## TSG-RAN Meeting #23 Phoenix, USA, 10-12 March 2004

Title: Frequency band alignment with TS 25.101

Source: TSG-RAN WG2

Agenda item: 7.3.5, 8.1.2, 8.10

Spec	CR	Rev	Phase	Subject	Cat	Version- Current	Version- New	Doc-2nd- Level	Workitem
25.307	015	1		Frequency band alignment with 25.101	A	5.1.0	5.2.0	R2-040349	Rinimp-UMTS1721, Rinimp-UMTS1800, Rinimp-UMTS1900
25.307	016	1		Frequency band alignment with 25.101	A	6.0.0	6.1.0	R2-040350	Rinimp-UMTS1721, Rinimp-UMTS1800, Rinimp-UMTS1900
25.307	017	-		Frequency band alignment with 25.101	F	3.2.0	3.3.0	R2-040346	Rinimp-UMTS1721, Rinimp-UMTS1800, Rinimp-UMTS1900
25.307	018	-		Frequency band alignment with 25.101	A	4.2.0	4.3.0	R2-040347	Rinimp-UMTS1721, Rinimp-UMTS1800, Rinimp-UMTS1900
25.331	2228	-		Frequency band alignment with 25.101	F	5.7.1	5.8.0	R2-040263	Rinimp-UMTS1721, Rinimp-UMTS1900, Rinimp-UMTS1800
25.331	2229	-		Frequency band alignment with 25.101	F	6.0.1	6.1.0	R2-040264	Rinimp-UMTS1721, Rinimp-UMTS1900, Rinimp-UMTS1800, Rinimp-UMTS800

## 3GPP TSG-RAN WG2 Meeting #40 Sophia Antipolis, France, 12th -16th January 2004

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

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## 1 Scope

The present document specifies requirements on UEs supporting a frequency band that is independent of release. TSG-RAN has agreed that the standardisation of new frequency bands may be independent of a release. However, in order to implement a UE that conforms to a particular release but supports a band of operation that is specified in a later release, it is necessary to specify some extra requirements.

For example, <u>UMTS 1800Band III</u> is contained in the Release 5 specifications. In order to implement a UE conforming to Release '4 but supporting the 1800 MHz bandBand III, it is necessary for the UE to additionally conform to some parts of the Release 5 specifications, such as the radio frequency requirements for the <u>1800 MHz bandBand III</u> and some signalling extensions relating to the UE radio access capabilities.

All frequency bands are fully specified in this release of the specifications. The present document does not contain any requirements for UEs supporting frequency bands independent of release.

# 6 UMTS 800Band VI Independent of Release

<u>UMTS 800Band VI</u> is specified in Release 6 but is defined as a release-independent frequency band. This approach aligns the <u>UMTS 800Band VI</u> band with other frequency bands when considering features that have to be supported in different releases.

### 6.1 UMTS 800Band VI UE

UEs that conform to Release '99 and support the 800 MHz frequency band Band VI shall support the following requirements in Release 6:

### 6.1.1 RF Requirements

The UE shall comply with the RF requirements for the 800 MHz band Band VI specified in [9]. These requirements are:

Section 5: Frequency bands and channel arrangement;

Section 6: Transmitter characteristics;

Section 7: Receiver characteristics.

Other requirements for radio reception and transmission requirements are defined in [2].

The UE shall comply with the Radio Resource Management requirements for the 800 MHz band Band VI specified in [10]. These requirements are:

Section 9.1: Measurement Performances for UE.

Other requirements for radio resource management are defined in [7].

### 6.1.2 Signalling Requirements

The UE shall support the following RRC extensions specified in [8]:

- The parameter value "<u>UMTS800Band VI</u>" for the IE "FDD frequency band" contained within the IEs "UE radio access capability extension" and "Measurement capability extension". The UE shall use this parameter value in order to signal its radio access capabilities relating to the 800 MHz band Band VI.
- The IE "Frequency band indicator" contained within the IEs "System Information Block type 5" and "System Information Block type 6". The UE shall use this IE to determine whether it is compliant with the RF requirement in the indicated frequency band, in case the UE is in the frequency that belongs to multiple frequency bands.

NOTE: The UE must be able to at least decode any unrelated RRC extensions that can be included in between the release it supports, and the IE "Frequency band indicator".

