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Technical Report

**3rd Generation Partnership Project;
Technical Specification Group Radio Access Networks;
Guideline on W/Sl for new Operating Bands
(Release 11)**



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Foreword

This Technical Report 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 provides guidelines for initiating and executing a 3GPP WI/SI for new frequency bands to be included in UTRA and E-UTRA specifications.

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] 3GPP TR 21.801: "Specification drafting rules".
- [3] RAN4 specifications: <http://www.3gpp.org/ftp/Specs/html-info/TS-G-WG--R4.htm>
- [4] RAN2 specifications: <http://www.3gpp.org/ftp/Specs/html-info/TS-G-WG--R2.htm>
- [5] RAN3 specifications: <http://www.3gpp.org/ftp/Specs/html-info/TS-G-WG--R3.htm>
- [6] RAN5 specifications: <http://www.3gpp.org/ftp/Specs/html-info/TS-G-WG--R5.htm>
- [7] RAN1 specifications: <http://www.3gpp.org/ftp/Specs/html-info/TS-G-WG--R1.htm>
- [8] TR template: http://www.3gpp.org/ftp/information/TS_TR_Templates/
- [9] Style and formatting template: http://www.3gpp.org/ftp/information/TS_TR_Templates/
- [10] General document template :
http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/Templates/R4_Tdoc_Template.zip
- [11] CR template: <http://www.3gpp.org/ftp/information/>
- [12] R4-040584, "LS on Removal of Radio Characteristics requirements from TS 25.461 UTRAN Iuant Interface: Layer 1", RAN4
- [13] TS 36.942, "Radio Frequency (RF) system scenarios"

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

Definition format (Normal)

<defined term>: <definition>.

example: text used to clarify abstract rules by applying them literally.

3.2 Symbols

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

Symbol format (EW)

<symbol> <Explanation>

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

TP	Text Proposal
TR	Technical Report
TS	Technical Specification
CR	Change Request
RAN	Radio Access Network
WI	Work Item
SI	Study Item

4 Background

The number of Work Items and Study Items on new Operating Bands is increasing dramatically in 3GPP. Therefore, there is a need to define a common way of working in order to increase efficiency. Having a common way of working for all work item/study items on frequency bands will allow 3GPP to better use the time for the WI/SI to discuss the relevant band specific issues, leaving the issues common for all frequency bands on the side. It will also make work easier for the WI/SI Rapporteur, so that they focus on leading the work.

5 Way of Working

5.1 Working flow

The working flow should be as follows for a work item/study item

1. Present WI/SI proposal in RAN4 for information. [RAN4 will lead the WI/SI \(and so the rapporteur is a member of this group\) and it also involves RAN2 and RAN3. RAN5 will prepare a separate WI.](#)
2. Present WI/SI in RAN plenary and get approval
3. Study all possible issues for the new band (for example specific co-existence problems, need of defining a new A-MPR, UE REFSENS...)
4. Solve all the issues and include the results in the TR
5. Once all the issues are solved, CRs for all TSs need to be divided among the volunteers companies. It is the responsibility of the Rapporteur to coordinate with other working groups ([i.e. RAN2 and RAN3](#)) to ensure that proper CRs are written in the other work groups. [The associated RAN5 WI may now be prepared and managed by the nominated RAN5 rapporteur, as per the existing practice](#)
6. Present all CRs affecting RAN4 specifications in RAN4 and endorse (specifications related to repeaters are excluded). All CRs shall be presented in one or two meeting to avoid rewriting of CRs in case the TSs are updated in the meantime. CRs to the core specifications (i.e. 36.101, 36.104, 25.101, 25.104 and 37.104)

should be presented and agreed in first place. Once they are agreed, CRs to the rest of the specifications should be prepared.

7. Send the endorsed CRs to RAN plenary
8. Close WI. If any issue related to the WI has been found but decided to leave it for maintenance, it should be documented.

CRs related to repeaters should be presented after closing the WI in the following RAN4 meetings (e.g. in the following 3 meetings) and endorsed to RAN.

9. Inform GERAN by sending an LS from RAN4 about the existence of the new operating band so they can define requirements accordingly, if needed.

6 WI/SI description

The WI is divided into two different parts, core and performance part. When presenting a WI definition, there should be a WID for the feature, a WID for the core part and a WID for the performance part. The feature part is the parent WID of the core and performance part. The work is lead by RAN4, which owns a majority of the specifications affected. [And it also involves RAN2 and RAN3.](#)

The feature part is the general description of the WI. Clauses 3 Justification, 4 Objective, 12 Work item leadership (RAN4) and Supporting companies should only be written here.

The core and performance part should reference the text in the feature part. The core part includes all BS and UE Radio related requirements. Under chapter "Expected Output", all ~~BS/UE requirements~~ TSS (~~independently of RAN group taking care of them~~) including BS/UE requirements (owned by RAN2, RAN3 and/or RAN4) shall be listed. The performance part includes the BS performance testing related issues as well as performance related requirements (i.e. baseband requirements on UE and BS). Under chapter "Expected Output", all testing TSS (~~owned by RAN2, RAN3 and/or RAN4~~) (~~independently of RAN group taking care of them~~) as well as documents containing performance requirements shall be listed. [The core part may be finished before the performance part and in this case, the core part can be closed. The feature part can be closed when both the core and performance part are finalized.](#)

The UE performance testing is not part of the WI, RAN5 will lead a special WI [to introduce a new band](#).

Chapter 8 lists [all](#) the deliverables that need [to be updated when adding a new band in the standard from RAN4. The core part may be finished before the performance part and in this case, the core part can be closed. The feature part can be closed when both the core and performance part are finalized.](#)

7 Technical Report (TR)

[This chapter just affects the WI/SI lead by RAN4 \(i.e. it does not apply to the WI defined in RAN5 for the addition of a new band\).](#)

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7.1 Content of the TR

It is recommended that the TR contains the chapters listed below. However, some chapters may not be needed for a specific new operating bands and some additional ones may be required:

- 1 Scope
- 2 References
- 3 Definitions, symbols and abbreviations
- 4 Background

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The WI [justification and](#) objective should be included here, including which technology will be supported in the new operating band.

[5](#) Frequency band arrangements and regulatory background

This clause should contain the following:

- A frequency arrangement chart
- Adjacent services to the new operating band
- Regulatory requirements that affect the new operating band (e.g. FCC requirements)

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[6](#) List of band specific issues to consider in the WI

List of general issues, UTRA, E-UTRA and/or MSR issues (if there is not any issue for a specific requirement, the same requirement as for the existing bands in the current 3GPP specifications will apply to the new band)

This chapter should consider for example co-existence studies with other 3GPP bands and other adjacent services, UE REFSENS and A-MPR.

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[7](#) General issues

This chapter is needed if there is any general issue to solve (e.g. co-existence). BS and UE issues should be treated separately.

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[8](#) Study of UTRA specific issues

This chapter is needed if there is any UTRA issue in the list of issues (e.g. UE REFSENS). BS and UE issues should be treated separately.

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[9](#) Study of E-UTRA specific issues

This chapter is needed if there is any E-UTRA issue in the list of issues (e.g. UE REFSENS, A-MPR). BS and UE issues should be treated separately.

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[10](#) Study of MSR specific issues

This chapter is needed if there is any MSR issue in the list of issues

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[11](#) Channel numbering for UTRA, E-UTRA and MSR (as applicable)

The channel numbers should be added in square brackets in the TR. The brackets can be removed once the final CRs are presented for approval.

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[12](#) Required changes to E-UTRA/UTRA/MSR specifications (as applicable)

This chapter should in general not contain any detailed description of changes or draft specification text. It is sufficient to identify the relevant specifications that need update and have a reference to clause 8 of the present TR.

If there are band specific issues that are identified above and that need a specification update not listed in clause 8 of the present document, the change should be described in more detail.

