3GPP TSG-RAN WG2 #111-e R2-200xxxx

Electronic meeting, 17th - 28th August, 2020

**Title:** Reply LS on Rel-16 UE feature lists

**Response to:** LS on Rel-16 RAN1 UE feature lists for NR (R1-200)

**Release:** Rel-16

**Work Item:** NR\_UE\_pow\_sav, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core

**Source:** Intel Corporation [To be RAN WG2]

**To:** RAN WG1, RAN WG4

**Cc:**

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**Attachments:** -

1. **Overall Description:**

RAN2 would like to thank RAN1 and RAN4 for their LSes on UE feature lists for Rel-16. Based on discussions during RAN2#111-e, RAN2 would like to inform RAN1 and RAN4 on the below:

1. **Granularity of intraFreqDAPS and interFreqDAPS in eMOB WI:**

The following 2 RAN2 agreements are on the granularity of intraFreqDAPS and interFreqDAPS:

* 4: For inter freq DAPS, the capability inter-FreqDAPS is specified per BC (for intra band, inter band cases). It is put under existing CA bandcombination, and same as CA, the CCs in the bandcombination with UL can all be source or target PCell.
* 7: Per Band per BC capability (intraBandDiffSCS, intraFreq-DAPS) is put in BandParameters.

1. **FG2-20 support co-located scenario only for inter-band EN-DC in RAN4 feature list**

RAN2 would like to seek guidance from RAN4 related to the co-location indication for inter-band ENDC combination:

1. Whether legacy gNB supports Rel-15 DC\_20\_n28?

Even though DC\_20\_n28 is specified in Rel-15, without the UE Type indication for DC\_20\_n28 (which is the only BC allowing Type 1), legacy gNB will not be able to configure DC\_20\_n28 confidently. Hence RAN2 assume that DC\_20\_n28 is not supported by legacy gNB.

1. Is there a default UE Type for DC\_20\_n28 and existing Rel-15 inter-band EN-DC band combinations?

If the UE Type indication is introduced from Rel-16, it is unclear what the UE Type for DC\_20\_n28 and existing Rel-15 inter-band EN-DC band combinations are for the UE and gNB. Hence RAN2 think RAN4 needs to define a default Type for Rel-15 inter-band EN-DC band combinations. Based also on the FG2\_20 (‘type 1 UE: performance guaranteed with PSD difference between DL carriers < 6dB, and MRTD=3us (current only DC\_20\_n28 has this limitation)’), the only Rel-15 band combination that Type1 is possible is DC\_20\_n28.  The other Rel-15 band combinations should only support Type 2 UE. Is this the correct understanding?

1. Is it the correct understanding that the UE Type indication is only allowed for limited EN-DC band combination that RAN4 specification defines? As of now, RAN2 understands that DC\_20\_n28 is the only EN-DC band combination that can apply the UE type indication. If it is correct, RAN2 think that it is desirable that the UE Type indication should not be applied for existing inter-band EN-DC band Combination to ensure there is no backward compatibility issue.
2. **UE capability signalling timeline impact based on the availability of RAN1 and RAN4 UE feature lists:**

RAN2 would also like to provide the timeline of designing the signalling based of the availability of RAN1 and RAN4 UE feature lists as below:

* RAN2 plan to start working on the capability signalling design aspects under the assumption that the UE feature lists from RAN1 and RAN4 are available to RAN2 by the end of week 1 of RAN1 and RAN4 WG meetings (viz., end of August 21st, 2020).
* Any content that is FFS will NOT be considered/discussed as part of the UE capability signalling for the September specification version but could be considered in the next quarter.
* Further agreements, if any, from email discussions after the RAN1 and RAN4 meetings cannot be part of September specification version but could be considered in the next quarter.

1. **Actions:**

**To RAN1:** RAN2 respectfully asks RAN1 to take the above into account and to provide RAN1 views on the RAN2 agreements in 2, if any. RAN2 also respectfully requests that RAN1 provide the UE feature list by end of week1 of RAN1 meeting (end of August 21st), while considering the content from item 7 above.

**To RAN4:** RAN2 respectfully asks RAN4 to take the above into account and to provide RAN4 views on the RAN2 agreements in 2, if any and the questions in 3. RAN2 also respectfully requests that RAN4 provide the UE feature list by end of week 1 of RAN4 meeting (end of August 21st), while considering the content from item 7 above.

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

TSG-RAN WG2 Meeting #112e 2020-11-05 to 2020-11-16 E-Meeting