>Calculation time for ciphering related information	CV- <i>Ciphering</i>			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call
>>SFN	MP		Integer(0..4095)	
>COUNT-C list	CV- <i>Ciphering</i>	1 to <maxCNdo mains>		COUNT-C values for radio bearers using transparent mode RLC
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>COUNT-C	MP		Bit string(32)	
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.
>>RB identity	MP		RB identity 10.3.4.16	
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
>>Downlink SN	CV- <i>SRB1</i>		Bit String(7)	VT(US) of RLC UM
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
<b>Integrity protection related information</b>				
>Integrity protection status	MP		Enumerated( Not started, Started)	
>Signalling radio bearer specific integrity protection information	CV- <i>IP</i>	4 to <maxSRBs etup>		
>>Uplink RRC HFN	MP		Bit string (28)	
>>Downlink RRC HFN	MP		Bit string (28)	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	
>Implementation specific parameters	OP		Bit string (1..512)	
<b>RRC IEs</b>				
<b>UE Information elements</b>				
>U-RNTI	MP		U-RNTI 10.3.3.47	
>C-RNTI	OP		C-RNTI 10.3.3.8	
>UE radio access Capability	MP		UE radio access capability 10.3.3.42	
>UE radio access capability extension	OP		UE radio access capability extension	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.3.3.42a	
>Last known UE position	OP			
>>SFN	MP		Integer (0..4095)	Time when position was estimated
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.
>>>CHOICE <i>Position estimate</i>	MP			
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a	
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d	
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e	
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b	
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c	
<b>Other Information elements</b>				
>UE system specific capability	OP	1 to <maxSystemCapability>		
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7	
<b>UTRAN Mobility Information elements</b>				
>URA Identifier	OP		URA identity 10.3.2.6	
<b>CN Information Elements</b>				
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9	
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain
>>CN domain identity	MP			
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9	
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
<b>Measurement Related Information elements</b>				
>For each ongoing measurement reporting	OP	1 to <MaxNoOf Meas>		
>>Measurement Identity	MP		Measurement identity 10.3.7.48	
>>Measurement Command	MP		Measurement command 10.3.7.46	
>>Measurement Type	<i>CV-Setup</i>		Measurement type 10.3.7.50	
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49	
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1	
>>CHOICE <i>Measurement</i>	OP			
>>>Intra-frequency				
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33	
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38	
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity 10.3.7.41	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-frequency				
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13	
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measurement	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			t quantity 10.3.7.18	
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-RAT				
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23	
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29	
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Traffic Volume				
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70	
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.3.7.71	
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Traffic volume measurement reporting criteria			Traffic volume measurement reporting criteria 10.3.7.72	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>>Quality				
>>>>Quality measurement Object	OP		Quality measurement object	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>>UE internal				
>>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79	
>>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>>UE positioning				
>>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110	
>>>>>Periodical reporting			Periodical	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			reporting criteria 10.3.7.53	
>>>>No reporting				
<b>Radio Bearer Information Elements</b>				
>Predefined configuration status information	OP		Predefined configuration status information 10.3.4.5a	
>Signalling RB information list	MP	1 to <maxSRBs etup>		For each signalling radio bearer
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24	
>RAB information list	OP	1 to <maxRABs etup>		Information for each RAB
>>RAB information	MP		RAB information to setup 10.3.4.10	
<b>Transport Channel Information Elements</b>				
<b>Uplink transport channels</b>				
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24	
>UL transport channel information list	OP	1 to <MaxTrCH >		
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2	
>CHOICE <i>mode</i>	OP			
>>FDD				
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5	
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH >		
>>>>DRAC static information	MP		DRAC static information 10.3.5.7	
>>TDD				(no data)
<b>Downlink transport channels</b>				
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6	
>DL transport channel	OP	1 to		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
information list		<MaxTrCH >		
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1	
>Measurement report	OP		MEASUREMENT REPORT 10.2.17	
<b>Other Information elements</b>				
Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)
Protocol error information	CV-ProtErr		Protocol error information 10.3.8.12	

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
<i>Setup</i>	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
<i>Ciphering</i>	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
<i>IP</i>	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
<i>ProtErr</i>	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
<i>SRB1</i>	The IE is mandatory present for RB1. Otherwise it is not needed.



## CHANGE REQUEST

# **TS 25.331 CR 1610** # rev **1** # Current version: **4.5.0** #

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

**Proposed change affects:** UICC apps#  ME  Radio Access Network  Core Network

<b>Title:</b>	# Clarification of SRNS Relocation Info		
<b>Source:</b>	# Alcatel, Fujitsu Ltd.		
<b>Work item code:</b>	# TEI	<b>Date:</b>	# 20/08/2002
<b>Category:</b>	# <b>A</b>	<b>Release:</b>	# Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)
	<b>B</b> (addition of feature),		R97 (Release 1997)
	<b>C</b> (functional modification of feature)		R98 (Release 1998)
	<b>D</b> (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

<b>Reason for change:</b>	# 1. The parameter value "await RB Release Complete" is not included in ASN.1 of SRNS Relocation Info although it is included in the tabular. This value would be needed when RB release procedure is used to switch the UE to CELL_FACH and trigger SRNS relocation upon the following cell update message.
	# 2. With the current standard in the IE "SRNS Relocation info" in the list "Cipherring info per radio bearer" there should be an IE "RB Id" giving the RB identity of the radio bearer for which this information is valid.
<b>Summary of change:</b>	# 1. The parameter value "awaitRRC-ConnectionRe-establishmentComplete" is redefined as "awaitRB-ReleaseComplete"
	# 2. It is clarified that the order of occurrence of the IE "Cipherring info per radio bearer" in the "SRNS Relocation Info" IE is the same as in the IE "Signalling RB information list" and the RBs in the IE "RAB information list". The signalling RBs are supposed to be listed first. Only UM and AM RBs that are ciphpered are supposed to be listed.
	Changes in the first revision are highlighted in blue
	<b>Isolated Impact analysis</b>
	No impact on a UE implementations because neither procedure nor parameter related to UE is changed.
	It would not have any impact on UTRAN implementations behaving like specified in this CR, a UTRAN implementation that does not behave according this CR may not be able to succeed this type of relocation when the UE is switched to CELL_FACH.
<b>Consequences if not approved:</b>	# SRNS Relocation in CELL_FACH triggered by a RB Release will not work.