# 3GPP TSG-RAN WG2 Meeting #40 Sophia Antipolis, France, 12th -16th January 2004

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Category:  # A  Use one of the following categories:  F (correction)  A (corresponds to a correction in an earlier release)  B (addition of feature),  C (functional modification of feature)  D (editorial modification)  Detailed explanations of the above categories can be found in 3GPP TR 21.900.  Release: # Rel-6  Use one of the following release  2 (GSM Phase 2)  R96 (Release 1996)  R97 (Release 1997)  R98 (Release 1998)  R99 (Release 1999)  Rel-4 (Release 4)  Rel-5 (Release 5)  Rel-6 (Release 6)									eases:				
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#### How to create CRs using this form:

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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.

## 1 Scope

The present document specifies requirements on UEs supporting a frequency band that is independent of release. TSG-RAN has agreed that the standardisation of new frequency bands may be independent of a release. However, in order to implement a UE that conforms to a particular release but supports a band of operation that is specified in a later release, it is necessary to specify some extra requirements.

For example, <u>UMTS 1800Band III</u> is contained in the Release 5 specifications. In order to implement a UE conforming to Release '4 but supporting the 1800 MHz bandBand III, it is necessary for the UE to additionally conform to some parts of the Release 5 specifications, such as the radio frequency requirements for the <u>1800 MHz bandBand III</u> and some signalling extensions relating to the UE radio access capabilities.

All frequency bands are fully specified in this release of the specifications. The present document does not contain any requirements for UEs supporting frequency bands independent of release.

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## 3GPP TSG-RAN WG2 Meeting #40 Sophia Antipolis, France, 12th -16th January 2004

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## 1 Scope

The present document specifies requirements on UEs supporting a frequency band that is independent of release. TSG-RAN has agreed that the standardisation of new frequency bands may be independent of a release. However, in order to implement a UE that conforms to a particular release but supports a band of operation that is specified in a later release, it is necessary to specify some extra requirements.

For example, <u>UMTS 1800Band III</u> is contained in the Release 5 specifications. In order to implement a UE conforming to Release '4 but supporting the 1800 MHz bandBand III, it is necessary for the UE to additionally conform to some parts of the Release 5 specifications, such as the radio frequency requirements for the <u>1800 MHz bandBand III</u> and some signalling extensions relating to the UE radio access capabilities.

All frequency bands are fully specified in this release of the specifications. The present document does not contain any requirements for UEs supporting frequency bands independent of release.

# 4 UMTS 1800Band III Independent of Release

<u>UMTS-1800Band III</u> is specified in Release 5 but is defined as a release-independent frequency band. This approach aligns the <u>UMTS-1800 bandBand III</u> with other frequency bands when considering features that have to be supported in different releases.

## 4.1 UMTS 1800Band III UE

UEs that conform to Release '99 and support the 1800 MHz frequency band Band III shall support the following requirements in Release 5.

### 4.1.1 RF Requirements

The UE shall comply with the RF requirements for the 1800 MHz band Band III specified in [2]. These requirements are:

- Section 5: Frequency bands and channel arrangement;
- Section 6: Transmitter characteristics;
- Section 7: Receiver characteristics.

Other requirements for radio reception and transmission requirements are defined in [5].

The UE shall comply with the Radio Resource Management requirements for the 1800 MHz band III specified in [7]. These requirements are:

Section 9.1: Measurement Performances for UE.

Other requirements for radio resource management are defined in [6].

### 4.1.2 Signalling Requirements

The UE shall support the following RRC extensions specified in [3]:

- The parameter value "<u>UMTS1800Band III</u>" for the IE "FDD frequency band" contained within the IEs "UE radio access capability extension" and "Measurement capability extension". The UE shall use this parameter value in order to signal its radio access capabilities relating to the 1800 MHz bandBand III.

# 5 UMTS 1900 Band II Independent of Release

<u>UMTS 1900Band II</u> is specified in Release 5 but is defined as a release-independent frequency band. This approach aligns the <u>UMTS 1900Band II</u> band with other frequency bands when considering features that have to be supported in different releases.

