**3GPP TSG-RAN WG Meeting #90 Electronic DRAFT RP-20xxxx**

**Online, 07 – 11 December 2020**

**Title: [DRAFT]** LS on BCS reporting and support for intra-band EN-DC band combinations

**Response to:** -

**Release:** Release 15

**Work Item:** NR\_NewRAT-Core

**Source:** Nokia [TSG RAN]

**To:** TSG RAN WG2, TSG RAN WG4

**Cc:**

**Contact Person:**

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**Attachments:** -

**1. Overall Description:**

RAN has discussed the topic of BCS reporting of intra-band part of inter-band EN-DC as per the document RP-202514, with the resulting discussion being documented in RP-20xxxx.

As results, RAN has recognized that both RAN2 and RAN4 require some actions to clarify the BCS reporting for band combinations involving intra-band EN-DC parts. For this reason, RAN would request that, for RAN#91e, the following clarifications are done in RAN2 and RAN4:

* For RAN4:
  + A) Clarify which band combinations are "intra-band EN-DC combinations with inter-band components", for the purposes of including the capability field *supportedBandwidthCombinationSetIntraENDC*. For example, for DC\_2A-71A\_n71A, does the UE always need to report an intra-band BCS for DC\_71A\_n71A even if the UE does not support UL DC\_71A\_n71A and thus not DC\_71A\_n71A? If the UE does support DC\_2A-71A\_n71A but does not report an intra-band BCS for DC\_71A\_n71A can the network assume that the UE supports all possible combinations of Band 71 and n71 channel bandwidths in the combination DC\_2A-71A\_n71A? Does the need for the UE to report a BCS depend on the band combination? For instance, does DC\_2A-66A\_n66A always need to report a BCS?
  + B) Resolve the general question of classification of intra-band EN-DC band combinations according to UL support. If the UE doesn't support UL on intra-band EN-DC part of a band combination, is band combination classified as "intra-band EN-DC band combination"?
  + C) Indicate the RAN4 understanding on A) and B) to RAN2 by the end of the first meeting week of RAN4#98e (to allow RAN2 to finalize their work).
  + D) Agree (if necessary) CRs taking the conclusions of A) and B) into account.
* For RAN2:
  + 1) Clarify what UE supports when it doesn't indicate the field *supportedBandwidthCombinationSetIntraENDC* for a band combination. For example, if UE supporting DC\_2A-7A-7A-66A-n66A does not include the capability field *supportedBandwidthCombinationSetIntraENDC*, how should network interpret UE capabilities?
  + 2) Clarify based on RAN4 feedback to A) and B), the usage of "intra-band EN-DC combinations with inter-band components" (A) and "intra-band EN-DC" (B) in RAN2 specifications.
  + 3) Agree (if necessary) CRs taking the conclusions of A), B), 1) and 2) into account.

**2. Actions:**

**To RAN WG4 group.**

**ACTION:** RAN respectfully requests RAN4 to

A) Clarify if higher order EN-DC band combinations with the equivalent band on the LTE and NR side such as 2A-7A-7A-66A-n66A and DC\_2A-71A\_n71A need to report a BCS for intra-band EN-DC (as defined in 38.101-3, section 5.3B.1), even if the UE doesn’t support the intra-band UL configurations DC\_66A\_n66A or DC\_71A\_n71A respectively. If the UE does not report a BCS for such a combination, what can the network assume about the configuration limitations for the equivalent bands in the combination?

B) Resolve the general question of classification of intra-band EN-DC band combinations according to UL support. If the UE doesn't support UL on intra-band EN-DC part of a band combination, is band combination classified as "intra-band EN-DC band combination"?

C) Indicate the RAN4 understanding on A) and B) to RAN2 by the end of the first meeting week of RAN4#98e (to allow RAN2 to finalize their work).

D) Agree to necessary CRs taking the conclusions of A) and B) into account.

**To RAN WG2 group.**

**ACTION:** RAN respectfully requests RAN2 to

1) Clarify (if necessary), based on RAN4 feedback to A) and B), the usage of "intra-band EN-DC combinations with inter-band components" (A) and "intra-band EN-DC" (B) in their specifications.

3) Agree to necessary CRs taking the conclusions of A), B), 1) and 2) into account.

**3. Date of Next TSG-RAN WG2 Meetings:**

3GPP RAN#91e 22 – 26 February 2021 Electronic Meeting