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[A TR skeleton containing all the chapters named above and including a more detailed description of each section can be found as an attachment to TR 30.007. The section numbering in the TR skeleton corresponds to the bullet numbers included in the list above. Rapporteurs should use this skeleton as guidance when creating the TR for the new WI/SL.](#)

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7.2 Drafting Rules to write the TR

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The TR should be drafted according to the 3GPP drafting rules [2]. The initial TR is created from the 3GPP TR template [8]. The style and formatting in the document should be according to [9]. When Text Proposals (TP) are incorporated in the TR, the Rapporteur should ensure that the style and formatting is kept.

7.3 — Rules to write Text Proposals (TP) for the TR

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Any Text Proposal for the TR should be drafted from the T doc template [10] if the TR is not formally approved by the TSG RAN plenary (i.e. it is not under change control). The TP should at least include an Introduction and Conclusion/Proposal section and be followed by the actual text proposal to include on the TR.

If the WI/SI TR is approved by the RAN plenary, it is under change control and all changes must be done according to the regular CR procedure using the CR template [11].

Any changes proposed in a TP or CR should follow the 3GPP drafting rules [2] and have style and formatting according to [9].

8 Required changes to E-UTRA/UTRA/MSR specifications

8.1. TS and RAN WG relation

CRs to TSs indicated in [3] shall be prepared and presented in RAN4 and CRs to TSs indicated in [4], [5], [6] and [7] shall be prepared and presented in RAN2, RAN3, RAN5 and RAN1, respectively. Following is a list of the specifications which need to be updated by each group when a new operating band is introduced. It is the responsibility of the Rapporteur to coordinate with other working groups to ensure that proper CRs are written in the other work groups.

- TS to be updated by RAN4
 - E-UTRA specifications: TS 36.101, TS 36.104, TS 36.106, TS 36.113, TS 36.124, TS 36.133, TS 36.141, TS 36.143 and TS 36.307
 - UTRA specifications: TS 25.101, TS 25.102, TS 25.104, TS 25.105, TS 25.106, TS 25.113, TS 25.123, TS 25.133, TS 34.124, TS 25.141, TS 25.142, TS 25.143, TS 25.461
 - MSR specifications: TS 37.104, TS 37.141 and TS 37.113
- TS to be updated by RAN3
 - E-UTRA specifications: None
 - UTRA specifications: TS 25.466, TS 25.461
 - MSR specifications: None
- TS to be updated by RAN2
 - E-UTRA specifications: None
 - UTRA specifications: TS 25.307, TS 25.331
 - MSR specifications: None
- TS to be updated by RAN5
 - E-UTRA specifications: TS 36.508, TS 36.521-1, TS 36.521-2, TS 36.521-3, TS 36.523-2, , 36.523-3
 - UTRA specifications: TS 34.108, TS 34.121-1, TS 34.121-2, TS 34.122, 34.123-1, 34.123-2, 34.123-3
 - UE positioning conformance testing (EUTRAN/UTRAN/EPC): TS 37.571-1 (note: This specification is not yet under revision control)

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8.2. Required changes to E-UTRA/UTRA/MSR specs

The specifications and the respective chapters which should be considered for updates are indicated below. The chapters don't always need an update, this need to be considered for each specific operating band.

8.2.1 Required changes to E-UTRA specifications

8.2.1.1 Required changes to TS 36.101

In order to implement the new band into the E-UTRA TS 36.101, the required changes are shown in Table 8.2.1.1-1.

Table 8.2.1.1-1: Required changes for TS 36.101

Section	Requirement	Description of changes in TS 36.101
5.5 (Note 1)	Operating bands	Add a row for the band to Table 5.5-1
5.6.1 (Note 1)	Channel bandwidths per operating band	Add all channel bandwidths for the band to Table 5.6.1-1
5.7.3 (Note 1)	Carrier frequency and EARFCN	Add a channel numbering for the band to Table 5.7.3-1
5.7.4 (Note 1)	TX–RX frequency separation	Add a row for the band's frequency separation to Table 5.7.4-1
6.2.2 (Note 1)	UE Maximum output power	Add a row for the band's UE power class to Table 6.2.2-1
6.2.4 (Note 1)	UE Maximum output power with additional requirements	Add the band to Table 6.2.4-1 (or appropriate table in same section)
6.6.3.2	Spurious emission band UE co-existence	Add the band to Table 6.6.3.2-1 for mutual protection with applicable E-UTRA bands
6.6.3.3 (Note 1)	Additional spurious emissions	Consider to add band to existing NS_xx table or add new table as applicable
7.3 (Note 1)	Reference sensitivity power level	Add a row for the band to Tables 7.3.1-1 and 7.3.1-2 and 7.3.2-1. Add row for the band to Table 7.3.1-3 if applicable.
7.6.1.1 (Note 1)	In-band blocking	Add the band to Table 7.6.1.1-2.
7.6.2.1 (Note 1)	Out-of-band blocking	Add the band to Table 7.6.2.1-2.
NOTE 1: This chapter needs to be updated if the operating band is defined as E-UTRA		

8.2.1.2 Required changes to TS 36.104

In order to implement the new band into the E-UTRA TS 36.104, the required changes are shown in Table 8.2.1.2-1.

Table 8.2.1.2-1: Required changes for TS 36.104

Section	Requirement	Description of changes in TS 36.104
5.5 (Note 1)	Operating bands	Add a row for the band to Table 5.5-1
5.7.3 (Note 1)	Carrier frequency and EARFCN	Add a channel number set for the band to Table 5.7.3-1
6.6.3.1 (Note 1)	Operating band unwanted emissions (Category A)	Add the band to Category A if applicable
6.6.3.2 (Note 1)	Operating band unwanted emissions (Category B)	Apply requirement for Option 1 or Option 2 if applicable
6.6.3.3 (Note 1)	Additional operating band unwanted emissions	Apply requirement if needed
6.6.4.3	Additional spurious emissions requirements (co-existence)	Add a row for the band to Tables 6.6.4.3.1-1 and 6.6.4.3.1-1x. Verify the current requirements and check if any modification is needed
6.6.4.4	Co-location with other base stations	Add a row for the band to Tables 6.6.4.4.1-1 and 6.6.4.4.1-2;
7.6.1 (Note 1)	General blocking requirement	Add the band to Tables 7.6.1.1-1, 7.6.1.1-1a, and 7.6.1.1-1b
7.6.2	Co-location with other base stations	Add a new row for the band to Tables 7.6.2.1-1 and 7.6.2.1-2; verify current requirements, check if exceptions needed
NOTE 1: This chapter needs to be updated if the operating band is defined as E-UTRA		

8.1.2.3 Required changes to TS 36.106

In order to implement the new band into the E-UTRA TS 36.106, the required changes are shown in Table 8.2.1.3-1.

Table 8.2.1.3-1: Required changes for TS 36.106

Section	Requirement	Description of changes in TS 36.106
5.5 (Note 1)	Operating bands	Add a row for the band in Table 5.5-1
5.7.3 (Note 1)	Carrier frequency and EARFCN	Add a row for the band in Table 5.7.3-1
9.1 (Note 1)	Operating band unwanted emissions	Add the band to category A, Category B (Option 1), Category B (Option 2) and additional requirements, if applicable
9.2.2.1	Co-existence with other systems in the same geographical area	Add a row for the band in Table 9.2.2.1-1
9.2.3.1	Co-location with base stations	Add a row for the band in Table 9.2.3.1-1
11.2.1	Co-location with BS in other systems (input IM)	Add a row for the band in Table 11.2.1-1
11.3.1	Co-existence with other systems (input IM)	Add a row for the band in Table 11.3.1-1
NOTE 1: This chapter needs to be updated if the operating band is defined as E-UTRA		

8.2.1.4 Required changes to TS 36.113

In order to implement the new band into the E-UTRA TS 36.113, the required changes are shown in Table 8.2.1.4-1. This TS needs to be updated if the operating band is defined as E-UTRA

Table 8.2.1.4-1: Required changes for TS 36.113

Section	Requirement	Description of changes in TS 36.113
4.5.2	Receiver exclusion band	Add a row for the band

8.2.1.5 Required changes to TS 36.124

In order to implement the new band into the E-UTRA TS 36.124, the required changes are shown in Table 8.2.1.5-1. This TS needs to be updated if the operating band is defined as E-UTRA

Table 8.2.1.5-1: Required changes for TS 36.124

Section	Requirement	Description of changes in TS 36.124
4.4	Receiver exclusion band	Add a row for the band

8.2.1.6 Required changes to TS 36.133

In order to implement the new band into the E-UTRA TS 36.133, the required changes are shown in Table 8.2.1.6-1.

