

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

RP-020078

Title: Technically endorsed CRs (Release '99 and Rel-4 category A) on Introduction of test marker

Source: Ericsson

Agenda item: 7.2.3

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Version	Versio
R2-020412	tech.end.	25.306	031	1	R99	Introduction of interim test marker within UE radio access capabilities	C	3.4.0	
R2-020540	tech.end.	25.306	032		Rel-4	Introduction of interim test marker within UE radio access capabilities	A	4.3.0	
R2-020521	tech.end.	25.331	1354	1	R99	Introduction of interim test marker RRC	F	3.9.0	
R2-020571	tech.end.	25.331	1355	1	Rel-4	Introduction of interim test marker RRC	A	4.3.0	

CHANGE REQUEST

⌘ **25.306 CR 031** ⌘ rev **r1** ⌘ Current version: **3.4.0** ⌘

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

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

Title:	⌘ Introduction of test level indicator within UE radio access capabilities		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI	Date:	⌘ 20-02-2002
Category:	⌘ C	Release:	⌘ R99
	<p>Use <u>one</u> of the following categories:</p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>

Reason for change: ⌘ The changes included in this CR are proposed for the following reasons:

- A significant number of terminals will release prior to the availability of test tools that are able to verify the entire R99 functionality as defined in the core specifications. To avoid interoperability problems, a special indicator is needed to identify these terminals. This indication may be used by the network to avoid invoking certain functionality towards UEs that have been subject to limited testing, if problems occur

Summary of change: ⌘ The original revision of this CR introduces the following changes

- Test level indicator: This new IE is introduced to indicate if the level of testing that is applicable for the UE; it indicates whether or not the UE has passed the full set of conformance tests

Impact analysis:

Impacted functionality: the UE version indication feature

Correction type: Clarification of a function where the specification is ambiguous and incomplete. Would affect UE implementations while it is a UTRAN option to utilise the additional information provided by the UE

Interoperability:

- Isolated impact: the impact is isolated; only the corrected functionality is affected
- CR implemented only by UTRAN: The change is backwards compatible; UTRAN can interpret absence of the extension as an indication that the UE is not fully tested
- CR implemented only by UE: The change is backwards compatible; UTRAN will ignore the not comprehended non- critical extension

Consequences if not approved:	⌘ UTRAN may need to avoid invoking functions that don't work for UEs that have not been fully tested. Otherwise, UTRAN may invoke functions that don't work towards UEs which have been subject to limited testing. This may disturb the system or deteriorate the response times
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Clauses affected:	⌘ 4.10, 5.1									
Other specs affected:	<table border="0"> <tr> <td>⌘ <input type="checkbox"/></td> <td>Other core specifications</td> <td>⌘ 25.306 v4.3.0, CR 032</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Test specifications</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>O&M Specifications</td> <td></td> </tr> </table>	⌘ <input type="checkbox"/>	Other core specifications	⌘ 25.306 v4.3.0, CR 032	<input type="checkbox"/>	Test specifications		<input type="checkbox"/>	O&M Specifications	
⌘ <input type="checkbox"/>	Other core specifications	⌘ 25.306 v4.3.0, CR 032								
<input type="checkbox"/>	Test specifications									
<input type="checkbox"/>	O&M Specifications									
Other comments:	⌘									

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://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.

4.10 General capabilities

ICS version

This is defined as the release version of the Implementation Conformance Statement (ICS) proforma specification [3] that is applicable for the UE.

Test level indicator

This is defined as the level of testing that is applicable for the UE. The test level indicator indicates whether or not the UE been fully tested i.e. whether it has passed the full set of conformance tests covering all of the core specification's functionality that is applicable for the UE.

5.1 Value ranges

Table 5.1: UE radio access capability parameter value ranges

		UE radio access capability parameter	Value range
PDCP parameters		Support for RFC 2507	Yes/No
		Support for loss-less SRNS relocation	Yes/No
		Maximum header compression context space	512, 1024, 2048, 4096, 8192 bytes
RLC parameters		Total RLC AM buffer size	2,10,50,100,150,500,1000 kBytes
		Maximum number of AM entities	3,4,5,6,8,16,30
PHY parameters	Transport channel parameters in downlink	Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	4, 8, 16, 32
		Maximum number of simultaneous CCTrCH	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval	4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC in the TFCS	16, 32, 48, 64, 96, 128, 256, 512, 1024
		Maximum number of TF	32, 64, 128, 256, 512, 1024
		Support for turbo decoding	Yes/No
	Transport channel parameters in uplink	Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	2, 4, 8, 16, 32
		Maximum number of simultaneous CCTrCH of DCH type (TDD only)	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks transmitted within TTIs that start at the same time	2, 4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC in the TFCS	4, 8, 16, 32, 48, 64, 96, 128, 256, 512, 1024
		Maximum number of TF	32, 64, 128, 256, 512, 1024
		Support for turbo encoding	Yes/No
	FDD Physical channel parameters in downlink	Maximum number of DPCH/PDSCH codes to be simultaneously received	1, 2, 3, 4, 5, 6, 7, 8
		Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)	600, 1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 48000, 57600, 67200, 76800
		Support for SF 512	Yes/No
		Support of PDSCH	Yes/No
		Simultaneous reception of SCCPCH and DPCH	Yes/No
		Simultaneous reception of SCCPCH, DPCH and PDSCH	Yes/No