## 5.1 UMTS 1900Band II UE

UEs that conform to Release '99 and support the 1900 MHz frequency bandBand II shall support the following requirements in Release 5

## 5.1.1 RF Requirements

The UE shall comply with the RF requirements for the 1900 MHz band Band II specified in [2]. These requirements are:

Section 5: Frequency bands and channel arrangement;

Section 6: Transmitter characteristics:

Section 7: Receiver characteristics.

Other requirements for radio reception and transmission requirements are defined in [5].

The UE shall comply with the Radio Resource Management requirements for the 1900 MHz band Band II specified in [7]. These requirements are:

Section 9.1: Measurement Performances for UE.

Other requirements for radio resource management are defined in [6].

### 5.1.2 Signalling Requirements

Release '99 contains the necessary signalling for the 1900 MHz frequency band II [4].

# 6 UMTS 800Band VI Independent of Release

<u>UMTS 800Band VI</u> is specified in Release 6 but is defined as a release-independent frequency band. This approach aligns the <u>UMTS 800 band Band VI</u> with other frequency bands when considering features that have to be supported in different releases.

### 6.1 UMTS 800Band VI UE

UEs that conform to Release '99 and support the 800 MHz frequency bandBand VI shall support the following requirements in Release 6

### 6.1.1 RF Requirements

The UE shall comply with the RF requirements for the 800 MHz bandBand VI specified in [9]. These requirements are:

- Section 5: Frequency bands and channel arrangement;
- Section 6: Transmitter characteristics;
- Section 7: Receiver characteristics.

Other requirements for radio reception and transmission requirements are defined in [5].

The UE shall comply with the Radio Resource Management requirements for the 800 MHz band Band VI specified in [10]. These requirements are:

Section 9.1: Measurement Performances for UE.

Other requirements for radio resource management are defined in [6].

## 6.1.2 Signalling Requirements

The UE shall support the following RRC extensions specified in [8]:

- The parameter value "<u>UMTS800Band VI</u>" for the IE "FDD frequency band" contained within the IEs "UE radio access capability extension" and "Measurement capability extension". The UE shall use this parameter value in order to signal its radio access capabilities relating to the 800 MHz bandBand VI.
- The IE "Frequency band indicator" contained within the IEs "System Information Block type 5" and "System Information Block type 6". The UE shall use this IE to determine whether it is compliant with the RF requirement in the indicated frequency band, in case the UE is in the frequency that belongs to multiple frequency bands.

NOTE: The UE must be able to at least decode any unrelated RRC extensions that can be included in between the release it supports, and the IE "Frequency band indicator".

## 3GPP TSG-RAN WG2 Meeting #40 Sophia Antipolis, France, 12th -16th January 2004

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## 1 Scope

The present document specifies requirements on UEs supporting a frequency band that is independent of release. TSG-RAN has agreed that the standardisation of new frequency bands may be independent of a release. However, in order to implement a UE that conforms to a particular release but supports a band of operation that is specified in a later release, it is necessary to specify some extra requirements.

For example, <u>UMTS 1800Band III</u> is contained in the Release 5 specifications. In order to implement a UE conforming to Release '4 but supporting the 1800 MHz bandBand III, it is necessary for the UE to additionally conform to some parts of the Release 5 specifications, such as the radio frequency requirements for the <u>1800 MHz bandBand III</u> and some signalling extensions relating to the UE radio access capabilities.

All frequency bands are fully specified in this release of the specifications. The present document does not contain any requirements for UEs supporting frequency bands independent of release.

# 4 UMTS 1800 Band III Independent of Release

UMTS 1800 is specified in Release 5 but is defined as a release-independent frequency band. This approach aligns the UMTS 1800 band with other frequency bands when considering features that have to be supported in different releases.

### 4.1 UMTS 1800Band III UE

UEs that conform to Release 4 and support the 1800 MHz frequency band Band III shall support the following requirements in Release 5.

### 4.1.1 RF Requirements

The UE shall comply with the RF requirements for the 1800 MHz band Band III specified in [2]. These requirements are:

Section 5: Frequency bands and channel arrangement;

Section 6: Transmitter characteristics;

Section 7: Receiver characteristics.

Other requirements for radio reception and transmission requirements are defined in [5].

The UE shall comply with the Radio Resource Management requirements for the 1800 MHz band III specified in [7]. These requirements are:

Section 9.1: Measurement Performances for UE.

Other requirements for radio resource management are defined in [6].