Table 8.2.1.6-1: Required changes for TS 36.133

Section	Requirement	Description of changes in TS 36.133
4.2.2.3 (Note 1)	Measurements of intra-frequency E-UTRAN cells	Add the band to the RSRP/SCH_RP list as appropriate
4.2.2.4 (Note 1)	Measurements of inter-frequency E-UTRAN cells	Add the band to the RSRP/SCH_RP list as appropriate
8.1.2.2 (Note 1)	E-UTRAN intra-frequency measurements	Add the band to the SCH_RP lists as appropriate
8.1.2.3 (Note 1)	E-UTRAN inter-frequency measurements	Add the band to the RSRP/SCH_RP lists as appropriate
8.1.2.5 (Note 1)	E-UTRAN OTDOA Intra-Frequency RSTD Measurements	Add the band to the PRP condition list
8.1.2.6 (Note 1)	E-UTRAN Inter-Frequency OTDOA Measurements	Add the band to the PRP condition list
9.1.2.1 (Note 1)	Intra-frequency absolute RSRP accuracy	Add the band to the RSRP list and Table 9.1.2.1-1 as appropriate
9.1.2.2 (Note 1)	Intra-frequency relative RSRP accuracy	Add the band to the RSRP1,2 list and Table 9.1.2.2-1 as appropriate
9.1.2.3 (Note 1)	Intra-frequency absolute RSRP Accuracy under Time Domain Measurement Resource Restriction	Add the band to Table 9.1.2.3-1
9.1.2.4 (Note 1)	Intra-frequency relative RSRP Accuracy under Time Domain Measurement Resource Restriction	Add the band to Table 9.1.2.4-1
9.1.3.1 (Note 1)	Inter-frequency absolute RSRP accuracy	Add the band to the RSRP list and Table 9.1.3.1-1 condition tables and lists
9.1.3.2 (Note 1)	Inter-frequency relative RSRP accuracy	Add the band to the RSRP1 and RSRP2 list and Table 9.1.3.2-1 as appropriate
9.1.5.1 (Note 1)	Intra-frequency absolute RSRQ accuracy	Add the band to the RSRP list and Table 9.1.5.1-1 as appropriate
9.1.5.2 (Note 1)	Intra-frequency absolute RSRQ Accuracy under Time Domain Measurement Resource Restriction	Add the band to Table 9.1.5.2-1
9.1.6.1 (Note 1)	Inter-frequency absolute RSRQ accuracy	Add the band to the RSRP list and Table 9.1.6.1-1 as appropriate
9.1.6.2 (Note 1)	Inter-frequency relative RSRQ accuracy	Add the band to the RSRP1, RSRP2 list and Table 9.1.6.2-1 as appropriate
9.1.9.1 (Note 1)	UE Rx – Tx time difference	Add the band to the RSRP list and Table 9.1.9.1-1 as appropriate
9.1.10.1 (Note 1)	Intra-frequency Reference Signal Time Difference (RSTD) accuracy	Add the band to the PRP list and Table 9.1.10.1-1 as appropriate
9.1.10.2 (Note 1)	Inter-frequency Reference Signal Time Difference (RSTD) accuracy	Add the band to the PRP1, PRP2 list and Table 9.1.10.2-1 as appropriate
9.2.1 (Note 2)	UTRAN FDD CPICH_RSCP absolute accuracy	Add the band to Table 9.2.1-1
A.9.1 (Note 1)	RSRP	Add the band to Noc, RSRP, and Io lines of Table A.9.1.1.2-1, Table A.9.1.2.2-1, Table A.9.1.3.2-1, Table A.9.1.4.2-1 as appropriate
A.9.2 (Note 1)	RSRQ	Add the band to Noc, RSRP, RSRQ, and Io lines of Table A.9.2.1.2-1, Table A.9.2.2.2-1, Table A.9.2.3.2-1, Table A.9.2.4.2-1
A.9.3 (Note 2)	UTRAN FDD CPICH RSCP	Add the band to the band list for Ioc, CPICH RSCP and Io in Tables A.9.3.1.2-3 and A.9.3.2.2-3
A.9.4 (Note 2)	UTRAN FDD CPICH Ec/No	Add the band to the band list for Ioc, CPICH Ec/No and Io in Tables A.9.4.1.2-3 and A.9.4.2.2-3

Annex B (Note 1)	Conditions for RRM requirements applicability for operating bands	Add the band to Table B.1.1-1, Table B.2.1-1, Table B.2.2-1, Table B.2.3-1, Table B.2.5-1, Table B.2.7-1, Table B.3.1-1, Table B.3.2-1
NOTE 1: This chapter needs to be updated if the operating band is E-UTRA		
NOTE 2: This chapter needs to be updated if the operating band is UTRA FDD		

8.2.1.7 Required changes to TS 36.141

In order to implement the E850 new band into the E-UTRA TS 36.141, the required changes are shown in Table 8.2.1.7-1.

Table 8.2.1.7-1: Required changes for TS 36.141

Section	Requirement	Description of changes in TS 36.141
5.5 (Note 1)	Operating bands	Add a row for the band to Table 5.5-1
5.7.3 (Note 1)	Carrier frequency and EARFCN	Add a channel number set for the band to Table 5.7.3-1
6.6.3.5.1 (Note 1)	Operating band unwanted emissions (Category A)	Add the band to Category A if applicable
6.6.3.5.2 (Note 1)	Operating band unwanted emissions (Category B)	Apply requirement for Option 1 and/or Option 2 if applicable
6.6.3.5.3 (Note 1)	Additional operating band unwanted emissions	Apply requirement if needed
6.6.4.5.4	Co-existence with other systems in the same geographical area	Add a row for the band to Tables 6.6.4.5.4-1 and 6.6.4.5.4-1x;
6.6.4.5.5	Co-location with other base stations	Add a row for the band to Tables 6.6.4.5.5-1 and 6.6.4.5.5-2;
7.6.5.1 (Note 1)	General blocking requirement	Add the band to Tables 7.6-1, 7.6-1a, and 7.6-1x
7.6.5.2	Co-location with other base stations	Add a new row for the band to Tables 7.6-3 and 7.6-4
NOTE 1: This chapter needs to be updated if the operating band is defined as E-UTRA		

8.2.1.8 Required changes to TS 36.143

In order to implement the new band into the E-UTRA TS 36.143, the required changes are shown in Table 8.2.1.8-1.

Table 8.2.1.8-1: Required changes for TS 36.143

Section	Requirement	Description of changes in TS 36.143
5.5 (Note 1)	Operating bands	Add a row for the band in Table 5.5-1
5.7.3 (Note 1)	Carrier frequency and EARFCN	Add a row for the band in Table 5.7.3-1
9.1.5 (Note 1)	Operating band unwanted emissions	Add the band to category A, Category B (Option 1), Category B (option 2) and additional requirements, if applicable
9.2.5.3	Co-existence with other systems in the same geographical area	Add a row for the band in Table 9.2.5.3.-1
9.2.5.4	Co-location with base stations	Add a row for the band in Table 9.2.5.4-1
11.5.2	Co-location with BS in other systems (input IM)	Add a row for the band in Table 11.5.2-1
11.5.3	Co-existence with other systems (input IM)	Add a row for the band in Table 11.5.3-1

NOTE 1: This chapter needs to be updated if the operating band is E-UTRA

8.2.1.9 Required changes to TS 36.307

In order to implement the new band into the E-UTRA TS 36.307, the required changes are shown in Table 8.2.1.9-1. This TS needs to be updated if the operating band is defined as E-UTRA

Table 8.2.1.9-1: Required changes for TS 36.307

Section	Requirement	Description of changes in TS 36.307 (per Release)
TBD	E-UTRA release-independent frequency band	Add a section for the band