		UE radio access capability parameter	Value range
		Maximum number of simultaneous S-CCPCH radio links	1 NOTE: Only the value 1 is part of this release of the specification
		Support of dedicated pilots for channel estimation	Yes/No
	FDD Physical channel parameters in uplink	Maximum number of DPDCH bits transmitted per 10 ms	600, 1200, 2400, 4800, 9600, 19200, 28800, 38400, 48000, 57600
		Support of PCPCH	Yes/No
	TDD physical channel parameters in downlink	Maximum number of timeslots per frame	1..14
		Maximum number of physical channels per frame	1,2,3..224
		Minimum SF	16, 1
		Support of PDSCH	Yes/No
		Maximum number of physical channels per timeslot	1..16
	TDD physical channel parameters in uplink	Maximum Number of timeslots per frame	1..14
		Maximum number of physical channels per timeslot	1, 2
		Minimum SF	16,8,4,2,1
		Support of PUSCH	Yes/No
RF parameters	FDD RF parameters	UE power class	3, 4 NOTE: Only power classes 3 and 4 are part of this release of the specification
		Tx/Rx frequency separation	190 MHz 174.8-205.2 MHz 134.8-245.2 MHz
RF parameters	TDD RF parameters	UE power class	2,3 NOTE: Only power classes 2 and 3 are part of this release of the specification
		Radio frequency bands	a), b), c), a+b), a+c), a+b+c)
		Chip rate capability	3.84,1.28
Multi-mode related parameters		Support of UTRA FDD/TDD	FDD, TDD, FDD+TDD
Multi-RAT related parameters		Support of GSM	Yes/No (per GSM frequency band)
		Support of multi-carrier	Yes/No
UE positioning related parameters		Standalone location method(s) supported	Yes/No
		Network assisted GPS support	Network based / UE based / Both/ None
		GPS reference time capable	Yes/No
		Support for IPDL	Yes/No
		Support for OTDOA UE based method	Yes/No
		Support for Rx-Tx time difference type 2 measurement	Yes/No
Measurement related capabilities		Need for downlink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
		Need for uplink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
General capabilities		ICS version	R99
		Test level indicator	Not fully tested/ fully tested

CHANGE REQUEST

⌘ **25.331 CR 1355** ⌘ rev **r1** ⌘ Current version: **4.3.0** ⌘

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

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

Title:	⌘	Introduction of interim test marker RRC	
Source:	⌘	Ericsson	
Work item code:	⌘	TEI	Date: ⌘ 22-02-2002
Category:	⌘	A	Release: ⌘ REL-4
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		F (correction)	2 (GSM Phase 2)
		A (corresponds to a correction in an earlier release)	R96 (Release 1996)
		B (addition of feature),	R97 (Release 1997)
		C (functional modification of feature)	R98 (Release 1998)
		D (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)

Reason for change: ⌘ The changes included in this CR are proposed for the following reasons:

- A significant number of terminals will release prior to the availability of test tools that are able to verify the entire R99 functionality as defined in the core specifications. To avoid interoperability problems, a special indicator is needed to identify these terminals. This indication may be used by the network to avoid invoking certain functionality towards UEs that have been subject to limited testing, if problems occur

Summary of change: ⌘ The original revision of this CR introduces the following changes

- Test level indicator: This new IE is introduced to indicate if the level of testing that is applicable for the UE; it indicates whether or not the UE has passed the full set of conformance tests

The following changes have been introduced in the 1st revision of this CR:

- The changes in the tabular have been removed and additional comments have been inserted in the ASN.1

Impact analysis:

Impacted functionality: the UE version indication feature

Correction type: Clarification of a function where the specification is ambiguous (ICS version) and incomplete.

Interoperability:

	<ul style="list-style-type: none"> • Isolated impact: the impact is isolated; only the corrected functionality is affected • CR implemented only by UTRAN: The change is backwards compatible; UTRAN can interpret absence of the extension as an indication that the UE is not fully tested • CR implemented only by UE: The change is backwards compatible; UTRAN will ignore the not comprehended non- critical extension
Consequences if not approved:	⌘ UTRAN may need to avoid invoking functions that don't work for UEs with limited test scope. Otherwise, UTRAN may invoke functions that don't work towards UEs which have been subject to limited testing. This may disturb the system or deteriorate the response times

Clauses affected:	⌘ <no changes to 10.2.39 and 10.3.3.42!>; 11.2, 11.3, 11.5									
Other specs affected:	<table border="0"> <tr> <td>⌘ <input type="checkbox"/></td> <td>Other core specifications</td> <td>⌘ 25.331 v3.9.0, CR 1354r1</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Test specifications</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>O&M Specifications</td> <td></td> </tr> </table>	⌘ <input type="checkbox"/>	Other core specifications	⌘ 25.331 v3.9.0, CR 1354r1	<input type="checkbox"/>	Test specifications		<input type="checkbox"/>	O&M Specifications	
⌘ <input type="checkbox"/>	Other core specifications	⌘ 25.331 v3.9.0, CR 1354r1								
<input type="checkbox"/>	Test specifications									
<input type="checkbox"/>	O&M Specifications									
Other comments:	⌘ This CR assumes that a document (referred to as XX.YYY) is created that includes how the UE shall set IE "Test level indicator"									

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
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- 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.