<b>Clauses affected:</b>	⌘	11.5, 14.12.4.2										
<b>Other specs affected:</b>	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
		Y	N									
		<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
Test specifications												
O&M Specifications												
<b>Other comments:</b>	⌘											

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.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://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

## 11.5 RRC information between network nodes

```

Internode-definitions DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS

    HandoverToUTRANCommand,
    MeasurementReport,
    PhysicalChannelReconfiguration,
    RadioBearerReconfiguration,
    RadioBearerRelease,
    RadioBearerSetup,
    RRC-FailureInfo-r3-IEs,
    TransportChannelReconfiguration
FROM PDU-definitions

-- Core Network IEs :
    CN-DomainIdentity,
    CN-DomainInformationList,
    CN-DRX-CycleLengthCoefficient,
    NAS-SystemInformationGSM-MAP,
-- UTRAN Mobility IEs :
    CellIdentity,
    URA-Identity,
-- User Equipment IEs :
    C-RNTI,
    DL-PhysChCapabilityFDD-v380ext,
    FailureCauseWithProtErr,
    RRC-MessageSequenceNumber,
    STARTList,
    STARTSingle,
    START-Value,
    U-RNTI,
    UE-RadioAccessCapability,
    UE-RadioAccessCapability-v370ext,
    UE-RadioAccessCapability-v380ext,
    UE-RadioAccessCapability-v3a0ext,
    UE-RadioAccessCapability-v4xyext,
-- Radio Bearer IEs :
    PredefinedConfigStatusList,
    PredefinedConfigValueTag,
    RAB-InformationSetupList,
    RAB-Identity,
    SRB-InformationSetupList,
-- Transport Channel IEs :
    CPCH-SetID,
    DL-CommonTransChInfo,
    DL-AddReconfTransChInfoList,
    DRAC-StaticInformationList,
    UL-CommonTransChInfo,
    UL-AddReconfTransChInfoList,
-- Measurement IEs :
    MeasurementIdentity,
    MeasurementReportingMode,
    MeasurementType,
    MeasurementType-r4,
    AdditionalMeasurementID-List,
    PositionEstimate,
    UE-Positioning-IPDL-Parameters-TDD-r4-ext,
-- Other IEs :
InterRAT-UE-RadioAccessCapabilityList
FROM InformationElements

    maxCNdomains,
    maxNoOfMeas,

    maxRB,
    maxSRBsetup
FROM Constant-definitions
;

-- Part 1: Class definitions similar to what has been defined in 11.1 for RRC messages
-- Information that is tranferred in the same direction and across the same path is grouped

```

```

-- *****
--
-- RRC information, to target RNC
--
-- *****
-- RRC Information to target RNC sent either from source RNC or from another RAT

ToTargetRNC-Container ::= CHOICE {
    interRATHandoverInfo          InterRATHandoverInfoWithInterRATCapabilities-r3,
    srncRelocation                SRNC-RelocationInfo-r3,
    extension                     NULL
}

-- *****
--
-- RRC information, target RNC to source RNC
--
-- *****

Target-RNC-ToSourceRNC-Container ::= CHOICE {
    radioBearerSetup              RadioBearerSetup,
    radioBearerReconfiguration    RadioBearerReconfiguration,
    radioBearerRelease            RadioBearerRelease,
    transportChannelReconfiguration TransportChannelReconfiguration,
    physicalChannelReconfiguration PhysicalChannelReconfiguration,
    rrc-FailureInfo              RRC-FailureInfo-r3-IEs,
    extension                     NULL
}

-- Part 2: Container definitions, similar to the PDU definitions in 11.2 for RRC messages
-- In alphabetical order

-- *****
--
-- Handover to UTRAN information
--
-- *****

InterRATHandoverInfoWithInterRATCapabilities-r3 ::= CHOICE {
    r3                             SEQUENCE {
        -- IE InterRATHandoverInfoWithInterRATCapabilities-r3-IEs also
        -- includes non critical extensions
        interRATHandoverInfo-r3    InterRATHandoverInfoWithInterRATCapabilities-r3-IEs,
        v390NonCriticalExtensions  SEQUENCE {
            interRATHandoverInfoWithInterRATCapabilities-v390ext
        }
        InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs,
        -- Reserved for future non critical extension
        nonCriticalExtensions      SEQUENCE {} OPTIONAL
    },
    criticalExtensions             SEQUENCE {}
}

InterRATHandoverInfoWithInterRATCapabilities-r3-IEs ::= SEQUENCE {
    -- The order of the IEs may not reflect the tabular format
    -- but has been chosen to simplify the handling of the information in the BSC
    -- Other IEs
    ue-RATSpecificCapability      InterRAT-UE-RadioAccessCapabilityList OPTIONAL,
    -- interRATHandoverInfo, Octet string is used to obtain 8 bit length field prior to
    -- actual information. This makes it possible for BSS to transparently handle information
    -- received via GSM air interface even when it includes non critical extensions.
    -- The octet string shall include the InterRATHandoverInfo information
    -- The BSS can re-use the 04.18 length field received from the MS
    interRATHandoverInfo          OCTET STRING (SIZE (0..255))
}

InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs ::= SEQUENCE {
    -- User equipment IEs
    failureCauseWithProtErr       FailureCauseWithProtErr OPTIONAL
}

-- *****
--
-- SRNC Relocation information
--
-- *****

```

```

SRNC-RelocationInfo-r3 ::= CHOICE {
  r3
    SRNC-RelocationInfo-r3 SEQUENCE {
      SRNC-RelocationInfo-r3-IEs,
      v380NonCriticalExtensions SEQUENCE {
        SRNC-RelocationInfo-v380ext SRNC-RelocationInfo-v380ext-IEs,
        -- Reserved for future non critical extension
      }
      v390NonCriticalExtensions SEQUENCE {
        SRNC-RelocationInfo-v390ext SRNC-RelocationInfo-v390ext-IEs,
        v3a0NonCriticalExtensions SEQUENCE {
          SRNC-RelocationInfo-v3a0ext SRNC-RelocationInfo-v3a0ext-IEs,
          v3b0NonCriticalExtensions SEQUENCE {
            SRNC-RelocationInfo-v3b0ext SRNC-RelocationInfo-v3b0ext-IEs,
            v4xyNonCriticalExtensions SEQUENCE {
              SRNC-RelocationInfo-v4xyext SRNC-RelocationInfo-v4xyext-IEs,
              -- Reserved for future non critical extension
            }
            nonCriticalExtensions SEQUENCE {} OPTIONAL
          } OPTIONAL
        } OPTIONAL
      } OPTIONAL
    } OPTIONAL
  },
  criticalExtensions SEQUENCE {}
}

SRNC-RelocationInfo-r3-IEs ::= SEQUENCE {
  -- Non-RRC IEs
  stateOfRRC StateOfRRC,
  stateOfRRC-Procedure StateOfRRC-Procedure,
  -- Ciphering related information IEs
  -- If the extension v380 is included use the extension for the ciphering status per CN domain
  cipheringStatus CipheringStatus,
  calculationTimeForCiphering CalculationTimeForCiphering OPTIONAL,
  cipheringInfoPerRB-List CipheringInfoPerRB-List OPTIONAL,
  count-C-List COUNT-C-List OPTIONAL,
  integrityProtectionStatus IntegrityProtectionStatus,
  srb-SpecificIntegrityProtInfo SRB-SpecificIntegrityProtInfoList,
  implementationSpecificParams ImplementationSpecificParams OPTIONAL,
  -- User equipment IEs
  u-RNTI U-RNTI,
  c-RNTI C-RNTI OPTIONAL,
  ue-RadioAccessCapability UE-RadioAccessCapability,
  ue-Positioning-LastKnownPos UE-Positioning-LastKnownPos OPTIONAL,
  -- Other IEs
  ue-RATSpecificCapability InterRAT-UE-RadioAccessCapabilityList OPTIONAL,
  -- UTRAN mobility IEs
  ura-Identity URA-Identity OPTIONAL,
  -- Core network IEs
  cn-CommonGSM-MAP-NAS-SysInfo NAS-SystemInformationGSM-MAP,
  cn-DomainInformationList CN-DomainInformationList OPTIONAL,
  -- Measurement IEs
  ongoingMeasRepList OngoingMeasRepList OPTIONAL,
  -- Radio bearer IEs
  predefinedConfigStatusList PredefinedConfigStatusList,
  srb-InformationList SRB-InformationSetupList,
  rab-InformationList RAB-InformationSetupList OPTIONAL,
  -- Transport channel IEs
  ul-CommonTransChInfo UL-CommonTransChInfo OPTIONAL,
  ul-TransChInfoList UL-AddReconfTransChInfoList OPTIONAL,
  modeSpecificInfo CHOICE {
    fdd SEQUENCE {
      cpch-SetID CPCH-SetID OPTIONAL,
      transChDRAC-Info DRAC-StaticInformationList OPTIONAL
    },
    tdd NULL
  },
  dl-CommonTransChInfo DL-CommonTransChInfo OPTIONAL,
  dl-TransChInfoList DL-AddReconfTransChInfoList OPTIONAL,
  -- Measurement report
  measurementReport MeasurementReport OPTIONAL,
  nonCriticalExtensions SEQUENCE {
    -- In case of TDD only up-Ipdl-Parameters-TDD is present, otherwise
    -- this IE is absent
    up-Ipdl-Parameters-TDD UE-Positioning-IPDL-Parameters-TDD-r4-ext OPTIONAL,
    -- Extension mechanism for non-release4 information
    nonCriticalExtensions SEQUENCE {} OPTIONAL
  }
}