8.2.1.10 Required changes to TS 36.508

[In order to implement the new band into the E-UTRA TS 36.508, the required changes are shown in Table 8.2.1.10-1.](#)

Table 8.2.1.10-1: Required changes for TS 36.508

Section	Requirement	Description of changes in TS 36.508
4.3.1	Test frequencies	Add a new table for test frequencies
6.2.3	Test frequencies	Add a new row in table(s) for test frequencies

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8.2.1.11 Required changes to TS 36.521-1

[In order to implement the new band into the E-UTRA TS 36.521-1, the required changes are shown in Table 8.2.1.11-1.](#)

Table 8.2.1.11-1: Required changes for TS 36.521-1

Section	Requirement	Description of changes in TS 36.521-1
5.2	Operating bands	Add a new row in table 5.2-1
5.3	Tx-Rx separation	Add a new row in table 5.3-1
5.4.2	Channel BW per operating band	Add a new row in table 5.4.2.1-1
5.4.4	Carrier frequency and EARFCN	Add a new row in table 5.4.4-1
6.2	UE max output pwr	Add a new row in tables 6.2.2.3-1, 6.2.2.5-1
6.2.3	MPR	Add a new row in table 6.2.3.5-1
6.2.4	A-MPR	Update tables 6.2.4.3-1
6.2.4.5	A-MPR	Update tables in section where applicable
6.6.3	Spurious emissions	Add new row in table 6.6.3.2.3-1, 6.6.3.2.5-1
7.3	Ref Sens	Add new row in table 7.3.3-1, 7.3.3-2, 7.3.3-3, 7.3.5-1, 7.3.5-2
7.6.1	In-Band Blocking	Add band requirements to tables 7.6.1.3-2, 7.6.1.5-2
7.6.2	Out-Of-Band Blocking	Add band requirements to tables 7.6.2.3-2, 7.6.2.5-2

8.2.1.12 Required changes to TS 36.521-2

In order to implement the new band into the E-UTRA TS 36.521-2, the required changes are shown in Table 8.2.1.12-1.

Table 8.2.1.12-1: Required changes for TS 36.521-2

Section	Requirement	Description of changes in TS 36.521-2
A.4.3	Baseline Implementation Capabilities	Add a row in table A.4.3-3

8.2.1.13 Required changes to TS 36.521-3

In order to implement the new band into the E-UTRA TS 36.521-3, the required changes are shown in Table 8.2.1.13-1.

Table 8.2.1.13-1: Required changes for TS 36.521-3

Section	Requirement	Description of changes in TS 36.521-3
8.1 8.2 8.3 8.4	UE Measurements Procedures	Add band dependent side conditions in chapter 8.1.1.3, 8.1.2.3, 8.1.3.3, 8.2.1.3, 8.2.2.3, 8.3.1.3, 8.3.2.3, 8.3.3.3, 8.4.1.3, 8.4.2.3,
8.11	Monitoring of Multiple Layers	Add band dependent side conditions in chapter 8.11.1.3, 8.11.2.3, 8.11.3.3, 8.11.4.3, 8.11.5.3, 8.11.6.3,
9.1 9.2	RSRP and RSRQ Accuracy	Add band dependent side conditions and requirements in chapters: 9.1.1.1.3, 9.1.1.1.5, 9.1.1.2.3, 9.1.1.2.5, 9.1.2.1.3, 9.1.2.1.5, 9.1.2.2.3, 9.1.2.2.5, 9.1.3.1.3, 9.1.3.1.5, 9.1.3.2.3, 9.1.3.2.5, 9.1.4.1.3, 9.1.4.1.5, 9.1.4.2.3, 9.1.4.2.5, 9.2.1.1.3, 9.2.1.1.5, 9.2.2.1.3, 9.2.2.1.5, 9.2.3.1.3, 9.2.3.1.5, 9.2.3.2.3, 9.2.3.2.5, 9.2.4.1.3, 9.2.4.1.5, 9.2.4.2.3, 9.2.4.2.5
9.3	UTRA FDD CPICH RSCP	Add band dependent side conditions and requirements in chapters: 9.3.1.3, 9.3.1.5, 9.3.2.3, 9.3.2.5
9.4	UTRAN FDD CPICH Ec/No	Add band dependent side conditions and requirements in chapters: 9.4.1.3, 9.4.1.5, 9.4.2.3, 9.4.2.5,

[8.2.1.14 Required changes to TS 36.523-2](#)

[In order to implement the new band into the E-UTRA TS 36.523-2, the required changes are shown in Table 8.2.1.14-1.](#)

Table 8.2.1.14-1: Required changes for TS 36.523-2

Section	Requirement	Description of changes in TS 36.523-2
A.4.3.1	RF Baseline Implementation Capabilities	Add a row to table A.4.3.1-1 or A.4.3.1-2

[8.2.1.15 Required changes to TS 37.571-1](#)

[In order to implement the new band into TS 37.571-1, the required changes are shown in Table 8.2.1.15-1.](#)

Table 8.2.1.15-1: Required changes for TS 37.571-1

Section	Requirement	Description of changes in TS 37.571-1
TBD	TBD	TBD

[Note: Sections in 37.571-1 is TBD since the specification is not yet under revision control](#)

[8.2.1.16 Required changes to TS 36.523-3](#)

[In order to implement the new band into the E-UTRA TS 36.523-3, the required changes are shown in Table 8.2.1.16-1.](#)

Table 8.2.1.16-1: Required changes for TS 36.523-3

Section	Requirement	Description of changes in TS 36.523-3
11	Guidelines on test execution	Add the restriction on test case execution due to the number of radio frequencies allocated for the specific operating Band

8.2.2 Required changes to UTRA specifications

8.2.2.1 Required changes to TS 25.101

In order to implement the new band into the UTRA TS 25.101, the required changes are shown in Table 8.2.2.1-1.

Table 8.2.2.1-1: Required changes for TS 25.101

Section	Requirement	Description of changes in TS 25.101
5.2 (Note 1)	Frequency bands	Add a row for the band to Table 5.0. Add a row for the band to Table 5.0aA, Table 5.0aB, Table 5.0aC if applicable
5.3 (Note 1)	TX–RX frequency separation	Add a row for the band's frequency separation to Table 5.0A
5.4.3 (Note 1)	Channel number	Add a channel numbering for the band to Table 5.1 (general). Add a channel numbering to Table 5.1A (additional channels) if applicable
5.4.4 (Note 1)	UTRA Absolute Radio Frequency Channel Number (UARFCN)	Add channel numberings for the band to Table 5.2 (see Channel number above)
6.2.1 (Note 1)	UE Maximum output power	Add a row for the band's UE power class to Table 6.1. Add a row to Table 6.1aB and Table 6.1aC if applicable
6.6.2.1+ (Note 1)	Out of band emission	Add the band if applicable
6.6.2.1A (Note 1)	Additional Spectrum emission mask for DC-HSUPA	Add the band if applicable
6.6.3.1	Spurious emissions	Add the band to Table 6.13
6.6.3.1A	Additional spurious requirement for DC-HSUPA	Add the band to Tables 6.13A
7.3.1 (Note 1)	Reference sensitivity level	Add the band to Tables 7.2.
7.3.2 (Note 1)	Additional requirement for DC-HSDPA	Add the band to Table 7.2A.
7.6 (Note 1)	Blocking characteristics	Add the band to Tables 7.6, 7.6A, 7.6B and 7.6C for in-band blocking. Add the band to Tables 7.7, 7.7AA, for out-of-band blocking; to Tables 7.7A, 7.7B, 7.7C, and 7.7D for narrow-band blocking. if applicable
7.8.1A (Note 1)	Additional requirements for DC-HSUPA and DB-DC-HSUPA on intermodulation characteristics	Add the band to Tables 7.9AC, 7.9A, 7.9B, 7.9C, and 7.9D
7.9	Receiver spurious emissions	Add the band to Table 7.11
B.2.2 (Note 1)	Multi-path fading propagation conditions	Add the band to Tables B.1, B.1B, B.1C, B.1D and B.1E
B.2.6. (Note 1)	MIMO propagation conditions	Add the band to Tables B.4 (single stream) and B.5 (dual stream)
E.2 (Note 1)	UARFCN used for UTRA FDD bands	Add the uplink/downlink UARFCN for the band to Table E.1

NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA FDD

8.2.2.2 Required changes to TS 25.102

In order to implement the new band into the UTRA TS 25.102, the required changes are shown in Table 7.8.2.2.1-1.