11.2 PDU definitions

```
--*****
--
-- TABULAR: The message type and integrity check info are not
-- visible in this module as they are defined in the class module.
-- Also, all FDD/TDD specific choices have the FDD option first
-- and TDD second, just for consistency.
--
--*****

PDU-definitions DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS

-- Core Network IEs :
  CN-DomainIdentity,
  CN-InformationInfo,
  CN-InformationInfoFull,
  NAS-Message,
  PagingRecordTypeID,
-- UTRAN Mobility IEs :
  URA-Identity,
-- User Equipment IEs :
  ActivationTime,
  C-RNTI,
  CapabilityUpdateRequirement,
  CapabilityUpdateRequirement-r4,
  CapabilityUpdateRequirement-r4-ext,
  CellUpdateCause,
  CipheringAlgorithm,
  CipheringModeInfo,
  EstablishmentCause,
  FailureCauseWithProtErr,
  FailureCauseWithProtErrTrId,
  InitialUE-Identity,
  IntegrityProtActivationInfo,
  IntegrityProtectionModeInfo,
  N-308,
  PagingCause,
  PagingRecordList,
  ProtocolErrorIndicator,
  ProtocolErrorIndicatorWithMoreInfo,
  Rb-timer-indicator,
  RedirectionInfo,
  RejectionCause,
  ReleaseCause,
  RRC-StateIndicator,
  RRC-TransactionIdentifier,
  SecurityCapability,
  START-Value,
  STARTList,
  U-RNTI,
  U-RNTI-Short,
  UE-RadioAccessCapability,
  UE-RadioAccessCapability-r4-ext,
  UE-RadioAccessCapability-v370ext,
  UE-RadioAccessCapability-v380ext,
  UE-RadioAccessCapability-v3a0ext,
  DL-PhysChCapabilityFDD-v380ext,
  UE-ConnTimersAndConstants,
```

```

    UE-SecurityInformation,
    URA-UpdateCause,
    UTRAN-DRX-CycleLengthCoefficient,
    WaitTime,
-- Radio Bearer IEs :
    DefaultConfigIdentity,
    DefaultConfigMode,
    DL-CounterSynchronisationInfo,
    PredefinedConfigIdentity,
    PredefinedConfigStatusList,
    RAB-Info,
    RAB-Info-Post,
    RAB-InformationList,
    RAB-InformationReconfigList,
    RAB-InformationSetupList,
    RAB-InformationSetupList-r4,
    RB-ActivationTimeInfoList,
    RB-COUNT-C-InformationList,
    RB-COUNT-C-MSB-InformationList,
    RB-IdentityList,
    RB-InformationAffectedList,
    RB-InformationReconfigList,
    RB-InformationReconfigList-r4,
    RB-InformationReleaseList,
    RB-WithPDCP-InfoList,    SRB-InformationSetupList,
    SRB-InformationSetupList2,
    UL-CounterSynchronisationInfo,
-- Transport Channel IEs:
    CPCH-SetID,
    DL-AddReconfTransChInfo2List,
    DL-AddReconfTransChInfoList,
    DL-CommonTransChInfo,
    DL-CommonTransChInfo-r4,
    DL-DeletedTransChInfoList,
    DRAC-StaticInformationList,
    TFC-Subset,
    TFCS-Identity,
    UL-AddReconfTransChInfoList,
    UL-CommonTransChInfo,
    UL-DeletedTransChInfoList,
-- Physical Channel IEs :
    Alpha,
    CCTrCH-PowerControlInfo,
    CCTrCH-PowerControlInfo-r4,
    ConstantValue,
    CPCH-SetInfo,
    DL-CommonInformation,
    DL-CommonInformation-r4,
    DL-CommonInformationPost,
    DL-InformationPerRL,
    DL-InformationPerRL-List,
    DL-InformationPerRL-List-r4,
    DL-InformationPerRL-ListPostFDD,
    DL-InformationPerRL-PostTDD,
    DL-InformationPerRL-PostTDD-LCR-r4,
    DL-PDSCH-Information,
    DPCH-CompressedModeStatusInfo,
    FrequencyInfo,
    FrequencyInfoFDD,
    FrequencyInfoTDD,
    MaxAllowedUL-TX-Power,
    OpenLoopPowerControl-IPDL-TDD-r4,
    PDSCH-CapacityAllocationInfo,
    PDSCH-CapacityAllocationInfo-r4,
    PDSCH-Identity,
    PrimaryCCPCH-TX-Power,
    PUSCH-CapacityAllocationInfo,
    PUSCH-CapacityAllocationInfo-r4,
    PUSCH-Identity,
    RL-AdditionInformationList,
    RL-RemovalInformationList,

```

```

SpecialBurstScheduling,
SSDT-Information,
TFC-ControlDuration,
SSDT-UL-r4,
TimeslotList,
TimeslotList-r4,
TX-DiversityMode,
UL-ChannelRequirement,
UL-ChannelRequirement-r4,
UL-ChannelRequirementWithCPCH-SetID,
UL-ChannelRequirementWithCPCH-SetID-r4,
UL-DPCH-Info,
UL-DPCH-Info-r4,
UL-DPCH-InfoPostFDD,
UL-DPCH-InfoPostTDD,
UL-DPCH-InfoPostTDD-LCR-r4,
UL-SynchronisationParameters-r4,
UL-TimingAdvance,
UL-TimingAdvanceControl,
UL-TimingAdvanceControl-r4,
-- Measurement IEs :
AdditionalMeasurementID-List,
Frequency-Band,
EventResults,
InterFreqEventResults-LCR-r4-ext,
InterRAT-TargetCellDescription,
MeasuredResults,
MeasuredResults-v390ext,
MeasuredResultsList,
MeasuredResultsList-LCR-r4-ext,
MeasuredResultsOnRACH,
MeasurementCommand,
MeasurementCommand-r4,
MeasurementIdentity,
MeasurementReportingMode,
PrimaryCCPCH-RSCP,
TimeslotListWithISCP,
TrafficVolumeMeasuredResultsList,
UE-Positioning-GPS-AssistanceData,
UE-Positioning-Measurement-v390ext,
UE-Positioning-OTDOA-AssistanceData,
UE-Positioning-OTDOA-AssistanceData-r4ext,
UE-Positioning-OTDOA-AssistanceData-UEB,
UE-Positioning-IPDL-Parameters-TDD-r4-ext,
-- Other IEs :
BCCH-ModificationInfo,
CDMA2000-MessageList,
GSM-MessageList,
InterRAT-ChangeFailureCause,
InterRAT-HO-FailureCause,
InterRAT-UE-RadioAccessCapabilityList,
InterRAT-UE-SecurityCapList,
IntraDomainNasNodeSelector,
ProtocolErrorMoreInformation,
Rplmn-Information,
Rplmn-Information-r4,
SegCount,
SegmentIndex,
SFN-Prime,
SIB-Data-fixed,
SIB-Data-variable,
SIB-Type
FROM InformationElements

maxSIBperMsg
FROM Constant-definitions;

<Cut until the next modified section>

-- *****
--
-- INTER RAT HANDOVER INFO

```

```

--
-- *****
InterRATHandoverInfo ::= SEQUENCE {
-- This structure is defined for historical reasons, backward compatibility with
04.18
predefinedConfigStatusList CHOICE {
absent NULL,
present PredefinedConfigStatusList
},
ue-SecurityInformation CHOICE {
absent NULL,
present UE-SecurityInformation
},
ue-CapabilityContainer CHOICE {
absent NULL,
present OCTET STRING (SIZE (0..63))
-- octet aligned string containing IE UE-RadioAccessCapabilityInfo
},
-- Non critical extensions
v390NonCriticalExtensions CHOICE {
absent NULL,
present SEQUENCE {
interRATHandoverInfo-v390ext InterRATHandoverInfo-v390ext-IEs,
-- Reserved for future non critical extension
v3a0NonCriticalExtensions SEQUENCE {} OPTIONAL
interRATHandoverInfo-v3a0ext InterRATHandoverInfo-v3a0ext-IEs,
-- Reserved for future non critical extension
nonCriticalExtensions SEQUENCE {} OPTIONAL
} OPTIONAL
}
}
}

InterRATHandoverInfo-v390ext-IEs ::= SEQUENCE {
-- User equipment IEs
ue-RadioAccessCapability-v380ext UE-RadioAccessCapability-v380ext
OPTIONAL,
dl-PhysChCapabilityFDD-v380ext DL-PhysChCapabilityFDD-v380ext
}

InterRATHandoverInfo-v3a0ext-IEs ::= SEQUENCE {
-- User equipment IEs
ue-RadioAccessCapability-v3a0ext UE-RadioAccessCapability-v3a0ext
}

<Cut until the next modified section>

-- *****
--
-- RRC CONNECTION REQUEST
--
-- *****

RRCConnectionRequest ::= SEQUENCE {
-- TABULAR: Integrity protection shall not be performed on this message.
-- User equipment IEs
initialUE-Identity InitialUE-Identity,
establishmentCause EstablishmentCause,
protocolErrorIndicator ProtocolErrorIndicator,
-- The IE above is MD, but for compactness reasons no default value
-- has been assigned to it.
-- Measurement IEs
measuredResultsOnRACH MeasuredResultsOnRACH OPTIONAL,
-- Extension mechanism for non- release99 information
v3a0NonCriticalExtensions SEQUENCE {} OPTIONAL
rrcConnectionRequest-v3a0ext RRCConnectionRequest-v3a0ext-IEs,
-- Reserved for future non critical extension
nonCriticalExtensions SEQUENCE {} OPTIONAL
} OPTIONAL
}

