3GPP TSG-RAN WG2 Meeting #116-e R2-210xxxx

Online, Nov 1 – 12, 2021

**Agenda item: 6.1.4.4**

**Source: CATT (Rapporteur)**

**Title: Summary of [AT116-e][014][NR16] Idle Inactive (CATT)**

**Document for: Discussion and Decision**

# 1 Introduction

This document is the report of the following email discussion:

* [AT116-e][014][NR16] Idle Inactive (CATT)

 Scope: Determine agreeable parts in a first phase, for agreeable parts agree on CRs. Treat [R2-2109369](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109369.zip), [R2-2109580](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109580.zip), [R2-2109581](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109581.zip), [R2-2109774](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109774.zip), [R2-2110405](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2110405.zip), [R2-2110406](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2110406.zip), [R2-2110407](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2110407.zip)

 Intended outcome: Report, Agreed CRs if applicable

 Deadline: Schedule 1

**A first round with Deadline for comments Thursday W1 Nov 4 1200 UTC to settle scope what is agreeable**

**A final round with Final deadline Thursday W2 Nov 11 1200 UTC to settle details / agree CRs**

# 2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

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| **Company** | **Name** | **Email Address** |
| CATT (Rapporteur) | Pierre Bertrand | pierrebertrand@catt.cn |
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# 3 Discussion

IAB

[R2-2109369](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109369.zip) Reply LS on power class and P-max for IAB-MT cell selection (R4-2115704; contact: CATT) RAN4 LS in Rel-16 NR\_IAB-Core To:RAN2

[R2-2109580](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109580.zip) Correction for TS 38.304 on power class for cell selection of IAB CATT,Huawei, HiSilicon CR Rel-16 38.304 16.6.0 0222 - F NR\_IAB-Core

[R2-2109581](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109581.zip) Correction for TS 36.304 on power class for cell selection of IAB CATT,Huawei,HiSilicon CR Rel-16 36.304 16.5.0 0833 - F NR\_IAB-Core

[R2-2109369](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109369.zip) is RAN4 reply LS to RAN2 LS R2-2106726. It states that:

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| RAN4 discussed the power class and P-max for IAB-MT cell selection issue and have the following understanding.1) There are no PEMAX1, PEMAX2 and PPowerClass definition for IAB-MT in TS 38.174.2) The maximum output power Pcmax is defined in TS 38.174 and is declared by manufacturer.3) PEMAX is not applicable to IAB-MT.Based on the above understanding, the RAN2 correction CRs R2-2106724 and R2-2106725 are not correct. How to further handle this issue in RAN2 is up to RAN2 decision. |

[R2-2109580](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109580.zip) and [R2-2109581](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109581.zip) are CRs to 38.304 and 36.304 respectively considering the RAN4 LS. In the CRs, Pcompensation in Cell Selection Criterion is set to 0 for IAB-MT.

**Q1: Do you agree to set Pcompensation to 0 in Cell Selection Criterion for IAB-MT?**

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| **Company** | **Yes/No** | **Comments** |
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**Summary 1**: TBD.

**Proposal 1**: TBD.

RRM Relaxation

1) CRs implementing RAN4 LS (per RAN2 agreement “R2 to follow the request from R4”)

[R2-2109774](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2109774.zip) Correction on RRM relaxation of higher priority frequencies OPPO CR Rel-16 38.304 16.6.0 0212 - F NR\_UE\_pow\_sav-Core R2-2107088

[R2-2110406](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2110406.zip) Addressing inconsistency for RRM measurement rules Ericsson, CATT CR Rel-16 38.304 16.6.0 0214 - F NR\_UE\_pow\_sav-Core R2-2108841

In the RAN4 LS R4-2108230, RAN4 indicated that 38.304 is inconsistent with RAN4's specification with regards to relaxed measurements. To cope with the inconsistency, R2-2109774 and R2-2110406 provide 2 CRs.

**Option 1** (R2-2109774, OPPO): in the sub-branch of “if *highPriorityMeasRelax* is configured with value *true*”, state that UE may choose to perform relaxed measurement according to clause 4.2.2.10.2 in TS38.133.

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| 5.2.4.9.0 Relaxed measurement rulesWhen the UE is required to perform measurements of intra-frequency cells or NR inter-frequency cells or inter-RAT frequency cells according to the measurement rules in clause 5.2.4.2:- if *lowMobilityEvaluation* is configured and *cellEdgeEvaluation* is not configured; and- if the UE has performed normal intra-frequency, NR inter-frequency, or inter-RAT frequency measurements for at least TSearchDeltaP after (re-)selecting a new cell; and- if the relaxed measurement criterion in clause 5.2.4.9.1 is fulfilled for a period of TSearchDeltaP:- the UE may choose to perform relaxed measurements for intra-frequency cells according to relaxation methods in clauses 4.2.2.9 in TS 38.133 [8];- if the serving cell fulfils Srxlev > SnonIntraSearchP and Squal > SnonIntraSearchQ:- if *highPriorityMeasRelax* is configured with value *true*:- the UE may choose to perform relaxed measurements for NR inter-frequency cells or inter-RAT frequency cells on frequencies of higher priority according to relaxation methods in clause 4.2.2.10.2 in TS 38.133 [8]; |

**Option 2** (R2-2110406, Ericsson, CATT): in two branches: 1) *lowMobilityEvaluation* is configured and c*ellEdgeEvaluation* is not configured; and 2) both *lowMobilityEvaluation* and *cellEdgeEvaluation* are configured, state that UE may choose to perform relaxed measurement according to clauses 4.2.2.10, and 4.2.2.11 in TS 38.133.