```

```

}

SRNC-RelocationInfo-v380ext-IEs ::= SEQUENCE {
  -- Ciphering related information IEs
  cn-DomainIdentity          CN-DomainIdentity,
  cipheringStatusList        CipheringStatusList
}

SRNC-RelocationInfo-v390ext-IEs ::= SEQUENCE {
  cn-DomainInformationList-v390ext  CN-DomainInformationList-v390ext  OPTIONAL,
  ue-RadioAccessCapability-v370ext  UE-RadioAccessCapability-v370ext  OPTIONAL,
  ue-RadioAccessCapability-v380ext  UE-RadioAccessCapability-v380ext  OPTIONAL,
  dl-PhysChCapabilityFDD-v380ext    DL-PhysChCapabilityFDD-v380ext,
  failureCauseWithProtErr          FailureCauseWithProtErr          OPTIONAL
}

SRNC-RelocationInfo-v3a0ext-IEs ::= SEQUENCE {
  -- cn-domain identity for IE startValueForCiphering-v3a0ext is specified
  -- in subsequent extension (SRNC-RelocationInfo-v3b0ext-IEs)
  startValueForCIphering-v3a0ext    START-Value,
  cipheringInfoForSRB1-v3a0ext      CipheringInfoForSRB1-v3a0ext,
  ue-RadioAccessCapability-v3a0ext  UE-RadioAccessCapability-v3a0ext  OPTIONAL
}

SRNC-RelocationInfo-v3b0ext-IEs ::= SEQUENCE {
  -- cn-domain identity for IE startValueForCiphering-v3a0ext included in previous extension
  cn-DomainIdentity                CN-DomainIdentity,
  -- the remaining start values are contained in IE startValueForCiphering-v3b0ext
  startValueForCiphering-v3b0ext    STARTList2          OPTIONAL
}

STARTList2 ::=
  SEQUENCE (SIZE (2..maxCNdomains)) OF
  STARTSingle

SRNC-RelocationInfo-v4xyext-IEs ::= SEQUENCE {
  ue-RadioAccessCapability-v4xyext  UE-RadioAccessCapability-v4xyext
}

CipheringInfoForSRB1-v3a0ext ::= SEQUENCE {
  dl-UM-SN                          BIT STRING (SIZE (7))
}

CipheringStatusList ::=
  SEQUENCE (SIZE (1..maxCNdomains)) OF
  CipheringStatusCNdomain

CipheringStatusCNdomain ::=
  SEQUENCE {
    cn-DomainIdentity  CN-DomainIdentity,
    cipheringStatus    CipheringStatus
  }

SRNC-RelocationInfo-r4 ::=
  SEQUENCE {
    -- Non-RRC IEs
    stateOfRRC                StateOfRRC,
    stateOfRRC-Procedure      StateOfRRC-Procedure,
    cipheringStatus            CipheringStatus,
    calculationTimeForCiphering  CalculationTimeForCiphering  OPTIONAL,
    cipheringInfoPerRB-List     CipheringInfoPerRB-List     OPTIONAL,
    integrityProtectionStatus   IntegrityProtectionStatus,
    srb-SpecificIntegrityProtInfo  SRB-SpecificIntegrityProtInfoList,
    implementationSpecificParams  ImplementationSpecificParams  OPTIONAL,
    -- User equipment IEs
    u-RNTI                    U-RNTI,
    c-RNTI                    C-RNTI                    OPTIONAL,
    ue-RadioAccessCapability    UE-RadioAccessCapability,
    ue-Positioning-LastKnownPos  UE-Positioning-LastKnownPos  OPTIONAL,
    -- Other IEs
    ue-RATSpecificCapability    InterRAT-UE-RadioAccessCapabilityList  OPTIONAL,
    -- UTRAN mobility IEs
    ura-Identity                URA-Identity                OPTIONAL,
    -- Core network IEs
    cn-CommonGSM-MAP-NAS-SysInfo  NAS-SystemInformationGSM-MAP,
    cn-DomainInformationList      CN-DomainInformationList      OPTIONAL,
    -- Measurement IEs
    ongoingMeasRepList           OngoingMeasRepList-r4          OPTIONAL,
    -- Radio bearer IEs
    predefinedConfigStatusList    PredefinedConfigStatusList,
    srb-InformationList           SRB-InformationSetupList,
  }

```



```

    modify                NULL,
    release                NULL
}

OngoingMeasRep ::=          SEQUENCE {
    measurementIdentity    MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType
    measurementCommandWithType    MeasurementCommandWithType,
    measurementReportingMode      MeasurementReportingMode          OPTIONAL,
    additionalMeasurementID-List   AdditionalMeasurementID-List     OPTIONAL
}

OngoingMeasRep-r4 ::=      SEQUENCE {
    measurementIdentity    MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType-r4.
    measurementCommandWithType    MeasurementCommandWithType-r4,
    measurementReportingMode      MeasurementReportingMode          OPTIONAL,
    additionalMeasurementID-List   AdditionalMeasurementID-List     OPTIONAL
}

OngoingMeasRepList ::=    SEQUENCE (SIZE (1..maxNoOfMeas)) OF
    OngoingMeasRep

OngoingMeasRepList-r4 ::= SEQUENCE (SIZE (1..maxNoOfMeas)) OF
    OngoingMeasRep-r4

SRB-SpecificIntegrityProtInfo ::= SEQUENCE {
    ul-RRC-HFN            BIT STRING (SIZE (28)),
    dl-RRC-HFN            BIT STRING (SIZE (28)),
    ul-RRC-SequenceNumber RRC-MessageSequenceNumber,
    dl-RRC-SequenceNumber RRC-MessageSequenceNumber
}

SRB-SpecificIntegrityProtInfoList ::= SEQUENCE (SIZE (4..maxSRBsetup)) OF
    SRB-SpecificIntegrityProtInfo

StateOfRRC ::=           ENUMERATED {
    cell-DCH, cell-FACH,
    cell-PCH, ura-PCH }

StateOfRRC-Procedure ::= ENUMERATED {
    awaitNoRRC-Message,
    awaitRB-ReleaseCompleteawaitRRC-ConnectionRe-
establishmentComplete,
    awaitRB-SetupComplete,
    awaitRB-ReconfigurationComplete,
    awaitTransportCH-ReconfigurationComplete,
    awaitPhysicalCH-ReconfigurationComplete,
    awaitActiveSetUpdateComplete,
    awaitHandoverComplete,
    sendCellUpdateConfirm,
    sendUraUpdateConfirm,
    sendRrcConnectionReestablishmentdummy,
    otherStates
}

UE-Positioning-LastKnownPos ::= SEQUENCE {
    sfn                    INTEGER (0..4095),
    cell-id                CellIdentity,
    positionEstimate       PositionEstimate
}

END