```

```

RRCCConnectionRequest-v3a0ext-IEs ::= SEQUENCE {
  -- User equipment IEs
  -- R99 UEs shall set the ue-TestLevelIndicator in accordance with XX.YYY.
  -- There are no requirements on how UEs conforming to this version of the
  -- shall set the ue-TestLevelIndicator
  ue-TestLevelIndicator          UE-TestLevelIndicator
}

<Cut until the next modified section>

-- *****
--
-- UE CAPABILITY INFORMATION
--
-- *****

UECapabilityInformation ::= SEQUENCE {
  -- User equipment IEs
  rrc-TransactionIdentifier      RRC-TransactionIdentifier      OPTIONAL,
  ue-RadioAccessCapability      UE-RadioAccessCapability      OPTIONAL,
  -- Other IEs
  ue-RATSpecificCapability      InterRAT-UE-RadioAccessCapabilityList  OPTIONAL,
  v370NonCriticalExtensions     SEQUENCE {
    ueCapabilityInformation-v370ext UECapabilityInformation-v370ext,
    v380NonCriticalExtensions     SEQUENCE {
      ueCapabilityInformation-v380ext UECapabilityInformation-v380ext-IEs,
      -- Reserved for future non critical extension
      v3a0NonCriticalExtensions     SEQUENCE {
        ueCapabilityInformation-v3a0ext UECapabilityInformation-v3a0ext-
        IEs,
        -- Reserved for future non critical extension
        v4NonCriticalExtensions     SEQUENCE {
          ueCapabilityInformation-r3-r4-ext
          UECapabilityInformation-r3-r4-ext,
          nonCriticalExtensions-r4   SEQUENCE {}          OPTIONAL
        }          OPTIONAL
      }          OPTIONAL
    }          OPTIONAL
  }          OPTIONAL
}

UECapabilityInformation-v370ext ::= SEQUENCE {
  -- User equipment IEs
  ue-RadioAccessCapability-v370ext UE-RadioAccessCapability-v370ext
  OPTIONAL
}

UECapabilityInformation-v380ext-IEs ::= SEQUENCE {
  -- User equipment IEs
  ue-RadioAccessCapability-v380ext UE-RadioAccessCapability-v380ext
  OPTIONAL,
  dl-PhysChCapabilityFDD-v380ext   DL-PhysChCapabilityFDD-v380ext
}

UECapabilityInformation-v3a0ext ::= SEQUENCE {
  -- User equipment IEs
  ue-RadioAccessCapability-v3a0ext UE-RadioAccessCapability-v3a0ext
}

UECapabilityInformation-r3-r4-ext ::= SEQUENCE {
  -- User equipment IEs
  ue-RadioAccessCapability-r4-ext   UE-RadioAccessCapability-r4-ext   OPTIONAL
}

```

11.3 Information element definitions

InformationElements DEFINITIONS AUTOMATIC TAGS ::=

<Cut until the next modified section>

```
-- *****  
--  
--     USER EQUIPMENT INFORMATION ELEMENTS (10.3.3)  
--  
-- *****
```

<Cut until the next modified section>

```
UE-RadioAccessCapability-v3a0ext ::= SEQUENCE {  
    -- User equipment IEs  
    -- R99 UEs shall set the ue-TestLevelIndicator in accordance with XX.YYY.  
    -- There are no requirements on how UEs conforming to this version of the  
    -- shall set the ue-TestLevelIndicator  
    ue-TestLevelIndicator UE-TestLevelIndicator  
}
```

```
UE-TestLevelIndicator ::= ENUMERATED (notFullyTested, fullyTested)
```

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,
    U-RNTI,
    UE-RadioAccessCapability,
    UE-RadioAccessCapability-v370ext,
    UE-RadioAccessCapability-v380ext,
    UE-RadioAccessCapability-v3a0ext,
-- Radio Bearer IEs :
    PredefinedConfigStatusList,
    PredefinedConfigValueTag,
    RAB-InformationSetupList,
    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
;
```

