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Technical Specification

3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Requirements on User Equipments (UEs) supporting a release-independent frequency band (Release 11)

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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

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, Band III is contained in the Release 5 specifications. In order to implement a UE conforming to Release '4 but supporting Band 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 Band III 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.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] to [27] Void.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in [1] apply.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

FDD	Frequency Division Duplex
RRC	Radio Resource Control
UE	User Equipment

4 Void

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25 Void

Annex A (normative): Void

Annex B (normative): Frequency arrangement for overlapping operating bands

The following information is provided in order to assist a UE to derive the DL UARFCN and UL UARFCN in a multi-band environment, in which multiple overlapping operating bands may be indicated in the IE "Multiple Frequency Band indicator list" (System Information Block type 5, System Information Block type 5bis and System Information Block type 6), or the IE "Multiple Frequency Info List FDD" (System Information Block type 11, System Information Block type 11bis and System Information Block type 12).

The sets of bands (multi-band environment), independent of release, that may be indicated in a cell are shown in Table B-1. Subsets of these may also be indicated. The DL UARFCN and UL UARFCN are derived according to [25.101].

Table B-1: Overlapping bands (multi-band environments) for each UTRA band

UTRA Operating Band	Overlapping UTRA operating bands	Duplex Mode
2	25	FDD
3	9	FDD
4	10	FDD
5	18, 19, 26	FDD
9	3	FDD
10	4	FDD
18	5, 26	FDD
19	5, 26	FDD
25	2	FDD
26	5, 18, 19	FDD

Annex C (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
09/2001	RP-13	RP-010557			Approved at TSG-RAN #13 and placed under Change Control	-	3.0.0
	RP-13	RP-010558	001	1	Correction to create Release 4	3.0.0	4.0.0
12/2001	RP-14	RP-010759	003		Inclusion of release independent RF related information	4.0.0	4.1.0
03/2002	RP-15	RP-020096	004		Creation of Rel-5 specification	4.1.0	5.0.0
12/2003	RP-22	RP-030630	010		Introduction of UMTS800	5.0.0	6.0.0
03/2004	RP-23	RP-040092	016	1	Frequency band alignment with 25.101	6.0.0	6.1.0
	RP-23	RP-040090	023		Introduction of UMTS1700/2100 (Band IV)	6.0.0	6.1.0
	RP-23	RP-040091	027		Introduction of UMTS850(Band V)	6.0.0	6.1.0
09/2005	RP-29	RP-050467	0038		Introduction of UMTS2600 internal band, Band VII	6.1.0	6.2.0
12/2005	RP-30	RP-050800	0042		Introduction of UMTS 900 (Band VIII)	6.2.0	6.3.0
	RP-30	RP-050801	0034		Introduction of UMTS1700	6.2.0	6.3.0
06/2006	RP-32	RP-060369	0043		Creation of release 7 version	6.3.0	7.0.0
12/2006	RP-34	RP-060715	0057		Introduction of Band X (Extended UMTS 1.7/2.1 GHz) in 25.307	7.0.0	7.1.0
09/2007	RP-37	RP-070633	0066		Introduction of Band XI	7.1.0	8.0.0
03/2008	RP-39	RP-080200	0072	-	Introduction of UMTS 700 MHz (Bands XII – XIV) in 25.307	8.0.0	8.1.0
09/2008	RP-41	RP-080676	0077	-	Introduction of UMTS Band d in 25.307	8.1.0	8.2.0
09/2008	RP-41	RP-080695	0082	-	Introduction of UMTS Band e in 25.307	8.1.0	8.2.0
03/2009	RP-43	RP-090146	0087	-	Introduction of UMTS Band f in 25.307	8.2.0	8.3.0
09/2009	RP-45	RP-090921	0089	-	Introduction of Band XIX	8.3.0	8.4.0
09/2009	RP-45	RP-090921	0088	1	Introduction of Band XIX	8.4.0	9.0.0
12/2009	RP-46	RP-091333	0094	-	Editorial corrections for Introduction of Band XIX	9.0.0	9.1.0
	RP-46	RP-091335	0100	1	Introduction of band XXI - 25.307	9.0.0	9.1.0
03/2010	RP-47	RP-100302	0106	-	Introduction of band XX (800 MHz)	9.1.0	9.2.0
03/2011	RP-51	-	-	-	Upgrade to Release 10 - no technical change	9.2.0	10.0.0
06/2011	RP-52	RP-110844	0141	1	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	10.0.0	10.1.0
09/2011	RP-53	RP-111294	0161	-	Add Band XXII for LTE/UMTS 3500 (FDD)	10.1.0	10.2.0
03/2012	RP-55	RP-120328	0168	-	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	10.2.0	10.3.0
06/2012	RP-56	RP-120816	0170	-	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	10.3.0	11.0.0
12/2012	RP-58	RP-121922	0193	-	Multiple frequency band indicators per cell	11.0.0	11.1.0