```



### 14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation.

Direction: source RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
<b>Non RRC IEs</b>				
>State of RRC	MP		RRC state indicator, 10.3.3.35a	
>State of RRC procedure	MP		Enumerated (await no RRC message, <del>Complete</del> , await RB Release <del>Complete</del> , await RB Setup Complete, await RB Reconfiguration Complete, await RB Release <del>Complete</del> , await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)	
<b>Ciphering related information</b>				
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>		
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>Ciphering status	MP		Enumerated( Not started, Started)	
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.
>Latest configured CN domain	MP		CN domain	Value contained in the variable

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			identity 10.3.1.1	of the same name.
>Calculation time for ciphering related information	CV- <i>Ciphering</i>			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call
>>SFN	MP		Integer(0..4095)	
>COUNT-C list	CV- <i>Ciphering</i>	1 to <maxCNdo mains>		COUNT-C values for radio bearers using transparent mode RLC
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>COUNT-C	MP		Bit string(32)	
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.
>>RB identity	MP		RB identity 10.3.4.16	
>>Downlink HFN	MP		Bit string(20..25 )	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
>>Downlink SN	CV- <i>SRB1</i>		Bit String(7)	VT(US) of RLC UM
>>Uplink HFN	MP		Bit string(20..25 )	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
<b>Integrity protection related information</b>				
>Integrity protection status	MP		Enumerated( Not started, Started)	
>Signalling radio bearer specific integrity protection information	CV- <i>IP</i>	4 to <maxSRBs etup>		
>>Uplink RRC HFN	MP		Bit string (28)	
>>Downlink RRC HFN	MP		Bit string (28)	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	
>Implementation specific parameters	OP		Bit string (1..512)	
<b>RRC IEs</b>				
<b>UE Information elements</b>				
>U-RNTI	MP		U-RNTI 10.3.3.47	
>C-RNTI	OP		C-RNTI 10.3.3.8	
>UE radio access Capability	MP		UE radio access capability 10.3.3.42	
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a	
>Last known UE position	OP			
>>SFN	MP		Integer	Time when position was

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			(0..4095)	estimated
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.
>>>CHOICE <i>Position estimate</i>	MP			
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a	
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d	
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e	
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b	
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c	
<b>Other Information elements</b>				
>UE system specific capability	OP	1 to <maxSystemCapability>		
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7	
<b>UTRAN Mobility Information elements</b>				
>URA Identifier	OP		URA identity 10.3.2.6	
<b>CN Information Elements</b>				
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9	
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain
>>CN domain identity	MP			
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9	
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6	
<b>Measurement Related Information elements</b>				
>For each ongoing measurement reporting	OP	1 to <MaxNoOfMeas>		
>>Measurement Identity	MP		Measurement	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			t identity 10.3.7.48	
>>Measurement Command	MP		Measuremen t command 10.3.7.46	
>>Measurement Type	CV-Setup		Measuremen t type 10.3.7.50	
>>Measurement Reporting Mode	OP		Measuremen t reporting mode 10.3.7.49	
>>>Additional Measurements list	OP		Additional measuremen ts list 10.3.7.1	
>>>CHOICE <i>Measurement</i>	OP			
>>>>Intra-frequency				
>>>>>Intra-frequency cell info	OP		Intra- frequency cell info list 10.3.7.33	
>>>>>Intra-frequency measurement quantity	OP		Intra- frequency measuremen t quantity 10.3.7.38	
>>>>>Intra-frequency reporting quantity	OP		Intra- frequency reporting quantity 10.3.7.41	
>>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>>Measurement validity	OP		Measuremen t validity 10.3.7.51	
>>>>>CHOICE <i>report criteria</i>	OP			
>>>>>>Intra-frequency measurement reporting criteria			Intra- frequency measuremen t reporting criteria 10.3.7.39	
>>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>>No reporting			NULL	
>>>>>>Inter-frequency				
>>>>>>>Inter-frequency cell info	OP		Inter- frequency cell info list 10.3.7.13	
>>>>>>>Inter-frequency measurement quantity	OP		Inter- frequency measuremen t quantity 10.3.7.18	
>>>>>>>Inter-frequency reporting quantity	OP		Inter- frequency reporting quantity 10.3.7.21	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-RAT				
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23	
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29	
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Traffic Volume				
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70	
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71	
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Traffic volume			Traffic	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
measurement reporting criteria			volume measurement reporting criteria 10.3.7.72	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting			NULL	
>>>Quality				
>>>>Quality measurement Object	OP		Quality measurement object	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting			NULL	
>>>UE internal				
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79	
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting			NULL	
>>>UE positioning				
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting				
<b>Radio Bearer Information Elements</b>				
>Predefined configuration status information	OP		Predefined configuration status	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			information 10.3.4.5a	
>Signalling RB information list	MP	1 to <maxSRBs etup>		For each signalling radio bearer
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24	
>RAB information list	OP	1 to <maxRABs etup>		Information for each RAB
>>RAB information	MP		RAB information to setup 10.3.4.10	
<b>Transport Channel Information Elements</b>				
<b>Uplink transport channels</b>				
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24	
>UL transport channel information list	OP	1 to <MaxTrCH >		
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2	
>CHOICE <i>mode</i>	OP			
>>FDD				
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5	
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH >		
>>>>DRAC static information	MP		DRAC static information 10.3.5.7	
>>TDD				(no data)
<b>Downlink transport channels</b>				
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6	
>DL transport channel information list	OP	1 to <MaxTrCH >		
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1	
>Measurement report	OP		MEASUREMENT REPORT	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.2.17	
<b>Other Information elements</b>				
Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)
Protocol error information	CV-ProtErr		Protocol error information 10.3.8.12	

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
<i>Setup</i>	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
<i>Ciphering</i>	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
<i>IP</i>	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
<i>ProtErr</i>	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
<i>SRB1</i>	The IE is mandatory present for RB1. Otherwise it is not needed.