Table 8.2.2-1: Required changes for TS 25.102

Section	Requirement	Description of changes in TS 25.102
5.2 (Note 1)	Frequency bands	Add the band to the list
5.4.4 (Note 1)	UARFCN	Add a row for the band in Table 5.1, 5.2 and 5.3 when applies
6.6.3	Spurious emissions	Add a row for the band in Table 6.7B, 6.7D and 6.7F when applies
7.6.1 (Note 1)	Blocking	Add a row for the band in Table 7.7, 7.7A, 7.7.A. , 7.7.A. , 7.7.B. , 7.7.C. , 7.7AAA when applies. Include the band in Table 7.7AA, 7.7CC if necessary
7.9 (Note 1)	Rx Spurious emissions	Add the band in Table 7.10A-2 if applicable
Annex B (Note 1)	Propagation conditions	Add the band to Table B.1. , B.1.A. , B.1B. , B.1C. , B.1D. , B.2, B.3, B.3B, B.4. , B.5. , B.6. , B.7. if applicable
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA TDD		

8.2.2.3 Required changes to TS 25.104

In order to implement the new band into the UTRA TS 25.104, the required changes are shown in Table 8.2.2.3-1.

Table 8.2.2.3-1: Required changes for TS 25.104

Section	Requirement	Description of changes in TS 25.104
5.2 (Note 1)	Frequency bands	Add a row for the band to Table 5.0
5.3 (Note 1)	TX–RX frequency separation	Add a row for the band's frequency separation to Table 5.0A
5.4.3 (Note 1)	Channel number	Add the channel numbering for the band to Tables 5.1. Add the additional channel numbering for the band in Table 5.1A if applicable
6.6.2.4 (Note 1)	Out of band emission	Add the band in in the chapter Table 6.6A, 6.6B, 6.6C if needed. Consider if any new additional requirement are needed
6.6.3.1.2 (Note 1)	Spurious emissions (Category B)	Add the band to either Table 6.9 or 6.9A if needed
6.6.3.2.1 (Note 1)	Protection of the BS receiver of own or different BS	Add a row for the band to Tables 6.10, 6.10A, 6.10B and 6.10C
6.6.3.3.1	Co-existence with other systems in the same geographical area	Add a row for the band to Table 6.11 and check if current requirements need any update
6.6.3.4.1	Co-existence with co-located and co-sited base stations	Add a row for the band to Tables 6.12, 6.13 and 6.14
6.6.3.9.1	Co-existence with Home BS operating in other bands	Add a row for the band to Table 6.20
7.5.1 (Note 1)	General Blocking characteristics	Add the band to Tables 7.4, 7.4A and 7.4B for general blocking; to Tables 7.5, 7.5A and 7.5B for narrowband blocking if applicable
7.5.2	Co-location with GSM900, DCS1800, PCS1900, GSM850, CDMA, UTRA and/or E-UTRA	Add the band to Table 7.5C, 7.5D and 7.5E
7.6 (Note 1)	Intermodulation characteristics	Add the band to Tables 7.6A, 7.6C and 7.6E if applicable
7.7.1	Spurious emissions	Add the band to Table 7.7A or Table 7.8 if the band is defined as UTRA FDD or UTRA TDD
B.2 (Note 1)	Multi-path fading propagation conditions	Add the band to Table B.1
B.5 (Note 1)	Multipath fading propagation conditions for E-DPDCH and E-DPCCH	Add the band to Table B.3
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA FDD		

8.2.2.4 Required changes to TS 25.105

In order to implement the new band into the UTRA TS 25.105, the required changes are shown in Table 8.2.2.4-1.

Table 8.2.2.4-1: Required changes for TS 25.105

Section	Requirement	Description of changes in TS 25.105
5.2 (Note 1)	Frequency bands	Add the band to the list
6.6.3.2 (Note 2)	Co-existence with GSM, DCS, UTRA and/or E-UTRA and co-location	Add the band to Table 6.12 and Table 6.13
6.6.3.5 (Note 3)	Co-existence with unsynchronized UTRA TDD and/or E-UTRA TDD	Add the band to Table 6.18, 6.19, 6.20, 6.20A, 6.20B, 6.21, 6.22, 6.23, 6.24, 6.25
7.5.0-4 (Note 1)	Blocking requirements	Add a table for the band when applicable
7.5.1 (Note 2)	Co-location with GSM, DCS, UTRA FDD and/or E-UTRA FDD	Add an the band in Tables 7.4 (d), 7.4A (d), 7.4B (d); 7.4K or include new tables as applicable
7.7.1 (Note 1)	Rx spurious emissions	Add the band in Table 7.6A-2, 7.6A-3 if applicable
B2	Multi-path propagation conditions	Add the band in Table B.2 and Table B.2A if applicable
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA TDD		
NOTE 2: This chapter needs to be updated if the operating band is defined as UTRA and/or E-UTRA FDD		
NOTE 3: This chapter needs to be updated if the operating band is defined as UTRA and/or E-UTRA TDD		

8.2.2.5 Required changes to TS 25.106

In order to implement the new band into the UTRA TS 25.106, the required changes are shown in Table 8.2.2.5-1.

Table 8.2.2.5-1: Required changes for TS 25.106

Section	Requirement	Description of changes in TS 25.106
5.1 (Note 1)	Frequency bands	Add a row for the band in Table 5.1
5.2 (Note 1)	TX-RX frequency separation	Add a row for the band in Table 5.2
5.3.3 (Note 1)	Channel number	Add a row for the band in Table 5.3 and Table 5.4
9.1.2 (Note 1)	Operating band unwanted emissions	Add the band in the affected tables and consider additional requirements
9.1.4 (Note 1)	Co-existence with services in adjacent bands	Consider if it is needed to update
9.2.3	Co-existence with other systems in the same geographical area (spurious emissions)	Add a row for the band in Table 9.9
9.2.4	Co-existence with co-located and co-sited Base Stations (spurious emissions)	Add a row for the band in Table 9.10
9.2.6 (Note 2)	Co-existence with UTRA TDD	Add a row for the band in Table 9.14, 9.14A, 9.15 and 9.15A
9.2.7 (Note 1)	Protection of PS operations	Consider if needed to add a row to Table 9.16
11.2.1	Co-location with Bs in other systems (input IM)	Add a row for the band in Table 11.2 or Table 11.2A
11.3	Co-existence with other systems (input IM)	Add a row for the band in Table 11.3
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA FDD		
NOTE 2: This chapter needs to be updated if the operating band is defined as UTRA TDD		

8.2.2.6 Required changes to TS 25.113

In order to implement the new band into the UTRA TS 25.113, the required changes are shown in Table 8.2.2.6-1. This TS needs to be updated if the operating band is defined as UTRA

Table 8.2.2.6-1: Required changes for TS 25.113

Section	Requirement	Description of changes in TS 25.113
4.5.2	Receiver exclusion band	Add a row for the band

8.2.2.7 Required changes to TS 25.123

In order to implement the new band into the E-UTRA TS 25.123, the required changes are shown in Table 8.2.2.7-1.

