**3GPP TSG RAN WG2 Meeting #121bis-e R2-22xxxx**

**e-meeting, 17-26 April 2023**

**Title: [DRAFT]** Reply LS on intraBandENDC-Support

**Response to:** R2-2300060 (R4-2220837)

**Release:** Release 16

**Work Items:** TEI16

**Source:** Qualcomm Incorporated [To be RAN WG2]

**To:** RAN WG4

**CC:**

**Contact Person:**

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**Attachments:** None

1 Overall description

RAN2 would like to thank RAN4 for their LS on intraBandENDC-Support.

RAN2 discussed RAN4’s suggestion regarding the interpretation of the UE capability parameter *intraBandENDC-Support* set to “both”. In RAN2, there were concerns raised for RAN4 suggestion, e.g. on the forward compatibility. RAN2 instead agreed on a new signalling solution as outlined below, with pending confirmation by RAN4.

**Principles**

1. A new UE capability parameter *intraBandENDC-Support****-UL***, with the values {contiguous, non-contiguous, both}, is introduced.
2. The UE capability parameter *intraBandENDC-Support-UL* is only signalled when UL capability is different from the one indicated by the existing parameter *intraBandENDC-Support*.
3. If the new parameter *intraBandENDC-Support-UL* is not signalled. the existing UE capability parameter *intraBandENDC-Support* indicates:
   * either the UE capability only for DL (when the UE supports intra-band EN-DC only in DL)
   * or the common capability for DL and UL (when the UE supports intra-band EN-DC in DL and UL)
4. Support for non-contiguous intra-band EN-DC in DL and contiguous in UL is not a valid case.

**Solution description**

With this solution, different intra-band EN-DC cases can be signalled as follows. Note that the table below includes the invalid case “Non-contiguous/Contiguous”, but only for illustration purpose.

|  |  |  |  |
| --- | --- | --- | --- |
| **Cases** | ***intraBandENDC-Support*** | ***intraBandENDC-Support-UL*** | **UE supports in DL / UL (if applicable)** |
| 1 | Absent (Contiguous) | Absent | * Contiguous/Contiguous |
| 2 | Absent (Contiguous) | Non-contiguous | * Contiguous/Non-contiguous |
| 3 | Non-contiguous | Absent | * Non-contiguous/Non-contiguous |
| 4 | Non-contiguous | Contiguous | * N/A   NOTE:  “Non-contiguous/Contiguous” is not valid. |
| 5 | Both | Absent | * Contiguous/contiguous * Non-contiguous/Non-contiguous |
| 6 | Both | Contiguous | * N/A   NOTE:  “Contiguous/Contiguous” is covered by case 1.  “Non-contiguous/Contiguous” is not valid. |
| 7 | Both | Non-contiguous | * Contiguous/Non-contiguous * Non-contiguous/Non-contiguous |
| 8 | Absent (Contiguous) | Both | * Contiguous/Contiguous * Contiguous/Non-contiguous |
| 9 | Non-contiguous | Both | * N/A   NOTE:  “Non-contiguous/Non-contiguous” is covered by case 3.  “Non-contiguous/Contiguous” is not valid. |
| 10 | Both | Both | * Contiguous/Contiguous * Non-contiguous/Non-contiguous * Contiguous/Non-contiguous |

RAN2 would like to ask RAN4 to review the solution above and inform RAN2 whether it is agreeable from RAN4’s perspective.

2 Actions

**To RAN4**

**ACTION:** RAN2 would like to ask RAN4 to review the UE capability signalling solution outlined in this LS and inform RAN2 whether it is agreeable from RAN4’s perspective.

3 Dates of next TSG RAN WG2 meetings

TSG-RAN WG2 Meeting #122 22 – 26 May 2023 Seoul, Korea

TSG-RAN WG2 Meeting #123 21 – 26 August 2023 Toulouse, France