## CHANGE REQUEST

# **TS 25.331 CR 1611** # rev **1** # Current version: **5.1.0** #

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	# Clarification of SRNS Relocation Info		
<b>Source:</b>	# Alcatel, Fujitsu Ltd.		
<b>Work item code:</b>	# TEI	<b>Date:</b>	# 20/08/2002
<b>Category:</b>	# <b>A</b>	<b>Release:</b>	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)	2	(GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)	R96	(Release 1996)
	<b>B</b> (addition of feature),	R97	(Release 1997)
	<b>C</b> (functional modification of feature)	R98	(Release 1998)
	<b>D</b> (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Rel-4	(Release 4)
		Rel-5	(Release 5)
		Rel-6	(Release 6)

<b>Reason for change:</b>	# 1. The parameter value "await RB Release Complete" is not included in ASN.1 of SRNS Relocation Info although it is included in the tabular. This value would be needed when RB release procedure is used to switch the UE to CELL_FACH and trigger SRNS relocation upon the following cell update message.
	2. With the current standard in the IE "SRNS Relocation info" in the list "Cipherring info per radio bearer" there should be an IE "RB Id" giving the RB identity of the radio bearer for which this information is valid.
<b>Summary of change:</b>	# 1. The parameter value "awaitRRC-ConnectionRe-establishmentComplete" is redefined as "awaitRB-ReleaseComplete"
	2. It is clarified that the order of occurrence of the IE "Cipherring info per radio bearer" in the "SRNS Relocation Info" IE is the same as in the IE "Signalling RB information list" and the RBs in the IE "RAB information list". The signalling RBs are supposed to be listed first. Only UM and AM RBs that are ciphpered are supposed to be listed.
	Changes in the first revision are highlighted in blue
	<b>Isolated Impact analysis</b>
	No impact on a UE implementations because neither procedure nor parameter related to UE is changed.
	It would not have any impact on UTRAN implementations behaving like specified in this CR, a UTRAN implementation that does not behave according this CR may not be able to succeed this type of relocation when the UE is switched to CELL_FACH.
<b>Consequences if not approved:</b>	# SRNS Relocation in CELL_FACH triggered by a RB Release will not work.

<b>Clauses affected:</b>	⌘	11.5, 14.12.4.2										
<b>Other specs affected:</b>	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
		Y	N									
		<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
Test specifications												
O&M Specifications												
<b>Other comments:</b>	⌘											

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.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://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

## 11.5 RRC information between network nodes

```
Internode-definitions DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN
```

```
IMPORTS
```

```
    HandoverToUTRANCommand,
    MeasurementReport,
    PhysicalChannelReconfiguration,
    RadioBearerReconfiguration,
    RadioBearerRelease,
    RadioBearerSetup,
    RRC-FailureInfo-r3-IEs,
    TransportChannelReconfiguration
FROM PDU-definitions
```

```
-- Core Network IEs :
    CN-DomainIdentity,
    CN-DomainInformationList,
    CN-DRX-CycleLengthCoefficient,
    NAS-SystemInformationGSM-MAP,
-- UTRAN Mobility IEs :
    CellIdentity,
    URA-Identity,
-- User Equipment IEs :
    C-RNTI,
    DL-PhysChCapabilityFDD-v380ext,
    FailureCauseWithProtErr,
    RRC-MessageSequenceNumber,
    STARTList,
    STARTSingle,
    START-Value,
    U-RNTI,
    UE-RadioAccessCapability,
    UE-RadioAccessCapability-v370ext,
    UE-RadioAccessCapability-v380ext,
    UE-RadioAccessCapability-v3a0ext,
    UE-RadioAccessCapability-v4xyext,
-- Radio Bearer IEs :
    PredefinedConfigStatusList,
    PredefinedConfigValueTag,
    RAB-InformationSetupList,
    RAB-Identity,
    RB-Identity,
    SRB-InformationSetupList,
-- Transport Channel IEs :
    CPCH-SetID,
    DL-CommonTransChInfo,
    DL-AddReconfTransChInfoList,
    DRAC-StaticInformationList,
    UL-CommonTransChInfo,
    UL-AddReconfTransChInfoList,
-- Measurement IEs :
    MeasurementIdentity,
    MeasurementReportingMode,
    MeasurementType,
    MeasurementType-r4,
    AdditionalMeasurementID-List,
    PositionEstimate,
    UE-Positioning-IPDL-Parameters-TDD-r4-ext,
-- Other IEs :
InterRAT-UE-RadioAccessCapabilityList
FROM InformationElements

    maxCNdomains,
    maxNoOfMeas,

    maxRB,
    maxRBallRABs,
    maxRFC3095-CID,
    maxSRBsetup
FROM Constant-definitions
;
```

```
-- Part 1: Class definitions similar to what has been defined in 11.1 for RRC messages
-- Information that is transferred in the same direction and across the same path is grouped
```

```
-- *****
```

```
-- RRC information, to target RNC
```

```
-- *****
```

```
-- RRC Information to target RNC sent either from source RNC or from another RAT
```

```
ToTargetRNC-Container ::= CHOICE {
    interRATHandoverInfo          InterRATHandoverInfoWithInterRATCapabilities-r3,
    srncRelocation                SRNC-RelocationInfo-r3,
    rfc3095-ContextInfo           RFC3095-ContextInfo-r5,
    extension                     NULL
}
```

```
-- *****
```

```
-- RRC information, target RNC to source RNC
```

```
-- *****
```

```
Target-RNC-ToSourceRNC-Container ::= CHOICE {
    radioBearerSetup              RadioBearerSetup,
    radioBearerReconfiguration    RadioBearerReconfiguration,
    radioBearerRelease            RadioBearerRelease,
    transportChannelReconfiguration TransportChannelReconfiguration,
    physicalChannelReconfiguration PhysicalChannelReconfiguration,
    rrc-FailureInfo               RRC-FailureInfo-r3-IEs,
    extension                     NULL
}
```

```
-- Part 2: Container definitions, similar to the PDU definitions in 11.2 for RRC messages
-- In alphabetical order
```

```
-- *****
```

```
-- Handover to UTRAN information
```

```
-- *****
```

```
InterRATHandoverInfoWithInterRATCapabilities-r3 ::= CHOICE {
    r3 SEQUENCE {
        -- IE InterRATHandoverInfoWithInterRATCapabilities-r3-IEs also
        -- includes non critical extensions
        interRATHandoverInfo-r3          InterRATHandoverInfoWithInterRATCapabilities-r3-IEs,
        v390NonCriticalExtensions        SEQUENCE {
            interRATHandoverInfoWithInterRATCapabilities-v390ext
        }
        InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs,
        -- Reserved for future non critical extension
        nonCriticalExtensions            SEQUENCE {} OPTIONAL
    },
    criticalExtensions                  SEQUENCE {}
}
```

```
InterRATHandoverInfoWithInterRATCapabilities-r3-IEs ::= SEQUENCE {
    -- The order of the IEs may not reflect the tabular format
    -- but has been chosen to simplify the handling of the information in the BSC
    -- Other IEs
    ue-RATSpecificCapability            InterRAT-UE-RadioAccessCapabilityList OPTIONAL,
    -- interRATHandoverInfo, Octet string is used to obtain 8 bit length field prior to
    -- actual information. This makes it possible for BSS to transparently handle information
    -- received via GSM air interface even when it includes non critical extensions.
    -- The octet string shall include the InterRATHandoverInfo information
    -- The BSS can re-use the 04.18 length field received from the MS
    interRATHandoverInfo                OCTET STRING (SIZE (0..255))
}
```

```
InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs ::= SEQUENCE {
    -- User equipment IEs
    failureCauseWithProtErr             FailureCauseWithProtErr OPTIONAL
}
```

```
-- *****
```

```

--
-- RFC3095 context, source RNC to target RNC
--
-- *****
RFC3095-ContextInfo-r5 ::= CHOICE {
    r5 SEQUENCE {
        rFC3095-ContextInfoList-r5 RFC3095-ContextInfoList-r5,
        -- Reserved for future non critical extension
        nonCriticalExtensions SEQUENCE {} OPTIONAL
    },
    criticalExtensions SEQUENCE {}
}

RFC3095-ContextInfoList-r5 ::= SEQUENCE (SIZE (1..maxRBallRABs)) OF
    RFC3095-ContextInfo

-- *****
--
-- SRNC Relocation information
--
-- *****

SRNC-RelocationInfo-r3 ::= CHOICE {
    r3 SEQUENCE {
        sRNC-RelocationInfo-r3 SRNC-RelocationInfo-r3-IEs,
        v380NonCriticalExtensions SEQUENCE {
            sRNC-RelocationInfo-v380ext SRNC-RelocationInfo-v380ext-IEs,
            -- Reserved for future non critical extension
            v390NonCriticalExtensions SEQUENCE {
                sRNC-RelocationInfo-v390ext SRNC-RelocationInfo-v390ext-IEs,
                v3a0NonCriticalExtensions SEQUENCE {
                    sRNC-RelocationInfo-v3a0ext SRNC-RelocationInfo-v3a0ext-IEs,
                    v3b0NonCriticalExtensions SEQUENCE {
                        sRNC-RelocationInfo-v3b0ext SRNC-RelocationInfo-v3b0ext-IEs,
                        v4xyNonCriticalExtensions SEQUENCE {
                            sRNC-RelocationInfo-v4xyext SRNC-RelocationInfo-v4xyext-IEs,
                            -- Reserved for future non critical extension
                            nonCriticalExtensions SEQUENCE {} OPTIONAL
                        } OPTIONAL
                    } OPTIONAL
                } OPTIONAL
            } OPTIONAL
        } OPTIONAL
    },
    criticalExtensions SEQUENCE {}
}

SRNC-RelocationInfo-r3-IEs ::= SEQUENCE {
    -- Non-RRC IEs
    stateOfRRC StateOfRRC,
    stateOfRRC-Procedure StateOfRRC-Procedure,
    -- Ciphering related information IEs
    -- If the extension v380 is included use the extension for the ciphering status per CN domain
    cipheringStatus CipheringStatus,
    calculationTimeForCiphering CalculationTimeForCiphering OPTIONAL,
    cipheringInfoPerRB-List CipheringInfoPerRB-List OPTIONAL,
    count-C-List COUNT-C-List OPTIONAL,
    integrityProtectionStatus IntegrityProtectionStatus,
    srb-SpecificIntegrityProtInfo SRB-SpecificIntegrityProtInfoList,
    implementationSpecificParams ImplementationSpecificParams OPTIONAL,
    -- User equipment IEs
    u-RNTI U-RNTI,
    c-RNTI C-RNTI OPTIONAL,
    ue-RadioAccessCapability UE-RadioAccessCapability,
    ue-Positioning-LastKnownPos UE-Positioning-LastKnownPos OPTIONAL,
    -- Other IEs
    ue-RATSpecificCapability InterRAT-UE-RadioAccessCapabilityList OPTIONAL,
    -- UTRAN mobility IEs
    ura-Identity URA-Identity OPTIONAL,
    -- Core network IEs
    cn-CommonGSM-MAP-NAS-SysInfo NAS-SystemInformationGSM-MAP,
    cn-DomainInformationList CN-DomainInformationList OPTIONAL,
    -- Measurement IEs
    ongoingMeasRepList OngoingMeasRepList OPTIONAL,
    -- Radio bearer IEs
    predefinedConfigStatusList PredefinedConfigStatusList,