```

-- *****
--
-- 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,
        -- Reserved for future non critical extension
        v3a0NonCriticalExtensions
      SEQUENCE {} OPTIONAL
        SRNC-RelocationInfo-v3a0ext SRNC-RelocationInfo-v3a0ext-IEs,
        -- Reserved for future non critical extension
        nonCriticalExtensions
      SEQUENCE {} 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 {
    SEQUENCE {
      fdd
      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 this IE 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
    }
}
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 {
    ue-RadioAccessCapability-v3a0ext  UE-RadioAccessCapability-v3a0ext
}

```

CHANGE REQUEST

⌘ **25.331 CR 1354** ⌘ rev **r1** ⌘ Current version: **3.9.0** ⌘

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

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

Title:	⌘ Introduction of interim test marker RRC		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI	Date:	⌘ 22-02-2002
Category:	⌘ F	Release:	⌘ R99
	<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>

Reason for change: ⌘ The changes included in this CR are proposed for the following reasons:

- A significant number of terminals will release prior to the availability of test tools that are able to verify the entire R99 functionality as defined in the core specifications. To avoid interoperability problems, a special indicator is needed to identify these terminals. This indication may be used by the network to avoid invoking certain functionality towards UEs that have been subject to limited testing, if problems occur

Summary of change: ⌘ The original revision of this CR introduces the following changes

- Test level indicator: This new IE is introduced to indicate if the level of testing that is applicable for the UE; it indicates whether or not the UE has passed the full set of conformance tests

Impact analysis:

Impacted functionality: the UE version indication feature

Correction type: Clarification of a function where the specification is ambiguous (ICS version) and incomplete.

Interoperability:

- Isolated impact: the impact is isolated; only the corrected functionality is affected
- CR implemented only by UTRAN: The change is backwards compatible; UTRAN can interpret absence of the extension as an indication that the UE is not fully tested
- CR implemented only by UE: The change is backwards compatible; UTRAN will ignore the not comprehended non- critical extension

Consequences if ⌘ UTRAN may need to avoid invoking functions that don't work for UEs with limited

not approved:	test scope. Otherwise, UTRAN may invoke functions that don't work towards UEs which have been subject to limited testing. This may disturb the system or deteriorate the response times
----------------------	---

Clauses affected:	⌘ 10.2.39, 10.3.3.42, 11.2, 11.3, 11.5
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ 25.331 v4.3.0, CR 1355r1 <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	⌘ This CR assumes that a document (referred to as XX.YYY) is created that includes how the UE shall set IE "Test level indicator"

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://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.

10.2.39 RRC CONNECTION REQUEST

RRC Connection Request is the first message transmitted by the UE when setting up an RRC Connection to the network.

RLC-SAP: TM

Logical channel: CCCH

Direction: UE → UTRAN

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Message Type	MP		Message Type	
UE information elements				
Initial UE identity	MP		Initial UE identity 10.3.3.15	
Establishment cause	MP		Establishment cause 10.3.3.11	
Protocol error indicator	MD		Protocol error indicator 10.3.3.27	Default value is FALSE
<u>Test level indicator</u>	<u>MP</u>		<u>Enumerated</u> (Not fully tested, fully tested)	<u>UEs shall set the IE in accordance with XX.YYY.</u>
Measurement information elements				
Measured results on RACH	OP		Measured results on RACH 10.3.7.45	

If the encoded message does not fill a transport block, the RRC layer shall insert padding according to subclause 12.1.

10.3.3.42 UE radio access capability

Information Element/Group name	Need	Multi	Type and reference	Semantics description
ICS version	MP		Enumerated(R99)	Indicates the release version of [42]-2 (Implementation Conformance Statement (ICS) proforma specification) that is applicable for the UE.
<u>Test level indicator</u>	<u>CV-not rrc connectionSetupComplete</u>		<u>Enumerated (Not fully tested, fully tested)</u>	<u>UEs shall set the IE in accordance with XX.YYY.</u>
PDCP capability	MP		PDCP capability 10.3.3.24	
RLC capability	MP		RLC capability 10.3.3.34	
Transport channel capability	MP		Transport channel capability 10.3.3.40	
RF capability FDD	OP		RF capability FDD 10.3.3.33	
RF Capability TDD	OP		RF capability TDD 10.3.3.33b	
Physical channel capability	MP		Physical channel capability 10.3.3.25	
UE multi-mode/multi-RAT capability	MP		UE multi-mode/multi-RAT capability 10.3.3.41	
Security capability	MP		Security capability 10.3.3.37	
UE positioning capability	MP		UE positioning capability 10.3.3.45	
Measurement capability	CH-fdd_req_susp		Measurement capability 10.3.3.21	

Condition	Explanation
<i>fdd_req_sup</i>	The IE is mandatory present if the IE "Multi-mode capability" has the value "FDD" or "FDD/TDD" and a FDD capability update has been requested in a previous message. Otherwise this field is not needed in the message.
<u><i>not_rrc_connectionSetupComplete</i></u>	The IE is not needed in the RRC CONNECTION SETUP COMPLETE message. Otherwise the IE is <u>mandatory present.</u>

11.2 PDU definitions

```
--*****
--
-- TABULAR: The message type and integrity check info are not
-- visible in this module as they are defined in the class module.
-- Also, all FDD/TDD specific choices have the FDD option first
-- and TDD second, just for consistency.
--
--*****

PDU-definitions DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS

-- Core Network IEs :
  CN-DomainIdentity,
  CN-InformationInfo,
  CN-InformationInfoFull,
  NAS-Message,
  PagingRecordTypeID,
-- UTRAN Mobility IEs :
  URA-Identity,
-- User Equipment IEs :
  ActivationTime,
  C-RNTI,
  CapabilityUpdateRequirement,
  CellUpdateCause,
  CipheringAlgorithm,
  CipheringModeInfo,
  EstablishmentCause,
  FailureCauseWithProtErr,
  FailureCauseWithProtErrTrId,
  InitialUE-Identity,
  IntegrityProtActivationInfo,
  IntegrityProtectionModeInfo,
  N-308,
  PagingCause,
  PagingRecordList,
  ProtocolErrorIndicator,
  ProtocolErrorIndicatorWithMoreInfo,
  Rb-timer-indicator,
  RedirectionInfo,
  RejectionCause,
  ReleaseCause,
  RRC-StateIndicator,
  RRC-TransactionIdentifier,
  SecurityCapability,
  START-Value,
  STARTList,
  U-RNTI,
  U-RNTI-Short,
  UE-RadioAccessCapability,
  UE-RadioAccessCapability-v370ext,
  UE-RadioAccessCapability-v380ext,
  DL-PhysChCapabilityFDD-v380ext,
  UE-RadioAccessCapability-v3a0ext,
  UE-ConnTimersAndConstants,
  UE-SecurityInformation,
  URA-UpdateCause,
  UTRAN-DRX-CycleLengthCoefficient,
```