## 4.1.2 Signalling Requirements

The UE shall support the following RRC extensions specified in [3]:

- The parameter value "<u>UMTS1800Band III</u>" for the IE "FDD frequency band" contained within the IEs "UE radio access capability extension" and "Measurement capability extension". The UE shall use this parameter value in order to signal its radio access capabilities relating to the 1800 MHz bandBand III.

# 5 UMTS 1900Band II Independent of Release

<u>UMTS 1900Band II</u> is specified in Release 5 but is defined as a release-independent frequency band. This approach aligns the <u>UMTS 1900 bandBand II</u> with other frequency bands when considering features that have to be supported in different releases.

## 5.1 UMTS 1900Band II UE

UEs that conform to Release 4 and support the 1900 MHz frequency band Band II shall support the following requirements in Release 5

## 5.1.1 RF Requirements

The UE shall comply with the RF requirements for the 1900 MHz band Band II specified in [2]. These requirements are:

Section 5: Frequency bands and channel arrangement;

Section 6: Transmitter characteristics;

Section 7: Receiver characteristics.

Other requirements for radio reception and transmission requirements are defined in [5].

The UE shall comply with the Radio Resource Management requirements for the 1900 MHz band Band II specified in [7]. These requirements are:

Section 9.1: Measurement Performances for UE.

Other requirements for radio resource management are defined in [6].

### 5.1.2 Signalling Requirements

Release 4 contains the necessary signalling for the 1900 MHz frequency band Band II [4].

# 6 UMTS 800Band VI Independent of Release

<u>UMTS 800Band VI</u> is specified in Release 6 but is defined as a release-independent frequency band. This approach aligns the <u>UMTS 800 band Band VI</u> with other frequency bands when considering features that have to be supported in different releases.

### 6.1 UMTS 800Band VI UE

UEs that conform to Release '99 and support the 800 MHz frequency bandBand VI shall support the following requirements in Release 6:

### 6.1.1 RF Requirements

The UE shall comply with the RF requirements for the 800 MHz bandBand VI specified in [9]. These requirements are:

- Section 5: Frequency bands and channel arrangement;
- Section 6: Transmitter characteristics:
- Section 7: Receiver characteristics.

Other requirements for radio reception and transmission requirements are defined in [5].

The UE shall comply with the Radio Resource Management requirements for the 800 MHz band Band VI specified in [10]. These requirements are:

Section 9.1: Measurement Performances for UE.

Other requirements for radio resource management are defined in [6].

## 6.1.2 Signalling Requirements

The UE shall support the following RRC extensions specified in [8]:

- The parameter value "<u>UMTS800Band VI</u>" for the IE "FDD frequency band" contained within the IEs "UE radio access capability extension" and "Measurement capability extension". The UE shall use this parameter value in order to signal its radio access capabilities relating to the 800 MHz bandBand VI.
- The IE "Frequency band indicator" contained within the IEs "System Information Block type 5" and "System Information Block type 6". The UE shall use this IE to determine whether it is compliant with the RF requirement in the indicated frequency band, in case the UE is in the frequency that belongs to multiple frequency bands.

NOTE: The UE must be able to at least decode any unrelated RRC extensions that can be included in between the release it supports, and the IE "Frequency band indicator".

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Other comments:

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

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Comprehensive information and tips about how to create CRs can be found at <a href="http://www.3gpp.org/specs/CR.htm">http://www.3gpp.org/specs/CR.htm</a>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \( \mathcal{x} \) 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 <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> 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.

#### 8.1.16.3 INTER RAT HANDOVER INFO message contents to set

#### The UE shall:

- 1> include the IE "UE security information"; and
- 1> not include the IE "UE Specific Behaviour Information 1 interRAT".
- 1> in case support for the compressed version of the inter RAT handover info is indicated via the other radio access technology:
  - 2> in case the other radio access technology indicates the number of pre-defined configurations mandatory to report:
    - 3> omit reporting (some) of the pre-defined configurations beyond the number indicated by the other radio access technology if this makes the INTER RAT HANDOVER INFO message size optimised for the other radio access technology.
- NOTE: In case of GSM, the omission of pre-defined configurations applies in case it makes the message fit within one LapDm segment on the radio interface.
  - 2> include of the following IEs the IE that after encoding has the smallest size: IE "Predefined configuration status information compressed" or the IE "Predefined configuration status information";
  - 2> include the IE "UE radio access capability compressed".