```

```

    srb-InformationList          SRB-InformationSetupList,
    rab-InformationList          RAB-InformationSetupList          OPTIONAL,
-- Transport channel IEs
    ul-CommonTransChInfo        UL-CommonTransChInfo            OPTIONAL,
    ul-TransChInfoList          UL-AddReconfTransChInfoList        OPTIONAL,
    modeSpecificInfo            CHOICE {
        fdd                     SEQUENCE {
            cpch-SetID           CPCH-SetID                    OPTIONAL,
            transChDRAC-Info     DRAC-StaticInformationList  OPTIONAL
        },
        tdd                     NULL
    },
    dl-CommonTransChInfo        DL-CommonTransChInfo            OPTIONAL,
    dl-TransChInfoList          DL-AddReconfTransChInfoList        OPTIONAL,
-- Measurement report
    measurementReport           MeasurementReport            OPTIONAL,
    nonCriticalExtensions        SEQUENCE {
        -- In case of TDD only up-IpdL-Parameters-TDD is present, otherwise
        -- this IE is absent
        up-IpdL-Parameters-TDD  UE-Positioning-IPDL-Parameters-TDD-r4-ext  OPTIONAL,
        -- Extension mechanism for non- release4 information
        nonCriticalExtensions    SEQUENCE {}
    }
}

SRNC-RelocationInfo-v380ext-IEs ::= SEQUENCE {
    -- Ciphering related information IEs
    cn-DomainIdentity           CN-DomainIdentity,
    cipheringStatusList         CipheringStatusList
}

SRNC-RelocationInfo-v390ext-IEs ::= SEQUENCE {
    cn-DomainInformationList-v390ext  CN-DomainInformationList-v390ext          OPTIONAL,
    ue-RadioAccessCapability-v370ext  UE-RadioAccessCapability-v370ext          OPTIONAL,
    ue-RadioAccessCapability-v380ext  UE-RadioAccessCapability-v380ext          OPTIONAL,
    dl-PhysChCapabilityFDD-v380ext    DL-PhysChCapabilityFDD-v380ext,
    failureCauseWithProtErr          FailureCauseWithProtErr                    OPTIONAL
}

SRNC-RelocationInfo-v3a0ext-IEs ::= SEQUENCE {
    -- cn-domain identity for IE startValueForCiphering-v3a0ext is specified
    -- in subsequent extension (SRNC-RelocationInfo-v3b0ext-IEs)
    startValueForCiphering-v3a0ext    START-Value,
    cipheringInfoForSRB1-v3a0ext      CipheringInfoForSRB1-v3a0ext,
    ue-RadioAccessCapability-v3a0ext  UE-RadioAccessCapability-v3a0ext          OPTIONAL
}

SRNC-RelocationInfo-v3b0ext-IEs ::= SEQUENCE {
    -- cn-domain identity for IE startValueForCiphering-v3a0ext included in previous extension
    cn-DomainIdentity                 CN-DomainIdentity,
    -- the remaining start values are contained in IE startValueForCiphering-v3b0ext
    startValueForCiphering-v3b0ext    STARTList2                                OPTIONAL
}

STARTList2 ::=
    SEQUENCE (SIZE (2..maxCNdomains)) OF
    STARTSingle

SRNC-RelocationInfo-v4xyext-IEs ::= SEQUENCE {
    ue-RadioAccessCapability-v4xyext  UE-RadioAccessCapability-v4xyext
}

CipheringInfoForSRB1-v3a0ext ::= SEQUENCE {
    dl-UM-SN                          BIT STRING (SIZE (7))
}

CipheringStatusList ::=
    SEQUENCE (SIZE (1..maxCNdomains)) OF
    CipheringStatusCNdomain

CipheringStatusCNdomain ::=
    SEQUENCE {
        cn-DomainIdentity              CN-DomainIdentity,
        cipheringStatus                 CipheringStatus
    }

SRNC-RelocationInfo-r4 ::=
    SEQUENCE {
        -- Non-RRC IEs
        stateOfRRC                     StateOfRRC,
        stateOfRRC-Procedure            StateOfRRC-Procedure,
        cipheringStatus                  CipheringStatus,

