[98-bis-e][204] LTE_NR_DC_CA_RRM_1_NWM - Version 0.0.0
RAN4

1 Introduction

This document covers the email discussion related to email thread 204 on LTE_NR_DC_CA_RRM_1.

List of papers:

Core work (Topic #1):

Following 2 CRs have been submitted. Companies are encouraged to comment directly on the CRs in Topic #1.

Table 1: Submissions for Core

5.4.1.1	R4-2106990	CR on LTE-NR EMR requirements 36133	Huawei, HiSilicon	draftCR
5.4.1.1	R4-2106991	CR on EMR requirements correction 38133	Huawei, HiSilicon	draftCR

Performance work (Topic #2):

Following Tdoc's have been submitted:

Table 2: Submissions for Performance

5.4.2.1.1	R4-2106389	Measurement Performance Requirements test for MR-DC	Nokia, Nokia Shanghai Bell	discussion
5.4.2.1.1	R4-2106390	Draft CR for Idle Mode measurements of inter-frequency RAT CA candidate cells for early reporting (TC#3)	Nokia, Nokia Shanghai Bell	draftCR

5.4.2.1.1	R4-2106391	Draft Big CR: Introduction of Rel-16 MR-DC EMR RRM performance requirements (TS 38.133)	Nokia, Nokia Shanghai Bell	draftCR
5.4.2.1.3	R4-2104859	Testing of measurement performance for RSRP/RSRQ in EMR	Apple	discussion
5.4.2.1.3	R4-2106992	draftCR to update EMR TC4	Huawei, HiSilicon	draftCR

2 Topic #1: IE names for capabilities

2.1 Contributions summary

No discussion document was submitted for RAN4#98bis meeting for the Core work. 2 CRs have been submitted for corrections to UE Core requirements.

Companies are welcomed to comment directly on the CRs.

Table 3: CR collection for Core requirements.

Reference	Tdoc	Title
1	R4-2106990	CR on LTE-NR EMR requirements 36133
2	R4-2106991	CR on EMR requirements correction 38133

2.2 Companies views' collection for 1st round

2.2.1 CR comments collection

Feedback Form 1: CRs comments collection for Topic #1

Item	Company	Comments
1	Nokia Corporation	Example: • #1: Company comments • #2: Company comments
2	Ericsson GmbH, Eurolab	#1: OK #2: OK
3	Nokia Corporation	#1: ok #2: ok
4	Qualcomm Incorporated	#1: Okay #2: Okay

2.3 Summary of 1st round

2.3.1 CRs

A summary of the 1st round discussion and status of 1st round will be provided here.

Table 4: CR recommendation for Topic #1 after 1st round

Tdoc	CRs Status update recommendation
R4-2106990	-
R4-2106991	-

3 Topic #2: Test of Measurement Performance Requirements test for MR-DC

3.1 Contributions summary

Table 5: Summary of the contributions

T-doc number	Company	Proposals / Observations

R4-2106389	Nokia, Nokia Shanghai Bell	Observation 1: Measurement accuracy tests include tests under normal and extreme conditions. Observation 2: Each test case needs to include two set of test parameters. One for normal conditions and one for extreme conditions. Proposal 1: RAN4 should reconsider defining the absolute measurement accuracy tests as separate test cases
R4-2104859	Apple	Observation 1: LTE CA IDLE mode accuracy requirements are verified together with measurement core requirements in one single test. Observation 2: NR EMR accuracy requirements have already been verified in the approved test case.

3.2   Open issues summary

3.2.1   Sub-topic 1-1

Sub-topic description: Re-consider having the measurement accuracy tests as separate test cases.

3.2.1.1   Issue 1-1-1: Measurement accuracy testing as separate test cases

Proposals:

Option 1: Yes. Define the measurement accuracy test cases as separate tests.

Option 2: No. Test the measurement accuracy within core requirements.

Recommended WF:

Define and verify absolute measurement accuracy within the agreed test cases. Include the necessary test parameters and settings for testing measurement accuracy under normal and extreme conditions into the existing test cases.

