**3GPP TSG-RAN WG4 Meeting #104-e draft R4-2214455**

**<Electronic Meeting>, 15 ‒ 26 August, 2022**

**Title:** WF on beam refinement assumptions in RRC\_INACTIVE and initial access

**Agenda Item:** 11.7.4

**Source: Nokia**

**Document for:** Approval

# Sub-topic 1: UE beam type and DRX implications in Rel-18 Inactive Beam Correspondence

**Way forward/Agreement:**

* The UE need not indicate support of BC without UL beam sweeping in inactive and IA. The usability of this capability is not clear at this point [Initial proposed text]

A few companies are not sure about keeping the 2nd sentence.

Alternative texts

* The UE need not indicate support of BC without UL beam sweeping in inactive and IA. [ZTE]
* The network presumes UE does not depend on UL beam sweeping functionality for beam correspondence in inactive or idle mode [Qualcomm, Verizon]
* It is assumed UE does not depend on UL beam sweeping functionality for beam correspondence in inactive or idle mode. [OPPO]
* All UE should support beam correspondence without UL beam sweeping in inactive and IA, therefore there is no need for UE to indicate the support of BC without UL beam sweeping. [Sony, CMCC]

**Way forward/FFS:**

* FFS: How beam refinement may work in RRC\_INACTIVE (RA-SDT and CG-SDT) and initial access
* FFS: Discuss the impact of fine beam vs rough beam for UE UL Tx beam on the test(s)
* FFS: Discuss if the refinement is the same as Rel-16 SSB only case
* FFS: Whether the peak EIRP the same as Rel-16 SSB only case achieved.
* FFS: Discuss DRX implications on UE beam refinement and on BC accuracy

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| Company | Agree/Disagree, include justification |
| Qualcomm | Perhaps the agreement can be reworded to something like ‘The network presumes UE does not depend on UL beam sweeping functionality for beam correspondence in inactive or idle mode’ |
| OPPO | QC alternative is better, but small changes maybe:  “The network presumes…” ->  “It is assumed UE does not depend on UL beam sweeping functionality for beam correspondence in inactive or idle mode”  Because this is not for the NW scheduling discussion, this is the assumption for requirement definition. |
| Verizon | Agree with Qualcomm! |
| Sony | An alternative way to reword the agreement to Qualcomm and OPPO’s version: to our understanding, all UE should support beam correspondence without UL beam sweeping since the network can’t configure the UE with SRS UL beam sweeping in inactive and IA, and this is the reason why it is not needed for UE indicate this to the network.  We suggest an alternative wording here for clarify the agreement:  “All UE should support beam correspondence without UL beam sweeping in inactive and IA, therefore there is no need for UE to indicate the support of BC without UL beam sweeping.”  We also think the last part “The usability of this capability is not clear at this point” is not needed in the agreement, since the reasoning of not indicate this capability is all UE must support it rather than the usability is unclear. |
| CMCC | Share the same view with Sony, it seems there is no need to reserve that “the usability of this capability is not clear at this point” |
| ZTE | There is some difference between the meaning of the original wording and revision proposals. A UE not reporting its support of the function does not mean that the UE has to have the capability, or NW may presume this capability either. We may just keep the first sentence as it is now and revise “the usability of this capability is not clear at this point” to “further study the usability of this capability”. |