```

```

    calculationTimeForCipherng      CalculationTimeForCipherng      OPTIONAL,
    cipherngInfoPerRB-List          CipherngInfoPerRB-List        OPTIONAL,
    integrityProtectionStatus       IntegrityProtectionStatus,
    srb-SpecificIntegrityProtInfo   SRB-SpecificIntegrityProtInfoList,
    implementationSpecificParams    ImplementationSpecificParams  OPTIONAL,
-- User equipment IES
    u-RNTI                          U-RNTI,
    c-RNTI                          C-RNTI                          OPTIONAL,
    ue-RadioAccessCapability        UE-RadioAccessCapability,
    ue-Positioning-LastKnownPos     UE-Positioning-LastKnownPos    OPTIONAL,
-- Other IES
    ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList  OPTIONAL,
-- UTRAN mobility IES
    ura-Identity                    URA-Identity                    OPTIONAL,
-- Core network IES
    cn-CommonGSM-MAP-NAS-SysInfo   NAS-SystemInformationGSM-MAP,
    cn-DomainInformationList        CN-DomainInformationList        OPTIONAL,
-- Measurement IES
    ongoingMeasRepList              OngoingMeasRepList-r4          OPTIONAL,
-- Radio bearer IES
    predefinedConfigStatusList      PredefinedConfigStatusList,
    srb-InformationList              SRB-InformationSetupList,
    rab-InformationList              RAB-InformationSetupList        OPTIONAL,
-- Transport channel IES
    ul-CommonTransChInfo            UL-CommonTransChInfo            OPTIONAL,
    ul-TransChInfoList              UL-AddReconfTransChInfoList    OPTIONAL,
    modeSpecificInfo                 CHOICE {
        fdd                          SEQUENCE {
            cpch-SetID                CPCH-SetID                      OPTIONAL,
            transChDRAC-Info          DRAC-StaticInformationList      OPTIONAL
        },
        tdd                          NULL
    },
    dl-CommonTransChInfo            DL-CommonTransChInfo            OPTIONAL,
    dl-TransChInfoList              DL-AddReconfTransChInfoList    OPTIONAL,
-- Measurement report
    measurementReport                MeasurementReport                OPTIONAL,
    nonCriticalExtensions            SEQUENCE {
        -- In case of TDD only up-IpdL-Parameters-TDD is present, otherwise
        -- this IE is absent
        up-IpdL-Parameters-TDD       UE-Positioning-IPDL-Parameters-TDD-r4-ext  OPTIONAL,
        -- Extension mechanism for non-release4 information
        nonCriticalExtensions         SEQUENCE {}
    }
}

-- IE definitions
CalculationTimeForCipherng ::= SEQUENCE {
    cell-Id          CellIdentity,
    sfn              INTEGER (0..4095)
}

CipherngInfoPerRB ::= SEQUENCE {
    dl-HFN          BIT STRING (SIZE (20..25)),
    ul-HFN          BIT STRING (SIZE (20..25))
}

-- TABULAR: CipherngInfoPerRB-List, multiplicity value numberOfRadioBearers
-- has been replaced with maxRB.
-- The order of occurrence of the IE "Cipherng info per radio bearer" in the
-- "SRNS Relocation Info" IE is the same as in the IE "Signalling RB information
-- list" and the RBs in the IE "RAB information list". The signalling RBs are supposed
-- to be listed first. Only UM and AM RBs that are ciphered are listed here
CipherngInfoPerRB-List ::= SEQUENCE (SIZE (1..maxRB)) OF
    CipherngInfoPerRB

CipherngStatus ::= ENUMERATED {
    started, notStarted }

CN-DomainInformation-v390ext ::= SEQUENCE {
    cn-DRX-CycleLengthCoeff    CN-DRX-CycleLengthCoefficient
}

CN-DomainInformationList-v390ext ::= SEQUENCE (SIZE (1..maxCNdomains)) OF
    CN-DomainInformation-v390ext

```

```

COUNT-C-List ::=                               SEQUENCE (SIZE (1..maxCNDomains)) OF
                                                COUNT-CSingle

COUNT-CSingle ::=                             SEQUENCE {
  cn-DomainIdentity                            CN-DomainIdentity,
  count-C                                       BIT STRING (SIZE (32))
}

-- The structure of DL-RFC3095-Context is FFS
DL-RFC3095-Context ::=                         SEQUENCE {
  rfc3095-Context-Identity                     INTEGER (0..16383),
  dl-mode                                       ENUMERATED {u, o, r}
}

ImplementationSpecificParams ::=              BIT STRING (SIZE (1..512))

IntegrityProtectionStatus ::=                 ENUMERATED {
  started, notStarted }

MeasurementCommandWithType ::=               CHOICE {
  setup                                         MeasurementType,
  modify                                       NULL,
  release                                       NULL
}

MeasurementCommandWithType-r4 ::=           CHOICE {
  setup                                         MeasurementType-r4,
  modify                                       NULL,
  release                                       NULL
}

OngoingMeasRep ::=                           SEQUENCE {
  measurementIdentity                          MeasurementIdentity,
  -- TABULAR: The CHOICE Measurement in the tabular description is included
  -- in MeasurementCommandWithType
  measurementCommandWithType                  MeasurementCommandWithType,
  measurementReportingMode                    MeasurementReportingMode                OPTIONAL,
  additionalMeasurementID-List                AdditionalMeasurementID-List            OPTIONAL
}

OngoingMeasRep-r4 ::=                       SEQUENCE {
  measurementIdentity                          MeasurementIdentity,
  -- TABULAR: The CHOICE Measurement in the tabular description is included
  -- in MeasurementCommandWithType-r4.
  measurementCommandWithType                  MeasurementCommandWithType-r4,
  measurementReportingMode                    MeasurementReportingMode                OPTIONAL,
  additionalMeasurementID-List                AdditionalMeasurementID-List            OPTIONAL
}

OngoingMeasRepList ::=                      SEQUENCE (SIZE (1..maxNoOfMeas)) OF
                                                OngoingMeasRep

OngoingMeasRepList-r4 ::=                   SEQUENCE (SIZE (1..maxNoOfMeas)) OF
                                                OngoingMeasRep-r4

RFC3095-ContextInfo ::=                     SEQUENCE {
  rb-Identity                                  RB-Identity,
  rfc3095-Context-List                        RFC3095-Context-List
}

RFC3095-Context-List ::=                    SEQUENCE (SIZE (1..maxRFC3095-CID)) OF SEQUENCE {
  dl-RFC3095-Context                           DL-RFC3095-Context                OPTIONAL,
  ul-RFC3095-Context                           UL-RFC3095-Context                OPTIONAL
}

SRB-SpecificIntegrityProtInfo ::=           SEQUENCE {
  ul-RRC-HFN                                   BIT STRING (SIZE (28)),
  dl-RRC-HFN                                   BIT STRING (SIZE (28)),
  ul-RRC-SequenceNumber                       RRC-MessageSequenceNumber,
  dl-RRC-SequenceNumber                       RRC-MessageSequenceNumber
}

SRB-SpecificIntegrityProtInfoList ::=        SEQUENCE (SIZE (4..maxSRBsetup)) OF
                                                SRB-SpecificIntegrityProtInfo

StateOfRRC ::=                              ENUMERATED {
  cell-DCH, cell-FACH,