#### 1> else:

- 2> include the IE "Predefined configuration status information";
- 2> include the IE "UE capability container", containing the IE "UE radio access capability" and the IE "UE radio access capability extension", in accordance with the following:
  - 3> if the UE supports multiple UTRA FDD Frequency Bands; or\_
  - 3> if the UE supports a single UTRA FDD Frequency Band different from Band I [21] 2100 MHz:
    - 4> include the IE "UE radio access capability", excluding IEs "RF capability FDD" and "Measurement capability";
    - 4> include the IE "UE radio access capability extension", including the IEs "RF capability FDD extension" and the "Measurement capability extension" associated with each supported UTRA FDD frequency band indicated in the IE "Frequency band".

#### 3> else:

- 4> include the IE "UE radio access capability", including the IEs "RF capability FDD" and "Measurement capability" associated with the <a href="Band I [21]2100 MHz UTRA FDD frequency band">Band I [21]2100 MHz UTRA FDD frequency band</a>;
- 4> include the IE "UE radio access capability extension", including the IEs "RF capability FDD extension" and the "Measurement capability extension" associated with each supported UTRA FDD frequency band indicated in the IE "Frequency band".
- 1> initiate the transfer of the INTER RAT HANDOVER INFO message via the other radio access technology, using radio access technology-specific procedures;
- 1> store the following in the variable INTER\_RAT\_HANDOVER\_INFO\_TRANSFERRED if they were included in the INTER RAT HANDOVER INFO message:
  - 2> the IE "Predefined configuration status information";
  - 2> the IE "UE security information";
  - 2> the IE "UE radio access capability";
  - 2> the IE "UE radio access capability extension"; and

2> the IE "UE radio access capability compressed".

1> and the procedure ends.

#### 8.6.3.12 Capability Update Requirement

If the IE "Capability Update Requirement" is included the UE shall:

- 1> if the IE "UE radio access FDD capability update requirement" has the value TRUE:
  - 2> if the UE supports FDD mode:
    - 3> store its UTRA FDD capabilities and its UTRA capabilities common to FDD and TDD in the IE "UE radio access capability" and the IE "UE radio access capability extension" in variable UE\_CAPABILITY\_REQUESTED as specified below:
      - 4> if the UE supports multiple UTRA FDD Frequency Bands; or
      - 4> if the UE supports a single UTRA FDD Frequency Band different from 2100 MHzBand I [21]:
        - 5> store the IE "UE radio access capability", excluding IEs "RF capability FDD" and "Measurement capability";
        - 5> store the IE "UE radio access capability extension", including the IEs "RF capability FDD extension" and the "Measurement capability extension" associated with each supported UTRA FDD frequency band indicated in the IE "Frequency band".
      - 4> else:
        - 5> store the IE "UE radio access capability", including the IEs "RF capability FDD" and "Measurement capability" associated with the <a href="Band I [21] 2100 MHz UTRA FDD frequency band">Band I [21] 2100 MHz UTRA FDD frequency band</a>.
- 1> if the IE "UE radio access 3.84 Mcps TDD capability update requirement" has the value TRUE:
  - 2> if the UE supports 3.84 Mcps TDD mode:
    - 3> store its UTRAN-specific 3.84 Mcps TDD capabilities and its UTRAN-specific capabilities common to FDD and TDD in the variable UE\_CAPABILITY\_REQUESTED.
- 1> if the IE "UE radio access 1.28 Mcps TDD capability update requirement" has the value TRUE:
  - 2> if the UE supports 1.28 Mcps TDD mode:
    - 3> store its UTRAN-specific 1.28 Mcps TDD capabilities and its UTRAN-specific capabilities common to FDD and TDD in the variable UE\_CAPABILITY\_REQUESTED.
- 1> if the IE "System specific capability update requirement list" is present:
  - 2> for each of the RAT requested in the IE "UE system specific capability"
    - 3> if the UE supports the listed RAT:
      - 4> include its inter-RAT radio access capabilities for the listed RAT in the IE "UE system specific capability" from the variable UE\_CAPABILITY\_REQUESTED.
- If the IE " Capability update requirement " is not present, the UE shall:
  - 1> assume the default values as specified in subclause 10.3.3.2 and act in accordance with the above.