```

    WaitTime,
-- Radio Bearer IEs :
    DefaultConfigIdentity,
    DefaultConfigMode,
    DL-CounterSynchronisationInfo,
    PredefinedConfigIdentity,
    PredefinedConfigStatusList,
    RAB-Info,
    RAB-Info-Post,
    RAB-InformationList,
    RAB-InformationReconfigList,
    RAB-InformationSetupList,
    RB-ActivationTimeInfoList,
    RB-COUNT-C-InformationList,
    RB-COUNT-C-MSB-InformationList,
    RB-IdentityList,
    RB-InformationAffectedList,
    RB-InformationReconfigList,
    RB-InformationReleaseList,
    SRB-InformationSetupList,
    SRB-InformationSetupList2,
    UL-CounterSynchronisationInfo,
-- Transport Channel IEs:
    CPCH-SetID,
    DL-AddReconfTransChInfo2List,
    DL-AddReconfTransChInfoList,
    DL-CommonTransChInfo,
    DL-DeletedTransChInfoList,
    DRAC-StaticInformationList,
    TFC-Subset,
    TFCS-Identity,
    UL-AddReconfTransChInfoList,
    UL-CommonTransChInfo,
    UL-DeletedTransChInfoList,
-- Physical Channel IEs :
    Alpha,
    CCTrCH-PowerControlInfo,
    ConstantValue,
    CPCH-SetInfo,
    DL-CommonInformation,
    DL-CommonInformationPost,
    DL-InformationPerRL,
    DL-InformationPerRL-List,
    DL-InformationPerRL-ListPostFDD,
    DL-InformationPerRL-PostTDD,
    DL-PDSCH-Information,
    DPCH-CompressedModeStatusInfo,
    FrequencyInfo,
    FrequencyInfoFDD,
    FrequencyInfoTDD,
    MaxAllowedUL-TX-Power,
    PDSCH-CapacityAllocationInfo,
    PDSCH-Identity,
    PrimaryCCPCH-TX-Power,
    PUSCH-CapacityAllocationInfo,
    PUSCH-Identity,
    RL-AdditionInformationList,
    RL-RemovalInformationList,
    SpecialBurstScheduling,
    SSDT-Information,
    TFC-ControlDuration,
    TimeslotList,
    TX-DiversityMode,
    UL-ChannelRequirement,
    UL-ChannelRequirementWithCPCH-SetID,
    UL-DPCH-Info,
    UL-DPCH-InfoPostFDD,
    UL-DPCH-InfoPostTDD,
    UL-TimingAdvance,
    UL-TimingAdvanceControl,
-- Measurement IEs :

```



```

AdditionalMeasurementID-List,
Frequency-Band,
EventResults,
InterRAT-TargetCellDescription,
MeasuredResults,
MeasuredResults-v390ext,
MeasuredResultsList,
MeasuredResultsOnRACH,
MeasurementCommand,
MeasurementIdentity,
MeasurementReportingMode,
PrimaryCCPCH-RSCP,
TimeslotListWithISCP,
TrafficVolumeMeasuredResultsList,
UE-Positioning-GPS-AssistanceData,
UE-Positioning-Measurement-v390ext,
UE-Positioning-OTDOA-AssistanceData,
UE-Positioning-OTDOA-AssistanceData-UEB,
-- Other IEs :
BCCH-ModificationInfo,
CDMA2000-MessageList,
GSM-MessageList,
InterRAT-ChangeFailureCause,
InterRAT-HO-FailureCause,
InterRAT-UE-RadioAccessCapabilityList,
InterRAT-UE-SecurityCapList,
IntraDomainNasNodeSelector,
ProtocolErrorMoreInformation,
Rplmn-Information,
SegCount,
SegmentIndex,
SFN-Prime,
SIB-Data-fixed,
SIB-Data-variable,
SIB-Type
FROM InformationElements

maxSIBperMsg
FROM Constant-definitions;

<Cut until the next modified section>

-- *****
--
-- INTER RAT HANDOVER INFO
--
-- *****

InterRATHandoverInfo ::= SEQUENCE {
-- This structure is defined for historical reasons, backward compatibility with
04.18
predefinedConfigStatusList CHOICE {
absent NULL,
present PredefinedConfigStatusList
},
ue-SecurityInformation CHOICE {
absent NULL,
present UE-SecurityInformation
},
ue-CapabilityContainer CHOICE {
absent NULL,
present OCTET STRING (SIZE (0..63))
-- octet aligned string containing IE UE-RadioAccessCapabilityInfo
},
-- Non critical extensions
v390NonCriticalExtensions CHOICE {
absent NULL,
present SEQUENCE {
interRATHandoverInfo-v390ext InterRATHandoverInfo-v390ext-IEs,
-- Reserved for future non critical extension
v3a0NonCriticalExtensions SEQUENCE { } OPTIONAL
interRATHandoverInfo-v3a0ext InterRATHandoverInfo-v3a0ext-IEs,

```

```

        }
        }
    }
}

```

```

InterRATHandoverInfo-v390ext-IEs ::= SEQUENCE {
    -- User equipment IEs
    ue-RadioAccessCapability-v380ext    UE-RadioAccessCapability-v380ext
    OPTIONAL,
    dl-PhysChCapabilityFDD-v380ext      DL-PhysChCapabilityFDD-v380ext
}

```

```

InterRATHandoverInfo-v3a0ext-IEs ::= SEQUENCE {
    -- User equipment IEs
    ue-RadioAccessCapability-v3a0ext    UE-RadioAccessCapability-v3a0ext
}

```

<Cut until the next modified section>

```

-- *****
--
-- RRC CONNECTION REQUEST
--
-- *****

```

```

RRCConnectionRequest ::= SEQUENCE {
    -- TABULAR: Integrity protection shall not be performed on this message.
    -- User equipment IEs
    initialUE-Identity          InitialUE-Identity,
    establishmentCause          EstablishmentCause,
    protocolErrorIndicator      ProtocolErrorIndicator,
    -- The IE above is MD, but for compactness reasons no default value
    -- has been assigned to it.
    -- Measurement IEs
    measuredResultsOnRACH       MeasuredResultsOnRACH          OPTIONAL,
    -- Extension mechanism for non- release99 information
    v3a0NonCriticalExtensions   SEQUENCE {} OPTIONAL
    rrcConnectionRequest-v3a0ext RRCConnectionRequest-v3a0ext-IEs,
    -- Reserved for future non critical extension
    nonCriticalExtensions       SEQUENCE {} OPTIONAL
}

```

```

RRCConnectionRequest-v3a0ext-IEs ::= SEQUENCE {
    -- User equipment IEs
    -- R99 UEs shall include IE "ue-TestLevelIndicator"
    ue-TestLevelIndicator       UE-TestLevelIndicator
}

```

<Cut until the next modified section>

```

-- *****
--
-- UE CAPABILITY INFORMATION
--
-- *****

```

```

UECapabilityInformation ::= SEQUENCE {
    -- User equipment IEs
    rrc-TransactionIdentifier    RRC-TransactionIdentifier    OPTIONAL,
    ue-RadioAccessCapability     UE-RadioAccessCapability    OPTIONAL,
    -- Other IEs
    ue-RATSpecificCapability     InterRAT-UE-RadioAccessCapabilityList    OPTIONAL,
    -- Non critical extensions
    v370NonCriticalExtensions    SEQUENCE {
        ueCapabilityInformation-v370ext UECapabilityInformation-v370ext,
        v380NonCriticalExtensions    SEQUENCE {
            ueCapabilityInformation-v380ext    UECapabilityInformation-v380ext-IEs,

```