Table 8.2.2.7-1: Required changes for TS 25.123

Section	Requirement	Description of changes in TS 25.123
4.2.2.5a (Note 1, Note 2)	Measurements of inter-RAT E-UTRA cells	Add the band to the RSRP/SCH_RP list as appropriate
8.1.2.7.1 (Note 4)	E-UTRAN FDD measurements (CELL_DCH state 3.84Mcps)	Add the band to RSRP/SCH_RP list as appropriate
8.1.2.8.1 (Note 2)	E-UTRAN TDD measurements (CELL_DCH state 3.84Mcps)	Add the band to RSRP/SCH_RP list as appropriate
8.1A.2.6.1 (Note 4)	Identification of a new cell, E-UTRAN FDD (CELL_DCH state 1.28Mcps)	Add the band to the RSRP/SCH_RP list as appropriate
8.1A.2.7.1 (Note 2)	E-UTRAN FDD measurements FDDTDD (CELL_DCH state 1.28Mcps)	Add the band to the RSRP/SCH_RP list as appropriate
8.1B.2.7.1 (Note 4)	Identification of a new cell, E-UTRAN FDD (CELL_DCH state 7.68Mcps)	Add the band to the RSRP/SCH_RP list as appropriate
8.1A.2.8.1 (Note 2)	E-UTRAN FDD measurements FDDTDD (CELL_DCH state 7.68Mcps)	Add the band to the RSRP/SCH_RP list as appropriate
A.9.2.5a.1 (Note 1)	E-UTRA FDD RSRP	Add a row for the band in Table A.9.2.5a.1-3
A.9.2.5a.2 (Note 2)	E-UTRA TDD RSRP	Add a row for the band in Table A.9.2.5a.2-3
A.9.2.5b.1 (Note 1)	E-UTRA FDD RSRQ	Add a row for the band in Table A.9.2.5b.1-3
A.9.2.5b.2 (Note 2)	E-UTRA TDD RSRQ	Add a row for the band in Table A.9.2.5b.2-3
Annex B	Conditions for RRM requirements applicability for operating bands	Add the band to Table B.1.1-1, B.2.1-1
NOTE 1: This chapter needs to be updated if the operating band is defined as E-UTRA FDD		
NOTE 2: This chapter needs to be updated if the operating band is defined as E-UTRA TDD		

8.2.2.8 Required changes to TS 34.124

In order to implement the new band into the UTRA TS 34.124, the required changes are shown in Table 8.2.2.8-1. This TS needs to be updated if the operating band is defined as UTRA

Table 8.2.2.8-1: Required changes for TS 34.124

Section	Requirement	Description of changes in TS 34.124
4.4	Receiver exclusion band	Add a row for the band

8.2.2.9 Required changes to TS 25.133

In order to implement the new band into the UTRA TS 25.133, the required changes are shown in Table 8.2.2.9-1.

Table 8.2.2.9-1: Required changes for TS 25.133

Section	Requirement	Description of changes in TS 25.133
4.2.2.5a (Note 1 , Note 2)	Measurements of inter-RAT E-UTRA cells	Add the band to the RSRP/SCH_RP list as appropriate
8.1.2.6.4 (Note 1 , Note 2)	E-UTRAN measurements - Identification of a new cell	Add the band to the RSRP/SCH_RP list as appropriate
9.1.1.1 (Note 31)	CPICH RSCP – Intra frequency measurements	Add the band to CPICH_RSCP1 list , Table 9.1 , CPICH_RSCP1,2 list and Table 9.2
9.1.1.2 (Note 31)	CPICH RSCP – Inter frequency measurements	Add the band to CPICH_RSCP1 , CPICH_RSCP2 lists and Table 9.3
9.1.2.1 (Note 13)	CPICH E _c /I ₀ – Intra frequency measurements accuracy	Add the band to CPICH_RSCP1 lists , Table 9.5 and CPICH_RSCP1,2 list , Table 9.6
9.1.2.2 (Note 13)	CPICH E _c /I ₀ – Inter frequency measurements accuracy	Add the band to CPICH_RSCP1 , CPICH_RSCP2 list , Table 9.7 and Table 9.8
9.1.3 (Note 13)	UTRA Carrier RSSI	Add the band to Tables 9.10 and Table 9.11
9.1.7.1 (Note 13)	SFN-CFN observed time difference – Intra frequency measurement requirement	Add the band to CPICH_RSCP1,2 lists , Table 9.16
9.1.7.2 (Note 13)	SFN-CFN observed time difference – Inter frequency measurement requirement	Add the band to CPICH_RSCP1 lists and CPICH_RSCP2 list and Table 9.17
9.1.8.1 (Note 13)	SFN-SFN observed time difference type 1	Add the band to CPICH_RSCP1 , CPICH_RSCP2 lists and Table 9.19
9.1.8.2 (Note 13)	SFN-SFN observed time difference type 2	Add the band to CPICH_RSCP1,2 lists , Table 9.21 , Table 9.22 , CPICH_RSCP1 and CPICH_RSCP2 lists and Table 9.23
9.1.9 (Note 13)	UE Rx-Tx time difference	Add the band to Tables 9.25 and Table 9.27
A.9.1.1 (Note 13)	Measurement performance for UE - CPICH RSCP	Add the band to Tables A.9.1 and A.9.2
A.9.1.2 (Note 13)	Measurement performance for UE - CPICH E _c /I ₀	Add the band to Tables A.9.3 , Table A.9.4 , Table A.9.4A and Table A.9.4B
A.9.1.3 (Note 13)	UTRA Carrier RSSI	Add the band to Tables A.9.5 , Table A.9.5.1 , Table A.9.5A and Table A.9.5A1
A.9.1.4 (Note 13)	SFN-CFN observed time difference	Add the band to Tables A.9.6 and Table A.9.7
A.9.1.5 (Note 13)	SFN-SFN observed time difference	Add the band to Tables A.9.8 , A.9.9 and A.9.10
A.9.1.6 (Note 13)	UE Rx-Tx time difference	Add the band to Tables A.9.11 and A.9.12
A.9.1.10 (Note 24)	E-UTRAN FDD RSRP absolute accuracy	Add the band to Table A.9.1.10.1-3
A.9.1.11 (Note 32)	E-UTRAN TDD RSRP absolute accuracy	Add the band to Table A.9.1.10.1-3
A.9.1.12 (Note 24)	E-UTRAN FDD RSRQ absolute accuracy	Add the band to Table A.9.1.12.1-3
A.9.1.13 (Note 32)	E-UTRAN TDD RSRQ absolute accuracy	Add the band to Table A.9.1.13.1-3
B.2 (Note 1 , Note 2)	Conditions for UE Measurements Procedures	Add the band to Table B.2.1-1 and B.3.1-1 if E-UTRA band or B.3.2-1 if UTRA FDD band
<p>NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA FDD</p> <p>NOTE 1: This chapter needs to be updated if the operating band is defined as E-UTRA FDD</p> <p>NOTE 22: This chapter needs to be updated if the operating band is defined as E-UTRA TDD</p> <p>NOTE 33: This chapter needs to be updated if the operating band is defined as E-UTRA TDD</p>		

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8.2.2.10 Required changes to TS 25.141

In order to implement the new band into the UTRA TS 25.141, the required changes are shown in Table 8.2.2.10-1.

Table 8.2.2.10-1: Required changes for TS 25.141

Section	Requirement	Description of changes in TS 25.141
3.4.1 (Note 1)	Frequency bands	Add a row for the band to Table 3.0
3.4.2 (Note 1)	TX–RX frequency separation	Add a row for the band in Table 3.0A
3.5.3 (Note 1)	Channel number	Add a channel numbering for the band to Table 3.1. Add additional channel numbering to Table 3.2 if needed
6.5.2.1.5 (Note 1)	Out of band emission	Add the band covered by Table 6.21A, 6.21B and 6.21C if applicable. Consider if any new additional requirements are needed
6.5.3.7.2 (Note 1)	Spurious emissions (Category B)	Add the band to either Table 6.36 or 6.36A if applicable
6.5.3.7.3 (Note 1)	Protection of the BS receiver of own or different BS	Add a row for the band to Tables 6.37, 6.37A, 6.37B and 6.37C
6.5.3.7.4	Co-existence with other systems in the same geographical area	Add a row for the band to Table 6.38
6.5.3.7.5	Co-existence with co-located and co-sited base stations	Add a row for the band to Tables 6.39, 6.40 and 6.41,
6.5.3.7.10	Co-existence with Home BS operating in other bands	Add a row for the band to Table 6.47
7.5.5	Blocking characteristics	Add the band to Tables 7.4K, 7.4L, 7.4M, 7.4R, 7.4S and 7.4T if the operating band is defined as UTRA FDD. Add the band in Table 7.4N, 7.4P and 7.4Q
7.6.5 (Note 1)	Intermodulation characteristics	Add the band to Table 7.5A(b) if applicable
7.7.5 (Note 1)	Spurious emissions	Add the band to Table 7.7A (b). Add the band to Table 7.7A (C) if needed
D.2 (Note 1)	Multi-path fading propagation conditions	Add the band to Table D.1
D.5 (Note 1)	Multipath fading propagation conditions for E-DPDCH and E-DPCCH	Add the band to Table D.3
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA FDD		

8.2.2.11 Required changes to TS 25.142

In order to implement the new band into the UTRA TS 25.142, the required changes are shown in Table 8.2.2.11-1.

