**3GPP TSG RAN WG1 #100bis R1-200xxxx**

**e-Meeting, April 20th – 30th, 2020**

Source: moderator (vivo)

Title: Feature lead summary on ULFPTx-01

Agenda Item: 7.2.6.4

Document for: Discussion and Decision

1. Introduction

Following email thread is assigned for discussion:

[100b-e-NR-eMIMO-ULFPTx-01] Email discussion on Issue #2 in R1-2002746: For 4Tx and partial-coherent UE in Mode 2, when the SRS resource set is configured with 2 ports SRS and 4 ports SRS, and the codebook subset associated with 2 port SRS resource. By 4/24 and corresponding TP (if any) by 4/30 – Rakesh (vivo)

1. Discussion on issue 2[1]
   1. Issue 2: For 4Tx and partial-coherent UE in Mode 2, when the SRS resource set is configured with 2 ports SRS and 4 ports SRS, and the codebook subset associated with 2 port SRS resource:

* Alt1: introduce a new UE capability, UE indicates whether it is *fullyAndPartialAndNonCoherent or nonCoherent*
* Alt2: the codebook subset is *nonCoherent*
* Alt3: the codebook subset is *fullyAndPartialAndNonCoherent*

Please provide your views/comments in the table below

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| --- | --- |
| Company/organization | comments |
| OPPO | Support Alt.2   1. According to the LS R1-2001513, some new RRC parameter is needed for Alt.1. Introducing non-essential new RRC parameter at a so-late stage is not a wise design, and may lead to further workload and more risk for ASN.1 frozen 2. As explained several times, it cannot be guaranteed that the 2 ports are coherent. Thus Alt.3 does not work for many UE implementations. |
| CMCC | We support Alt2, since we think the motivation of Alt1 or Alt3 is not clear. In our understanding, the 2 ports can be considered as coherent only when the 2 ports are virtualized from the first and third port (i.e., using [1 0 1 0]) or from the second and fourth port (i.e., using [0 1 0 1]) of the 4 ports. Let’s take the former case as an example, we can assume both the first and the third port can support 20dBm in order to support full power transmission. However, in that case, the 2-port is equivalent to the 4-port using reported TPMIs (e.g., using G4, ; ) which can support full power transmission. |
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Observation:

Proposal:

# References

[1] R1-2002746, Summary of prep email discussion on ULFPTx, RAN1#100b-e