3.3   Companies views' collection for 1st round

Feedback Form 2: Companies views' collection for 1st round

Item	Company	Comments
1	Ericsson GmbH, Eurolab	Our preference is Option 2 i.e. testing both in the same set of test cases.
2	HuaWei Technologies Co., Ltd	We support option 2 which is aligned with the first sentence of the **Recommended WF**. For the second setence of the **Recommended WF**, we would like to clarify what "extreme condition" means. Does it mean the extreme condition in accuracy table e.g. Table 10.1.4.1.1-1? It is noted that in existing RAN4 accuracy tests, there is no separate sub-tests for normal and extreme conditions.
3	Nokia Corporation	We can support the recommended WF. We can agree to test absolute accuracy requirements in the existing test cases. The test cases would need to be adapted accordingly.
4	Qualcomm Incorporated	Option 2
5	Apple GmbH	Support option 2. As elaborated in our contribution R4-2104859, we have similar test case design in LTE spec, i.e. testing both accuracy and measurement period in one single test (TS36.133 clause A.8.16.105). Note that the signal power level in LTE test is higher than extreme condition, i.e. Es/Iot=0dB for SCC according to Table A.8.16.105.1-2. Therefore we propose to use the same test methodology here, i.e. no need to touch the extreme conditions.
6	MediaTek Inc.	MediaTek: Support option 2

3.3.1 CR comments collection

Table 6: CR collection for Performance requirements.

Reference	Tdoc	Title
1	R4-2106390	Draft CR for Idle Mode measurements of inter-frequency RAT CA candidate cells for early reporting (TC#3)
2	R4-2106992	draftCR to update EMR TC4

Feedback Form 3: CRs comments collection for Topic #2

Item	Company	Comments
1	Nokia Corporation	Example: • #1: Company comments • #2: Company comments
2	Anritsu Corporation	**Anritsu: Comments to R4-2106390** a) It is very confusing to have T1, T2 and T5 in one table, and T3, T4 in another table. If the information on both Cell 1 and Cell 2 for T1..T5 is too much in one table, suggest a split with one table for Cell 1 and another table for Cell 2. b) In several tables Cell 2 Noc/15kHz is stated twice, once with a fixed value of -98dBm/15kHz and again with band-dependent values, which is a contradiction. To meet the test purpose, it is probably not necessary to use band-dependent values. One fixed value may be OK, and is much simpler. c) It is not clear why Cell 1 needs different Noc values of -98dBm/15kHz during T1, T2, T5 and -102dBm/15kHz during T3, T4. Could this be simplified to a constant -98dBm/15kHz during T1..T5? d) The derived parameters need to be re-evaluated when issues a) b) and c) are resolved.
3	Ericsson GmbH, Eurolab	#1: OK #2: OK
4	RO-HDE & SCHWARZ	**R4-2106390** Similar comment as Anritsu, very confusing description of 2Cells across T1-T5. We suggest separate table per cell, with consecutive description of T1-T5.

3.4 Summary of 1st round

3.4.1 Open issues

A summary of the 1st round discussion and status of 1st round will be provided here including identified open issues, tentative agreements and/or candidate options etc.

Table 7: Summary of Sub-topic 1-1 after 1st round

	Status summary
Sub-topic 1.1	Tentative agreements: Candidate options: Recommendations for 2nd round:

3.4.2 CRs

A summary of the 1st round discussion and status of 1st round will be provided here.

Table 8: CR recommendation for Topic #2 after 1st round

Tdoc	CR Status update recommendation
	e.g. "agreeable", "to be revised", "postponed"

4 Recommendations for Tdocs

4.1 1st round

New Tdoc's:

Table 9: New Tdoc allocation after 1st round

Title	Source	Comment

Existing Tdoc's:

Table 10: Tdoc status of existing Tdoc after 1st round

Title	Source	Comment
R4-2106990	Huawei, HiSilicon	-
R4-2106991	Huawei, HiSilicon	-
R4-2106390	Nokia, Nokia Shanghai Bell	-
R4-2106391	Nokia, Nokia Shanghai Bell	Draft BigCR
R4-2106992	Huawei, HiSilicon	-