```





14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation.

Direction: source RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
<b>Non RRC IEs</b>				
>State of RRC	MP		RRC state indicator, 10.3.3.35a	
>State of RRC procedure	MP		Enumerated (await no RRC message, <del>Complete</del> , await RB Release <del>Complete</del> , await RB Setup Complete, await RB Reconfiguration Complete, await RB Release <del>Complete</del> , await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)	
<b>Ciphering related information</b>				
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>		
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>Ciphering status	MP		Enumerated( Not started, Started)	
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.
>Latest configured CN domain	MP		CN domain	Value contained in the variable

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			identity 10.3.1.1	of the same name.
>Calculation time for ciphering related information	CV- <i>Ciphering</i>			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call
>>SFN	MP		Integer(0..4095)	
>COUNT-C list	CV- <i>Ciphering</i>	1 to <maxCNdo mains>		COUNT-C values for radio bearers using transparent mode RLC
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>COUNT-C	MP		Bit string(32)	
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.
>>RB identity	MP		RB identity 10.3.4.16	
>>Downlink HFN	MP		Bit string(20..25 )	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
>>Downlink SN	CV- <i>SRB1</i>		Bit String(7)	VT(US) of RLC UM
>>Uplink HFN	MP		Bit string(20..25 )	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
<b>Integrity protection related information</b>				
>Integrity protection status	MP		Enumerated( Not started, Started)	
>Signalling radio bearer specific integrity protection information	CV- <i>IP</i>	4 to <maxSRBs etup>		
>>Uplink RRC HFN	MP		Bit string (28)	
>>Downlink RRC HFN	MP		Bit string (28)	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	
>Implementation specific parameters	OP		Bit string (1..512)	
<b>RRC IEs</b>				
<b>UE Information elements</b>				
>U-RNTI	MP		U-RNTI 10.3.3.47	
>C-RNTI	OP		C-RNTI 10.3.3.8	
>UE radio access Capability	MP		UE radio access capability 10.3.3.42	
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a	
>Last known UE position	OP			
>>SFN	MP		Integer	Time when position was

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			(0..4095)	estimated
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.
>>>CHOICE <i>Position estimate</i>	MP			
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a	
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d	
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e	
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b	
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c	
<b>Other Information elements</b>				
>UE system specific capability	OP	1 to <maxSystemCapability>		
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7	
<b>UTRAN Mobility Information elements</b>				
>URA Identifier	OP		URA identity 10.3.2.6	
<b>CN Information Elements</b>				
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9	
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain
>>CN domain identity	MP			
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9	
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6	
<b>Measurement Related Information elements</b>				
>For each ongoing measurement reporting	OP	1 to <MaxNoOfMeas>		
>>Measurement Identity	MP		Measurement	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			t identity 10.3.7.48	
>>Measurement Command	MP		Measuremen t command 10.3.7.46	
>>Measurement Type	CV-Setup		Measuremen t type 10.3.7.50	
>>Measurement Reporting Mode	OP		Measuremen t reporting mode 10.3.7.49	
>>>Additional Measurements list	OP		Additional measuremen ts list 10.3.7.1	
>>>CHOICE <i>Measurement</i>	OP			
>>>>Intra-frequency				
>>>>>Intra-frequency cell info	OP		Intra- frequency cell info list 10.3.7.33	
>>>>>Intra-frequency measurement quantity	OP		Intra- frequency measuremen t quantity 10.3.7.38	
>>>>>Intra-frequency reporting quantity	OP		Intra- frequency reporting quantity 10.3.7.41	
>>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>>Measurement validity	OP		Measuremen t validity 10.3.7.51	
>>>>>CHOICE <i>report criteria</i>	OP			
>>>>>>Intra-frequency measurement reporting criteria			Intra- frequency measuremen t reporting criteria 10.3.7.39	
>>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>>No reporting			NULL	
>>>>>Inter-frequency				
>>>>>>Inter-frequency cell info	OP		Inter- frequency cell info list 10.3.7.13	
>>>>>>Inter-frequency measurement quantity	OP		Inter- frequency measuremen t quantity 10.3.7.18	
>>>>>>Inter-frequency reporting quantity	OP		Inter- frequency reporting quantity 10.3.7.21	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-RAT				
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23	
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29	
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Traffic Volume				
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70	
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71	
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>>Traffic volume			Traffic	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
measurement reporting criteria			volume measurement reporting criteria 10.3.7.72	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting			NULL	
>>>Quality				
>>>>Quality measurement Object	OP		Quality measurement object	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting			NULL	
>>>UE internal				
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79	
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting			NULL	
>>>UE positioning				
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111	
>>>>CHOICE <i>report criteria</i>	OP			
>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110	
>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>No reporting				
<b>Radio Bearer Information Elements</b>				
>Predefined configuration status information	OP		Predefined configuration status	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			information 10.3.4.5a	
>Signalling RB information list	MP	1 to <maxSRBs etup>		For each signalling radio bearer
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24	
>RAB information list	OP	1 to <maxRABs etup>		Information for each RAB
>>RAB information	MP		RAB information to setup 10.3.4.10	
<b>Transport Channel Information Elements</b>				
<b>Uplink transport channels</b>				
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24	
>UL transport channel information list	OP	1 to <MaxTrCH >		
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2	
>CHOICE <i>mode</i>	OP			
>>FDD				
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5	
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH >		
>>>>DRAC static information	MP		DRAC static information 10.3.5.7	
>>TDD				(no data)
<b>Downlink transport channels</b>				
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6	
>DL transport channel information list	OP	1 to <MaxTrCH >		
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1	
>Measurement report	OP		MEASUREMENT REPORT	



Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.2.17	
<b>Other Information elements</b>				
Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)
Protocol error information	CV-ProtErr		Protocol error information 10.3.8.12	

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
<i>Setup</i>	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
<i>Ciphering</i>	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
<i>IP</i>	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
<i>ProtErr</i>	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
<i>SRB1</i>	The IE is mandatory present for RB1. Otherwise it is not needed.