**3GPP TSG-RAN WG1 #101-e R1-2004969**

**e-Meeting, 25th May – 5th June, 2020**

**Title:** LS on updated Rel-16 RAN1 UE features lists for NR

**Response to:** R2-2006030

**Release:** Rel-16

**Work Items:** NR\_2step\_RACH-Core, NR\_unlic-Core, NR\_IAB-Core, 5G\_V2X\_NRSL-Core, NR\_L1enh\_URLLC-Core, NR\_IIOT-Core, NR\_eMIMO-Core, NR\_UE\_pow\_sav-Core, NR\_pos-Core, NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core, TEI-16, NR\_CLI\_RIM-Core

**Source:** RAN WG1

**To:** RAN WG2, RAN WG4

**CC:**

**Contact Person:**

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**Attachment:**  R1-2004970.zip (Updated version of RAN1 UE features list for Rel-16 NR)

**1. Overall Description:**

RAN1 would like to thank RAN2 for their reply LS on UE feature lists for Rel-16 NR. RAN1 has been discussing on Rel-16 RAN1 UE features list for NR. Based on the agreements made at the RAN1#101-e meeting, RAN1 agreed to send the updated version of NR UE features list to RAN2 to facilitate their work on defining capability signaling.

Following are some notes regarding the NR features list:

**To RAN4:**

RAN1 has determined that introduction of the following UE capabilities by RAN4 is beneficial for assisting NW beam indication across multiple CCs in inter-band CA

* UE indication for group(s) of bands that share the same UE spatial domain reception filter
* UE indication for group(s) of bands that share the same UE spatial domain transmission filter

xxx

Also, RAN1 would like to provide RAN1 views on questions in RAN2 LS as below.

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| **2.1 Interpretation of the support of TMPI(s) for lower configurations in mode-2 operation**  RAN2 wonders whether the UL full power mode-2 supporting TPMIs for the lower configuration of coherency/port config can be deduced from the reported set of TPMIs, or does the UE need to explicitly report supported TPMIs for each coherency/port config the UE can support as part of it’s capability? |

**RAN1 view:** xxx

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| **4.1 Further restrictions that are applicable to NR -DC combinations**  RAN2 would like to request RAN1 and RAN4 if they see any additional restrictions in the definition of NR-DC combinations that can help reduce the NR-DC cell grouping capability reporting at the UE. |

**RAN1 view:** There is no additional suggestion from RAN1 for now.

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| **6.1 Dormancy support interpretation in RAN1 UE feature list:**  Regarding FG 18-4/4a/4b in RAN1 UE feature lists, it is RAN2’s view that if RAN1 agrees to allow the UE to report the support of dormancy per band combination, if the UE reports that it supports dormancy for a band combination, the UE should support the dormancy for all the fallback band combinations of this reported band combination. RAN2 would like to RAN1 to notify if this is not RAN1’s intention. |

**RAN1 view:** RAN2 understanding is aligned with RAN1’s intention.

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| **6.2 FG interpretation in RAN1 and RAN4 UE feature lists:**  It is the view of RAN2 (from RP-200502 [1]) that a UE supporting a feature group should support all the components of the feature group. Based on the UE feature list content, this appears to be not applicable to all the FGs from the lists, and so request RAN1 and RAN4 to clearly indicate the relation among components within a FG when it is not according to the RAN guidance. |

**RAN1 view:** RAN1 view is aligned with RAN2’s view that a UE supporting a feature group should support all the components of the feature group according to the RAN guidance. In the updated version of NR UE features list, RAN1 defined FGs and components in such a way.

**2. Actions:**

**To RAN WG2**

**ACTION:** RAN1 kindly would like to ask RAN2 to take into account the list of RAN1 NR UE features and above RAN1 views for designing corresponding capability signalling in Rel.16.

**To RAN WG4**

**ACTION:** RAN1 kindly would like to ask RAN4 to take into account the list of RAN1 NR UE features and above RAN1 views for designing corresponding capability signalling in Rel.16.

**3. Date of Next RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #102-e 17th – 28th August 2020 E-meeting.