3GPP TSG-RAN WG2 #113b-e R2-210xxxx

Electronic Meeting, 12th Apr – 20th Apr 2021

**Agenda item: 5.4.2**

**Source: Nokia**

**Title: Summary of [Post113-e][008][NR15] 4-layer MIMO in EN-DC for Cat5 UEs (Nokia)**

**WID/SID: NR\_newRAT-Core**

**Document for: Discussion and Decision**

# 1 Introduction

This document is the report of the following email discussion:

5.4.2 LTE changes related to NR

* [Post113-e][008][NR15] 4-layer MIMO in EN-DC for Cat5 UEs (Nokia)

Scope: Handling of 4-layer MIMO in EN-DC for Cat5 UEs, baseline is [AT113-e][008] [R2-2100946](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_113-e/Docs/R2-2100946.zip), collect opinions to decide way forward. Can also discuss

Intended outcome: Report

Deadline: Long

During the RAN2#113-e meeting, the following was input contribution for this IoDT issue

[R2-2100946](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_113-e/Docs/R2-2100946.zip) Handling of 4-layer MIMO in EN-DC for Cat5 UEs Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

An email discussion was held with the summary in [R2-2102444](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_113-e/Docs/R2-2102444.zip) for the discussion

* [Offline-008][NR15] LTE changes (Nokia)

# 2 **Discussion**

Based on the discussion during RAN2#113-e, the following proposal requires further discussion:

**Proposal 1**: RAN2 to clarify what is the correct interpretation on LTE RI bit width for Cat5 UEs in EN-DC out of the following options:

* Option 1) The UE always used 2-bit RI bit width (even if it only supports 2-layer MIMO in EN-DC mode)
* Option 2) The used RI bit width depend on the maximum support MIMO layers, i.e. if UE only supports 2 layers in EN-DC, it will use 1-bit RI bit width in EN-DC mode (and it uses 2-bit RI in LTE-only mode).

**Question 1**: Do companies agree to the Proposal 1? Please explain your reasoning as well.

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| Answers to Question 1 | | |
| Company | Yes/No | Comments |
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# 3 Conclusion

Always echo the list of observations and proposals.

# Annex A – Contact Points

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

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| Company | Name | Email Address |
| Nokia | Amaanat | amaanat.ali@nokia.com |
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