Table 8.2.2.11-1: Required changes for TS 25.142

Section	Requirement	Description of changes in TS 25.142
4.2 (Note 1)	Frequency bands	Add the band to the list
6.6.3.2.2 (Note 2)	Co-existence with GSM, DCS, UTRA and/or E-UTRA and Co-located base stations	Add rows for the band in Tables 6.31 and Table 6.32
6.6.3.2.5 (Note 3)	Co-existence with unsynchronized UTRA TDD and/or E-UTRA TDD	Add rows for the band in Tables 6.32 when applicable
7.5.1.2 (Note 2)	Co-location with GSM, DCS, UTRA FDD and /or E-UTRA FDD 3.84Mcps	Add an entry for the band in Tables 7.9
7.5.2.2 (Note 2)	Co-location with GSM, DCS, UTRA FDD and /or E-UTRA FDD 1.28Mcps	Add an entry for the band in Tables 7.10B and 7.9A
7.5.2.3 (Note 2)	Co-location with UTRA FDD and /or E-UTRA FDD 7.68Mcps	Add an entry for the band in Tables 7.10G and 7.9BH
7.7.2.2 (Note 1)	Rx spurious emissions for 1.28Mcps	Add an entry for the band in Tables 7.12A-1, 7.12A-2 if applicable
B.2 (Note 1)	Multipath propagation conditions	Add the band in Table B.2A
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA TDD		
NOTE 2: This chapter needs to be updated if the operating band is defined as UTRA and/or E-UTRA FDD		
NOTE 3: This chapter needs to be updated if the operating band is defined as UTRA and/or E-UTRA TDD		

8.2.2.12 Required changes to TS 25.143

In order to implement the new band into the UTRA TS 25.143, the required changes are shown in Table 8.2.2.12-1.

Table 8.2.2.12-1: Required changes for TS 25.143

Section	Requirement	Description of changes in TS 25.143
4.1 (Note 1)	Frequency bands	Add a row for the band in Table 4.1
4.2 (Note 1)	TX-RX frequency separation	Add a row for the band in Table 4.2
4.3.3 (Note 1)	Channel number	Add a row for the band in Table 4.3 and Table 4.4
9.1.2 (Note 1)	Operating band unwanted emissions	Add the band covered by Table 9.4B, 9.8B. Maybe include some notes or some more additional requirements
9.2.2.4	Co-existence with other systems in the same geographical area (spurious emissions)	Add a row for the band in Table 9.13
9.2.2.5	Co-existence with co-located and co-sited Base Stations (spurious emissions)	Add a row for the band in Table 9.14
9.2.2.7 (Note 2)	Co-existence with UTRA-TDD	Add a row for the band in Table 9.18, 9.18A, 9.19, 9.19A
9.2.2.8 (Note 1)	Protection of PS	Consider if needed to add a row to Table 9.16
11.2.2	Co-location with BS in other systems (input IM)	Add a row for the band in Table 11.2
11.2.3	Co-existence with other systems (input IM)	Add a row for the band in Table 11.2A or 11.2AA
11.5.2	Co-location with BS in other systems (input IM) –test requirements-	Add a row for the band in Table 11.4 or 11.4A
11.5.3	Co-existence with other systems (input IM) –test requirements-	Add a row for the band in Table 11.4A
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA FDD		
NOTE 2: This chapter needs to be updated if the operating band is defined as UTRA TDD		

8.2.2.13 Required changes to TS 25.307

In order to implement the new band into the UTRA TS 25.307, the required changes are shown in Table 8.2.2.13-1.

Table 8.2.2.13-1: Required changes for TS 25.307

Section	Requirement	Description of changes in TS 25.307
TBD	UTRA release-independent frequency band	Add a section for the band

8.2.2.14 Required changes to TS 25.331

In order to implement the new band into the UTRA TS 25.331, the required changes are shown in Table 8.2.2.14-1.

Table 8.2.2.14-1: Required changes for TS 25.331

Section	Requirement	Description of changes in TS 25.331
10.3.3.21a (Note 1)	Measurement capability extension	Include the band in the chapter.
10.3.3.32a (Note 2)	RF capability compressed	Include the band in the chapter.
10.3.3.33b (Note 2)	RF capability TDD	Include the band in the chapter.
10.3.3.33c (Note 2)	RF capability TDD 1.28 Mcps	Include the band in the chapter.
10.3.3.42ob (Note 2)	UE radio access capability comp for 1.28 Mcps TDD	Include the band in the chapter.
10.3.3.42a (Note 1)	UE radio access capability extension	Include the band in the chapter.
10.3.6.35c (Note 2)	Frequency band indicator 2	Add the band to the IE "Frequency band indicator 2"
11.3	Information element definition	Add the band in the code
NOTE 1: This chapter needs to be updated if the operating band is defined as UTRA FDD		
NOTE 2: This chapter needs to be updated if the operating band is defined as UTRA TDD		

8.2.2.153 Required changes to TS 25.461

In order to implement the new band into the UTRA TS 25.461, the required changes are shown in Table 8.2.2.135-1. This TS needs to be updated if the operating band is defined as UTRA. The CR to TS 25.461 needs to be presented in RAN4 and endorsed to RAN3 for approval, according to the agreement in [12].

Table 8.2.2.153-1: Required changes for TS 25.461

Section	Requirement	Description of changes in TS 25.461
4.3.7	Operating bands	Add a row for the band to Table 4.3.7.1

8.2.2.158.2.2.16 Required changes to TS 25.466

In order to implement the new band into the UTRA TS 25.466, the required changes are shown in Table 8.2.2.1516-1.

Table 8.2.2.165-1: Required changes for TS 25.466

Section	Requirement	Description of changes in TS 25.466
Annex B	Assigned fields for additional data	Add an entry for the band to Table B.2-1 or B.2-2

8.2.2.17 Required changes to TS 34.108

In order to implement the new band into the UTRA TS 34.108, the required changes are shown in Table 8.2.2.17-1.

Table 8.2.2.17-1: Required changes for TS 34.108

Section	Requirement	Description of changes in TS 34.108
5.1.1/5.1.2	Test frequencies	Add a new table for the new operating band

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8.2.2.18 Required changes to TS 34.121-1

In order to implement the new band into the UTRA TS 34.121-1, the required changes are shown in Table 8.2.2.18-1.

Table 8.2.2.18-1: Required changes for TS 34.121-1

Section	Requirement	Description of changes in TS 34.121-1
4.2 4.3	Frequency bands	Add new rows to tables in both sections
4.4	Channel arrangements	Add new rows to tables 4.1, 4.1a, 4.2
5.2	Max output power	Add new row to table 5.2.1, 5.2.2
5.4	Output pwr dynamics in uplink	Add new band in table: 5.4.1.3
5.5	Transmit ON/OFF Power	Add new band in table: 5.5.2.3.
5.9	SEM	Add new requirements to sections: 5.9.2, 5.9.5, 5.9A.2, 5.9A.5, 5.9B.2, 5.9B5.
5.11	Spurious Emissions	Add new requirements to sections: 5.11.2, 5.11.5
6.2	Reference Sensitivity Level	Add new row in tables: 6.2.1, 6.2.2, 6.2A.1, 6.2A.5
6.5	Blocking Characteristics	Add new row in tables: 6.5.1, 6.5.2, 6.5.3, 6.5.4, 6.5.5, 6.5.6, 6.5A.1, 6.5A.2, 6.5A.3, 6.5A.5, 6.5A.6, 6.5A.7
6.7	Intermodulation Characteristics	Add new row in tables: 6.7.2, 6.7.4, 6.7A.2, 6.7A.5
6.8	Spurious Emissions	Add new row in tables: 6.8.2, 6.8.4
8.6.6	E-UTRAN Measurements	Add new band dependent side condition in chapter: 8.6.6.1.2
8.6.7	Combined Inter-Frequency and E-UTRAN measurements	Add new band dependent side condition in chapter: 8.6.7.1.2
8.7	Measurement Performance Requirements	Add new band dependent side conditions and requirements in chapters: 8.7.1.1, 8.7.1.2, 8.7.2.1, 8.7.2.2, 8.7.3.1, 8.7.3.2, 8.7.3A, 8.7.4.1, 8.7.4.2, 8.7.5.1, 8.7.5.2, 8.7.5.3, 8.7.6.1, 8.7.6.1A, 8.7.6.2, 8.7.10, 8.7.11, 8.7.12, 8.7.13
D.2 E	Propagation Conditions	Add new band to tables: D.2.2.1, D.2.2.1A, D.2.2.1B, D.2.2.1C, D.2.9.1, D.2.9.2, F.2.1, F.4.4.