```

-- Reserved for future non critical extension
v3a0NonCriticalExtensions SEQUENCE {} OPTIONAL
ueCapabilityInformation-v3a0ext UECapabilityInformation-v3a0ext-
IEs,
-- Reserved for future non critical extension
nonCriticalExtensions SEQUENCE {} OPTIONAL
} OPTIONAL
} OPTIONAL
}

UECapabilityInformation-v370ext ::= SEQUENCE {
-- User equipment IEs
ue-RadioAccessCapability-v370ext UE-RadioAccessCapability-v370ext
OPTIONAL
}

UECapabilityInformation-v380ext-IEs ::= SEQUENCE {
-- User equipment IEs
ue-RadioAccessCapability-v380ext UE-RadioAccessCapability-v380ext
OPTIONAL,
dl-PhysChCapabilityFDD-v380ext DL-PhysChCapabilityFDD-v380ext
}

UECapabilityInformation-v3a0ext ::= SEQUENCE {
-- User equipment IEs
ue-RadioAccessCapability-v3a0ext UE-RadioAccessCapability-v3a0ext
}

```

11.3 Information element definitions

InformationElements DEFINITIONS AUTOMATIC TAGS ::=

<Cut until the next modified section>

```
-- *****
--
--      USER EQUIPMENT INFORMATION ELEMENTS (10.3.3)
--
-- *****
```

<Cut until the next modified section>

```
UE-RadioAccessCapability ::=          SEQUENCE {
    ics-Version                    ICS-Version,
    pdcp-Capability                PDCP-Capability,
    rlc-Capability                  RLC-Capability,
    transportChannelCapability      TransportChannelCapability,
    rf-Capability                    RF-Capability,
    physicalChannelCapability        PhysicalChannelCapability,
    ue-MultiModeRAT-Capability      UE-MultiModeRAT-Capability,
    securityCapability              SecurityCapability,
    ue-positioning-Capability        UE-Positioning-Capability,
    measurementCapability            MeasurementCapability      OPTIONAL
}

UE-RadioAccessCapabilityInfo ::=       SEQUENCE {
    ue-RadioAccessCapability        UE-RadioAccessCapability,
    ue-RadioAccessCapability-v370ext UE-RadioAccessCapability-v370ext
}

UE-RadioAccessCapability-v370ext ::=   SEQUENCE {
    ue-RadioAccessCapabBandFDDList  UE-RadioAccessCapabBandFDDList
}

UE-RadioAccessCapability-v380ext ::=   SEQUENCE {
    ue-PositioningCapabilityExt      UE-PositioningCapabilityExt
}

UE-RadioAccessCapability-v3a0ext ::=   SEQUENCE {
    R99 UEs shall include IE "ue-TestLevelIndicator"
    ue-TestLevelIndicator            UE-TestLevelIndicator      OPTIONAL
}

UE-TestLevelIndicator ::=             ENUMERATED (notFullyTested,fullyTested)
```

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,  
    U-RNTI,  
    UE-RadioAccessCapability,  
    UE-RadioAccessCapability-v370ext,  
    UE-RadioAccessCapability-v380ext,  
    UE-RadioAccessCapability-v3a0ext,
```

```
-- Radio Bearer IEs :
```

```
    PredefinedConfigStatusList,  
    PredefinedConfigValueTag,  
    RAB-InformationSetupList,  
    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;
```

```
<Cut until the next modified section>
```

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

```

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

InterRATHandoverInfoWithInterRATCapabilities ::= CHOICE {
  r3
    interRATHandoverInfo-r3
    InterRATHandoverInfoWithInterRATCapabilities-r3-
  IEs,
  -- IE InterRATHandoverInfoWithInterRATCapabilities-r3-IEs also
  -- includes non critical extensions
  v390NonCriticalExtensions
    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 (SIZE (0..255))
  -- 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
}

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

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

SRNC-RelocationInfo ::= CHOICE {
  r3
    SRNC-RelocationInfo-r3
    SRNC-RelocationInfo-r3-IEs,
  v380NonCriticalExtensions
    SRNC-RelocationInfo-v380ext
    SRNC-RelocationInfo-v380ext-IEs,
  -- Reserved for future non critical extension
  v390NonCriticalExtensions
    SRNC-RelocationInfo-v390ext
    SRNC-RelocationInfo-v390ext-IEs,
  -- Reserved for future non critical extension
  v3a0NonCriticalExtensions
    SRNC-RelocationInfo-v3a0ext
    SRNC-RelocationInfo-v3a0ext-IEs,
  -- Reserved for future non critical extension
  nonCriticalExtensions
    SEQUENCE {} 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 {
    ue-RadioAccessCapability-v3a0ext  UE-RadioAccessCapability-v3a0ext
}

```

CHANGE REQUEST

⌘ **25.306 CR 032** ⌘ rev - ⌘ Current version: **4.3.0** ⌘

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

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

Title:	⌘ Introduction of test level indicator within UE radio access capabilities		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI	Date:	⌘ 23-02-2002
Category:	⌘ C	Release:	⌘ REL-4
	<p>Use <u>one</u> of the following categories:</p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>

Reason for change: ⌘ The changes included in this CR are proposed for the following reasons:

- A significant number of terminals will release prior to the availability of test tools that are able to verify the entire R99 functionality as defined in the core specifications. To avoid interoperability problems, a special indicator is needed to identify these terminals. This indication may be used by the network to avoid invoking certain functionality towards UEs that have been subject to limited testing, if problems occur

Summary of change: ⌘ The original revision of this CR introduces the following changes

- Test level indicator: This new IE is introduced to indicate if the level of testing that is applicable for the UE; it indicates whether or not the UE has passed the full set of conformance tests

Impact analysis:

Impacted functionality: the UE version indication feature

Correction type: Clarification of a function where the specification is ambiguous and incomplete. Would affect UE implementations while it is a UTRAN option to utilise the additional information provided by the UE

Interoperability:

- Isolated impact: the impact is isolated; only the corrected functionality is affected
- CR implemented only by UTRAN: The change is backwards compatible; UTRAN can interpret absence of the extension as an indication that the UE is not fully tested
- CR implemented only by UE: The change is backwards compatible; UTRAN will ignore the not comprehended non- critical extension

Consequences if not approved:	⌘	UTRAN may need to avoid invoking functions that don't work for UEs that have not been fully tested. Otherwise, UTRAN may invoke functions that don't work towards UEs which have been subject to limited testing. This may disturb the system or deteriorate the response times
--------------------------------------	---	---

Clauses affected:	⌘	4.10, 5.1	
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications	⌘ 25.306 v3.4.0, CR 031r1
		<input type="checkbox"/> Test specifications	
		<input type="checkbox"/> O&M Specifications	
Other comments:	⌘		

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://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.

