**3GPP TSG RAN WG2#118-e R2-220xxxx**

**e-Meeting, 9th - 20th May, 2022**

**Title:** LS reply on clarification of *dualPA-Architecture* capability

**Response to:** R4-2206503 (LS on clarification of *dualPA-Architecture* capability)

**Release:** Rel-17

**Work Item:** NR\_RF\_FR1\_enh

**Source:** TSG RAN WG2

**To:** TSG RAN WG4

**Cc:**

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**Attachments: -**

**1. Overall Description:**

RAN2 would like to thank for the RAN4 LS in R4-2206503.

For the required change on *dualPA-Architecture*, after discussion during RAN2#118, RAN2 would like to respectfully ask RAN4 to provide answer for the following questions:

**Q1**: During RAN2#117, RAN2 had made the following agreement for the DC location report

* [032] It is left to UE implementation whether a UE supporting *dualPA-Architecture* for a BC always reports two DC locations for the BC.
* [032] A UE not supporting dualPA-Architecture for a BC always reports one DC location for the BC. Whether to change the specification can be discussed at next meeting.

Is the required change from RAN4 (i.e., the reporting of *dualPA-Architecture* also indicates the support of dual-LO) compatible with the RAN2 agreement above (i.e., the reporting of *dualPA-Architecture* does not mandate the UE to report two DC locations for the BC)?

**Q2**: In RAN2 specification, there are two *dualPA-Architecture* as follows: Where the former one is reported for the intra-band CA part of NR, while the latter one is for the intra-band BC part of (NG)EN-DC/NE-DC.

| ***dualPA-Architecture***  For band combinations with single-band with UL CA, this field indicates the support of dual PA. If absent in such band combinations, the UE supports single PA for all the ULs. For other band combinations, this field is not applicable. | BC | No | N/A | N/A |
| --- | --- | --- | --- | --- |
| ***dualPA-Architecture***  For an intra-band band combination, this field indicates the support of dual PAs. If absent in an intra-band band combination, the UE supports single PA for all the ULs in the intra-band band combination. For other band combinations, this field is not applicable.  This capability applies to:  - Intra-band (NG)EN-DC/NE-DC combination without additional inter-band NR and LTE CA component;  - Intra-band (NG)EN-DC/NE-DC combination supporting both UL and DL intra-band (NG)EN-DC/NE-DC parts with additional inter-band NR/LTE CA component;  - Inter-band (NG)EN-DC/NE-DC combination, where the frequency range of the E-UTRA band is a subset of the frequency range of the NR band (as specified in Table 5.5B.4.1-1 of TS 38.101-3 [4]).  If this capability is included in an "Intra-band (NG)EN-DC/NE-DC combination supporting both UL and DL intra-band (NG)EN-DC/NE-DC parts with additional inter-band NR/LTE CA component", this capability applies to the intra-band (NG)EN-DC/NE-DC BC part. | BC | No | N/A | N/A |

Is the required change also applicable to the latter one, or only applicable to the former one?

**2. Actions:**

**To RAN4:**

**ACTION:** RAN2 respectfully ask RAN4 to provide answer for Q1 and Q2 above.

**3. Date of Next TSG WG RAN4 Meetings:**

TSG-RAN WG2 Meeting #119-e 15 - 26 August 2022 E-meeting

TSG-RAN WG2 Meeting #119-bis-e 10 -19 October 2022 E-meeting