### 10.3.3.21a Measurement capability extension

This IE may be used to replace the measurement capability information provided within IE "Measurement capability".

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
FDD measurements	MP	1 to <maxfre qBands FDD&gt;</maxfre 			
>FDD Frequency band	MD		Enumerat ed(FDD2 100Band I, FDD1900 Band II,	The default value is the same as indicated in the IE "Frequency band" included in the IE " UE radio access capability extension".  Band numbering is defined in [21].  Five spare values are needed	REL-5
>Need for DL compressed mode	MP		Band III) Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on the FDD frequency band indicated by the IE "FDD Frequency band"	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on the FDD frequency band indicated by the IE "FDD Frequency band"	
TDD measurements	CV- tdd_sup	1 to <maxfre qBands TDD&gt;</maxfre 			
>TDD Frequency band	MP		Enumerat ed(a, b, c)		
>Need for DL compressed mode	MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on TDD frequency band indicated by the IE "TDD Frequency band"	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on TDD frequency band indicated by the IE "TDD Frequency band"	
GSM measurements	CV- gsm_su p	1 to <maxfre qBands GSM&gt;</maxfre 			

Information	Need	Multi	Type and	Semantics description	Version
Element/Group name			reference		
>GSM Frequency band	MP		Enumerat ed(GSM4 50, GSM480, GSM850, GSM900 P, GSM900 E, GSM1800	as defined in [45]. Nine spare values are needed.	
>Need for DL compressed mode	MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on GSM frequency band indicated by the IE "GSM Frequency band"	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on GSM frequency band indicated by the IE "GSM Frequency band"	
Multi-carrier	CV-				
measurement >Need for DL compressed mode	mc_sup MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on multicarrier	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on multicarrier	

Condition	Explanation
tdd_sup	The IE is mandatory present if the IE "Multi-mode capability" has the value "TDD" or "FDD/TDD".  Otherwise this field is not needed in the message.
gsm_sup	The IE is mandatory present if the IE "Support of GSM" has the value TRUE. Otherwise this field is not needed in the message.
mc_sup	The IE is mandatory present if the IE "Support of multi-carrier" has the value TRUE. Otherwise this field is not needed in the message.

## 10.3.3.42a UE radio access capability extension

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Frequency band specific capability list	MP	1 to <maxfre qbandsF DD&gt;</maxfre 			
>Frequency band	MP		Enumerat ed(FDD2 100Band I, FDD1900 Band II,	Band numbering is defined in [21] Five spare values are needed	
			FDD1800 Band III)		REL-5
>RF capability FDD extension	MD		RF capability FDD extension 10.3.3.33 a	the default values are the same values as in the immediately preceding IE "RF capability FDD extension"; the first occurrence is MP	
>Measurement capability extension	MP		Measure ment capability extension 10.3.3.21 a		

### 11.3 Information element definitions

```
RadioFrequencyBandFDD ::= ENUMERATED {
-- fdd2100, fdd1900, fdd1800 correspond to Band I, Band II and Band III respectively fdd2100, fdd1900, fdd1900, fdd1800, spare5, spare4, spare3, spare2, spare1 }

RF-CapabBandListFDDComp::= SEQUENCE (SIZE (1..maxFreqBandsFDD)) OF
-- the first entry corresponds with the first value of IE RadioFrequencyBandFDD, -- fdd2100, and so on RF-CapabBandFDDComp
```

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Category:  # F Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) P (editorial modification) D (editorial modification) D (editorial modification) C (functional mo											) ) ) )		
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Consequences if not approved:	#		31 will ating b	not be co ands.	onsiste	nt with 2	25.10	1 wit	h regard	to th	e ide	ntificatio	n of FDD
Clauses affected:	¥	8.1.1	6.3, 8	6.3.12, 1	0.3.3.2	21a, 10.	3.3.42	2a, 1	0.3.3.351	b, 11.	.3		
Other specs	¥	YN	Othe	r core spe	ecificat	tions	¥						

affected:	Test specifications O&M Specifications
Other comments:	$oldsymbol{lpha}$

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

Comprehensive information and tips about how to create CRs can be found at <a href="http://www.3gpp.org/specs/CR.htm">http://www.3gpp.org/specs/CR.htm</a>. Below is a brief summary:

- 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 <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> 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.