4.10 General capabilities

ICS version

This is defined as the release version of the Implementation Conformance Statement (ICS) proforma specification [3] that is applicable for the UE.

Test level indicator

This is defined as the level of testing that is applicable for the UE. The test level indicator indicates whether or not the UE been fully tested i.e. whether it has passed the full set of conformance tests covering all of the core specification's functionality that is applicable for the UE.

5.1 Value ranges

Table 5.1: UE radio access capability parameter value ranges

		UE radio access capability parameter	Value range
PDCP parameters		Support for RFC 2507	Yes/No
		Support for RFC 3095	Yes/No
		Support for loss-less SRNS relocation	Yes/No
		Maximum header compression context space	512, 1024, 2048, 4096, 8192 bytes
RLC parameters		Total RLC AM buffer size	2,10,50,100,150,500,1000 kBytes
		Maximum number of AM entities	3,4,5,6,8,16,30
PHY parameters	Transport channel parameters in downlink	Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	4, 8, 16, 32
		Maximum number of simultaneous CCTrCH	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval	4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC in the TFCS	16, 32, 48, 64, 96, 128, 256, 512, 1024
		Maximum number of TF	32, 64, 128, 256, 512, 1024
		Support for turbo decoding	Yes/No
	Transport channel parameters in uplink	Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant	640, 1280, 2560, 3840, 5120, 6400, 7680, 8960, 10240, 20480, 40960, 81920, 163840
		Maximum number of simultaneous transport channels	2, 4, 8, 16, 32
		Maximum number of simultaneous CCTrCH of DCH type (TDD only)	1, 2, 3, 4, 5, 6, 7, 8
		Maximum total number of transport blocks transmitted within TTIs that start at the same time	2, 4, 8, 16, 32, 48, 64, 96, 128, 256, 512
		Maximum number of TFC in the TFCS	4, 8, 16, 32, 48, 64, 96, 128, 256, 512, 1024
		Maximum number of TF	32, 64, 128, 256, 512, 1024
		Support for turbo encoding	Yes/No
	FDD Physical channel parameters in downlink	Maximum number of DPCH/PDSCH codes to be simultaneously received	1, 2, 3, 4, 5, 6, 7, 8
		Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH)	600, 1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 48000, 57600, 67200, 76800
		Support for SF 512	Yes/No
		Support of PDSCH	Yes/No
		Simultaneous reception of SCCPCH and DPCH	Yes/No

		UE radio access capability parameter	Value range
PDCP parameters		Support for RFC 2507	Yes/No
		Simultaneous reception of SCCPCH, DPCH and PDSCH	Yes/No
		Maximum number of simultaneous S-CCPCH radio links	1 NOTE: Only the value 1 is part of this release of the specification
		Support of dedicated pilots for channel estimation	Yes/No
	FDD Physical channel parameters in uplink	Maximum number of DPDCH bits transmitted per 10 ms	600, 1200, 2400, 4800, 9600, 19200, 28800, 38400, 48000, 57600
		Support of PCPCH	Yes/No
	TDD 3.84 Mcps physical channel parameters in downlink	Maximum number of timeslots per frame	1..14
		Maximum number of physical channels per frame	1,2,3..224
		Minimum SF	16, 1
		Support of PDSCH	Yes/No
		Maximum number of physical channels per timeslot	1..16
	TDD 3.84 Mcps physical channel parameters in uplink	Maximum Number of timeslots per frame	1..14
		Maximum number of physical channels per timeslot	1, 2
		Minimum SF	16,8,4,2,1
		Support of PUSCH	Yes/No
	TDD 1.28 Mcps physical channel parameters in downlink	Maximum number of timeslots per subframe	1..6
		Maximum number of physical channels per subframe	1,2,3,...,96
		Minimum SF	16, 1
		Support of PDSCH	Yes/No
		Maximum number of physical channels per timeslot	1..16
Support 8PSK		Yes/No	
TDD 1.28 Mcps physical channel parameters in uplink	Maximum number of timeslots per subframe	1..6	
	Maximum number of physical channels per timeslot	1,2	
	Minimum SF	16,8,4,2,1	
	Support of 8PSK	Yes/No	
	Support of PUSCH	Yes/No	
RF parameters	FDD RF parameters	UE power class	3, 4 NOTE: Only power classes 3 and 4 are part of this release of the specification
		Tx/Rx frequency separation	190 MHz 174.8-205.2 MHz 134.8-245.2 MHz
RF parameters	TDD 3.84 Mcps RF parameters	UE power class	2,3 NOTE: Only power classes 2 and 3 are part of this release of the specification
		Radio frequency bands	a), b), c), a+b), a+c), b+c), a+b+c)
	TDD 1.28 Mcps RF parameters	UE power class	2,3
		Radio frequency bands	a), b), c), a+b), a+c), b+c), a+b+c)
Multi-mode related parameters		Support of UTRA FDD	Yes/No
		Support of UTRA TDD 3.84 Mcps	Yes/No
		Support of UTRA TDD 1.28 Mcps	Yes/No
Multi-RAT related parameters		Support of GSM	Yes/No (per GSM frequency band)
		Support of multi-carrier	Yes/No
UE positioning related parameters		Standalone location method(s) supported	Yes/No

	UE radio access capability parameter	Value range
PDCP parameters	Support for RFC 2507	Yes/No
	Network assisted GPS support	Network based / UE based / Both/ None
	GPS reference time capable	Yes/No
	Support for IPDL	Yes/No
	Support for OTDOA UE based method	Yes/No
	Support for Rx-Tx time difference type 2 measurement	Yes/No
Measurement related capabilities	Need for downlink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
	Need for uplink compressed mode	Yes/No (per frequency band, UTRA mode and RAT)
General capabilities	ICS version	R99
	Test level indicator	Not fully tested/ fully tested