8.2.2.19 Required changes to TS 34.121-2

In order to implement the new band into the UTRA TS 34.121-2, the required changes are shown in Table 8.2.2.19-1.

Table 8.2.2.19-1: Required changes for TS 34.121-2

Section	Requirement	Description of changes in TS 34.121-2
4	Applicability	Add new band in table 1
A.4.3	Baseline Implementation Capabilities	Add new band in table A.6

8.2.2.20 Required changes to TS 34.122

In order to implement the new band into the UTRA TS 34.122, the required changes are shown in Table 8.2.2.20-1.

Table 8.2.2.20-1: Required changes for TS 34.122

Section	Requirement	Description of changes in TS 34.122
4.2	Frequency bands	Add new rows to tables in both sections
4.4	Channel arrangements	Add new row in tables in the section
5.5.3	Spurious Emissions	Add new band frequencies to chapters: 5.5.3.2, 5.5.3.5
6.5	Blocking Characteristics	Add new band requirements to chapters: 6.5.2.1, 6.5.2.2, 6.5.2.3, 6.5.5.1, 6.5.5.2, 6.5.5.3,
6.5A	Blocking Characteristics (IMB)	Add new band requirements to chapters: 6.5A.2, 6.5A.5,
6.8	Spurious Emissions	Add new requirements to chapters: 6.8.2.2, 6.8.2.5
8.6.5	E-UTRAN measurements	Add new band dependent side condition in chapter: 8.6.5.1, 8.6.5.2,
8.7	Measurement Performance Requirements	Add new band dependent side conditions and requirements in chapters: 8.7.14, 8.7.15, 8.7.16, 8.7.17,
D.2	Propagation Conditions	Add new band to tables: D.2.2.2.1, D.2.2.2.2,

[8.2.2.21 Required changes to TS 34.123-1](#)

[In order to implement the new band into the UTRA TS 34.123-1, the required changes are shown in Table 8.2.2.21-1.](#)

Table 8.2.2.21-1: Required changes for TS 34.123-1

Section	Requirement	Description of changes in TS 34.123-1
Table 6.2A	Frequency used in ITU region	Add the ITU region related to the deployed band.
Table 6.3 Table 6.3B Table 6.4 Table 6.4a	Test frequencies	Add the test frequencies related to the deployed band.

[8.2.2.22 Required changes to TS 34.123-2](#)

[In order to implement the new band into the UTRA TS 34.123-2, the required changes are shown in Table 8.2.2.22-1.](#)

Table 8.2.2.22-1: Required changes for TS 34.123-2

Section	Requirement	Description of changes in TS 34.123-2
A.4.3.2	RF Baseline Implementation Capabilities	Add a row to table A.15 or A.16

[8.2.2.23 Required changes to TS 34.123-3](#)

[In order to implement the new band into the UTRA TS 34.123-3, the required changes are shown in Table 8.2.2.23-1.](#)

Table 8.2.2.23-1: Required changes for TS 34.123-3

Section	Requirement	Description of changes in TS 34.123-3
Annex I.2	Guidelines on test execution	Add the restriction on test case execution due to the number of radio frequencies allocated for the specific operating Band

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8.2.3 Required changes to MSR specifications

Independently of the new operating band being single or multi-RAT, MSR specifications should be updated.

8.2.3.1 Required changes to TS 37.104

In order to implement the new band into the MSR TS 37.104, the required changes are shown in Table 8.2.3.1-1.

Table 8.2.3.1-1: Required changes in TS 37.104

Section	Description	Required Changes in TS 37.104
4.5	Operating bands and band categories	Add the band in Table 4.5-1 or 4.5-2 as applicable
6.6.1.3.1	BS spurious emissions limits for co-existence with systems operating in other frequency bands	Add a new row for the band in Table 6.6.1.3.1-1. Verify the current requirements and check if any modification is needed
6.6.1.4.1	BS spurious emissions limits for BS co-located with another BS	Add a new row for the band in Table 6.6.1.4.1-1.
6.6.2.4	Additional operating band unwanted emissions	Check if any additional requirement is needed
7.4.1	General blocking minimum requirement	Add the band in Table 7.4.1-1.
7.5.4.5 (Note 1)	Additional BC3 minimum requirement	Add the band in Table 7.4.5.1-1.
7.5.1	General minimum requirement for out-of-band blocking	Add the band in Table 7.5.1-1.
7.5.2	Co-location minimum requirement for out-of-band blocking	A new row is expected to be added in Table 7.5.2-1.
NOTE 1: This chapter needs to be updated if the operating band is defined as BC3		

8.2.3.2 Required changes to TS 37.113

In order to implement the new band into the MSR TS 37.113, the required changes are shown in Table ~~7~~8.2.3.2-1.

Table 8.2.3.2-1: Required changes in TS 37.113

Section	Description	Required Changes in TS 37.113
4.4.2	Receiver exclusion band	A new row is expected to be added in Table 4.4-2

8.2.3.3 Required changes to TS 37.141

In order to implement the new band into the MSR TS 37.141, the required changes are shown in Table 8.2.3.3-1.

Table 8.2.3.3-1: Required changes in TS 37.141

Section	Description	Required Changes in TS 37.141
4.4	Operating bands and band categories	Add a row for the band in Table 4.4-1 or Table 4.4-2 as applicable
6.6.1.5.5	Additional spurious emissions requirement for co-existence with systems operating in other frequency bands	Add the new band in Table 6.6.1.5.5-1. Verify the current requirements and see if modifications are needed
6.6.1.5.6	Spurious emissions limits for BS co-located with another BS	Add the new band in Table 6.6.1.5.6-1.
6.6.2.5	Additional operating band unwanted emissions	Check if any additional requirement is needed
7.4.5.1	General blocking test requirement	Add the band in Table 7.4.5.1-1.
7.4.5.5	Additional BC3 minimum requirement	Add the band in Table 7.4.5.5-1.
7.5.5.1	General minimum requirement for out-of-band blocking	It is proposed to evaluate the appropriate out-of-band blocking requirement for when co-located with BS in other frequency bands for the new band and make corresponding changes in Table 7.5.5.1-1.
7.5.5.2	Co-location test requirement	A new row is expected to be added in Table 7.5.5.2-1. It is proposed to evaluate the appropriate co-location test requirement for when co-located with BS in other frequency bands for the new band.
NOTE 1: This chapter needs to be updated if the operating band is defined as BC3		

Annex A: Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2011-05	RAN#52	RP-110751			TR for "Guideline for introducing new operating bands"		0.1.0
2011-06	RAN4#59 AH	R4-113646			Agreed documents in RAN4#59 AH: R4-113644 : "TP for Inclusion of a TR skeleton to guideline of new W/Sl for new operating bands (TR 30.007)" R4-113645 : "TP for addition of RAN5 to guideline of new W/Sl for new operating bands (TR 30.007)" R4-113647 : "TP for Required changes to E-UTRA/UTRA/MSR update to guideline of new W/Sl for new operating bands (TR 30.007)"	0.1.0	0.2.0

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