#### 8.1.16.3 INTER RAT HANDOVER INFO message contents to set

#### The UE shall:

- 1> include the IE "UE security information"; and
- 1> not include the IE "UE Specific Behaviour Information 1 interRAT".
- 1> in case support for the compressed version of the inter RAT handover info is indicated via the other radio access technology:
  - 2> in case the other radio access technology indicates the number of pre-defined configurations mandatory to report:
    - 3> omit reporting (some) of the pre-defined configurations beyond the number indicated by the other radio access technology if this makes the INTER RAT HANDOVER INFO message size optimised for the other radio access technology.
- NOTE: In case of GSM, the omission of pre-defined configurations applies in case it makes the message fit within one LapDm segment on the radio interface.
  - 2> include of the following IEs the IE that after encoding has the smallest size: IE "Predefined configuration status information compressed" or the IE "Predefined configuration status information";
  - 2> include the IE "UE radio access capability compressed".

#### 1> else:

- 2> include the IE "Predefined configuration status information";
- 2> include the IE "UE capability container", containing the IE "UE radio access capability" and the IE "UE radio access capability extension", in accordance with the following:
  - 3> if the UE supports multiple UTRA FDD Frequency Bands; or\_
  - 3> if the UE supports a single UTRA FDD Frequency Band different from Band I [21] 2100 MHz:
    - 4> include the IE "UE radio access capability", excluding IEs "RF capability FDD" and "Measurement capability";
    - 4> include the IE "UE radio access capability extension", including the IEs "RF capability FDD extension" and the "Measurement capability extension" associated with each supported UTRA FDD frequency band indicated in the IE "Frequency band".

#### 3> else:

- 4> include the IE "UE radio access capability", including the IEs "RF capability FDD" and "Measurement capability" associated with the <a href="Band I [21]2100 MHz UTRA FDD frequency band">Band I [21]2100 MHz UTRA FDD frequency band</a>;
- 4> include the IE "UE radio access capability extension", including the IEs "RF capability FDD extension" and the "Measurement capability extension" associated with each supported UTRA FDD frequency band indicated in the IE "Frequency band".
- 1> initiate the transfer of the INTER RAT HANDOVER INFO message via the other radio access technology, using radio access technology-specific procedures;
- 1> store the following in the variable INTER\_RAT\_HANDOVER\_INFO\_TRANSFERRED if they were included in the INTER RAT HANDOVER INFO message:
  - 2> the IE "Predefined configuration status information";
  - 2> the IE "UE security information";
  - 2> the IE "UE radio access capability";
  - 2> the IE "UE radio access capability extension"; and

2> the IE "UE radio access capability compressed".

1> and the procedure ends.

#### 8.6.3.12 Capability Update Requirement

If the IE "Capability Update Requirement" is included the UE shall:

- 1> if the IE "UE radio access FDD capability update requirement" has the value TRUE:
  - 2> if the UE supports FDD mode:
    - 3> store its UTRA FDD capabilities and its UTRA capabilities common to FDD and TDD in the IE "UE radio access capability" and the IE "UE radio access capability extension" in variable UE\_CAPABILITY\_REQUESTED as specified below:
      - 4> if the UE supports multiple UTRA FDD Frequency Bands; or
      - 4> if the UE supports a single UTRA FDD Frequency Band different from 2100 MHzBand I [21]:
        - 5> store the IE "UE radio access capability", excluding IEs "RF capability FDD" and "Measurement capability";
        - 5> store the IE "UE radio access capability extension", including the IEs "RF capability FDD extension" and the "Measurement capability extension" associated with each supported UTRA FDD frequency band indicated in the IE "Frequency band".
      - 4> else:
        - 5> store the IE "UE radio access capability", including the IEs "RF capability FDD" and "Measurement capability" associated with the <a href="Band I [21] 2100 MHz UTRA FDD frequency band">Band I [21] 2100 MHz UTRA FDD frequency band</a>.
- 1> if the IE "UE radio access 3.84 Mcps TDD capability update requirement" has the value TRUE:
  - 2> if the UE supports 3.84 Mcps TDD mode:
    - 3> store its UTRAN-specific 3.84 Mcps TDD capabilities and its UTRAN-specific capabilities common to FDD and TDD in the variable UE\_CAPABILITY\_REQUESTED.
- 1> if the IE "UE radio access 1.28 Mcps TDD capability update requirement" has the value TRUE:
  - 2> if the UE supports 1.28 Mcps TDD mode:
    - 3> store its UTRAN-specific 1.28 Mcps TDD capabilities and its UTRAN-specific capabilities common to FDD and TDD in the variable UE\_CAPABILITY\_REQUESTED.
- 1> if the IE "System specific capability update requirement list" is present:
  - 2> for each of the RAT requested in the IE "UE system specific capability"
    - 3> if the UE supports the listed RAT:
      - 4> include its inter-RAT radio access capabilities for the listed RAT in the IE "UE system specific capability" from the variable UE\_CAPABILITY\_REQUESTED.
- If the IE " Capability update requirement " is not present, the UE shall:
  - 1> assume the default values as specified in subclause 10.3.3.2 and act in accordance with the above.