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| 5.2.4.9.0 Relaxed measurement rulesWhen the UE is required to perform measurements of intra-frequency cells or NR inter-frequency cells or inter-RAT frequency cells according to the measurement rules in clause 5.2.4.2:- if *lowMobilityEvaluation* is configured and *cellEdgeEvaluation* is not configured; and- if the UE has performed normal intra-frequency, NR inter-frequency, or inter-RAT frequency measurements for at least TSearchDeltaP after (re-)selecting a new cell; and- if the relaxed measurement criterion in clause 5.2.4.9.1 is fulfilled for a period of TSearchDeltaP:- the UE may choose to perform relaxed measurements for intra-frequency cells, NR inter-frequency cells or inter-RAT frequency cells according to relaxation methods in clauses 4.2.2.9, 4.2.2.10, and 4.2.2.11 in TS 38.133 [8];- if *cellEdgeEvaluation* is configured and *lowMobilityEvaluation* is not configured; and- if the relaxed measurement criterion in clause 5.2.4.9.2 is fulfilled:- the UE may choose to perform relaxed measurements for intra-frequency cells according to relaxation methods in clauses 4.2.2.9 in TS 38.133 [8];- if the serving cell fulfils Srxlev ≤ SnonIntraSearchP or Squal ≤ SnonIntraSearchQ:- the UE may choose to perform relaxed measurements for NR inter-frequency cells or inter-RAT frequency cells according to relaxation methods in clauses 4.2.2.10, and 4.2.2.11 in TS 38.133 [8];- if both *lowMobilityEvaluation* and *cellEdgeEvaluation* are configured:- if the UE has performed normal intra-frequency, NR inter-frequency, or inter-RAT frequency measurements for at least TSearchDeltaP after (re-)selecting a new cell; and- if the relaxed measurement criterion in clause 5.2.4.9.1 is fulfilled for a period of TSearchDeltaP; and- if the relaxed measurement criterion in clause 5.2.4.9.2 is fulfilled:- the UE may choose to perform relaxed measurements for NR inter-frequency cells or inter-RAT frequency cells according to relaxation methods in clauses 4.2.2.10, and 4.2.2.11 in TS 38.133 [8]; |

**Q2: Which option do you prefer?**

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| **Company** | **Option 1/ option 2** | **Comments** |
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**Summary 2**: TBD.

**Proposal 2**: TBD.

2) Applicability of highPriorityMeasRelax

[R2-2110405](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2110405.zip) RRM relaxation Ericsson discussion Rel-16 NR\_UE\_pow\_sav-Core

[R2-2110407](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_116-e%5CDocs%5CR2-2110407.zip) DRAFT LS on highPriorityMeasRelax parameter Ericsson LS out Rel-16 NR\_UE\_pow\_sav-Core To:RAN4

R2-2110405 further discusses the use of *highPriorityMeasRelax* parameter as a follow-up of the RAN4 LS on mis-alignment between RAN2 and RAN4 specifications. Two proposals are provided.

**Proposal 1: 38.304 refers to 38.133 when *lowMobilityEvalutation* is fulfilled/configured only and when both *lowMobilityEvalutation* and *highPriorityMeasRelax* are configured/fulfilled.**

The Proposal 1 is reflected in the CR R2-2110406 and can be discussed in Q2.

The proposal 2 goes one step further consisting in reviving the initial RAN2 agreement that the *highPriorityMeasRelax* configuration parameter enables the NW to control whether the UE is allowed to relaxed RRM measurements for higher priority frequency **for all use cases** and inform RAN4 accordingly**.**

**Proposal 2: Ask RAN4 to use *highPriorityMeasRelax* configuration parameter also for the case when both *lowMobilityEvalutation* and *highPriorityMeasRelax* are configured/fulfilled.**

R2-2110407 is the corresponding LS to the Proposal 2.

**Q3: Do you agree to extend the applicability of *highPriorityMeasRelax* parameter also for the case when both *lowMobilityEvalutation* and *highPriorityMeasRelax* are configured and ask RAN4 to take it into account?**

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| **Company** | **Yes/No** | **Comments** |
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**Summary 3**: TBD.

**Proposal 3**: TBD.

# 4 Conclusion

TBD.