### 10.3.3.21a Measurement capability extension

This IE may be used to replace the measurement capability information provided within IE "Measurement capability".

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
FDD measurements	MP	1 to <maxfre qBands FDD&gt;</maxfre 	reference		
>FDD Frequency band	MD		Enumerat ed(FDD2 400Band I, FDD1900 Band II,	The default value is the same as indicated in the IE "Frequency band" included in the IE " UE radio access capability extension".  Band numbering is defined in [21].  Four spare values are needed	REL-5
			Band III, FDD800B		REL-6
>Need for DL compressed mode	MP		and VI) Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on the FDD frequency band indicated by the IE "FDD Frequency band"	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on the FDD frequency band indicated by the IE "FDD Frequency band"	
TDD measurements	CV- tdd_sup	1 to <maxfre qBands TDD&gt;</maxfre 			
>TDD Frequency band	MP		Enumerat ed(a, b, c)		
>Need for DL compressed mode	MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on TDD frequency band indicated by the IE "TDD Frequency band"	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on TDD frequency band indicated by the IE "TDD Frequency band"	
GSM measurements	CV- gsm_su p	1 to <maxfre qBands GSM&gt;</maxfre 			

Information	Need	Multi	Type and	Semantics description	Version
Element/Group name			reference	· .	
>GSM Frequency band	MP		Enumerat ed(GSM4 50, GSM480, GSM850, GSM900 P, GSM900 E, GSM1800	as defined in [45]. Nine spare values are needed.	
>Need for DL compressed mode	MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on GSM frequency band indicated by the IE "GSM Frequency band"	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on GSM frequency band indicated by the IE "GSM Frequency band"	
Multi-carrier	CV-				
measurement >Need for DL compressed mode	mc_sup MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on multicarrier	
>Need for UL compressed mode	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on multicarrier	

Condition	Explanation
tdd_sup	The IE is mandatory present if the IE "Multi-mode capability" has the value "TDD" or "FDD/TDD".  Otherwise this field is not needed in the message.
gsm_sup	The IE is mandatory present if the IE "Support of GSM" has the value TRUE. Otherwise this field is not needed in the message.
mc_sup	The IE is mandatory present if the IE "Support of multi-carrier" has the value TRUE. Otherwise this field is not needed in the message.

## 10.3.3.42a UE radio access capability extension

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Frequency band specific capability list	MP	1 to <maxfre qbandsF DD&gt;</maxfre 			
>Frequency band	MP		Enumerat ed(FDD2 100Band I, FDD1900 Band II,	Band numbering is defined in [21] Four spare values are needed	
			EDD1800 Band III,		REL-5
			FDD800B and VI)		REL-6
>RF capability FDD extension	MD		RF capability FDD extension 10.3.3.33 a	the default values are the same values as in the immediately preceding IE "RF capability FDD extension"; the first occurrence is MP	
>Measurement capability extension	MP		Measure ment capability extension 10.3.3.21		

## 10.3.6.35b Frequency band indicator

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Frequency band indicator	MP		Enumerated( FDD2100Ba nd I, FDD1900Ba nd II, FDD1800Ba nd III, FDD800Ban d VI)	Four spare values are needed	REL-6

### 11.3 Information element definitions