**3GPP TSG RAN WG1 #108-e R1-22nnnnn**

**e-Meeting, February 21st – March 3rd, 2022**

**Title:** LS on updated Rel-17 RAN1 UE features list for NR

**Response to:** -

**Release:** Rel-17

**Work Items:** NR\_FeMIMO, NR\_ext\_to\_71GHz, NR\_IIOT\_URLLC\_enh, NR\_NTN\_solutions, NR\_pos\_enh, NR\_redcap, NR\_UE\_pow\_sav\_enh, NR\_cov\_enh, NR\_IAB\_enh, NR\_SL\_enh, NR\_MBS, NR\_DSS, LTE\_NR\_DC\_enh2, NR\_DL1024QAM\_FR1, NR\_RF\_FR1\_enh, NR\_SmallData\_INACTIVE

**Source:** RAN WG1

**To:** RAN WG2

**CC:** RAN WG4

**Contact Person:**

#### Name: Shinya Kumagai, Ralf Bendlin

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**Attachment:**  R1-22nnnnn.zip (Updated RAN1 UE features list for Rel-17 NR after RAN1 #108-e)

**1. Overall Description:**

RAN1 has continued to discuss the Rel-17 RAN1 UE features list for NR and would like to share the latest version with RAN2 in the attachment R1-22nnnnn. Note that in the attached version of the Rel. 17 NR UE features list, whenever it is RAN1’s understanding that an open issue has no ASN.1 impact, the highlighting has been removed.

In addition, RAN1 reached the following agreement for NR\_DL1024QAM\_FR1:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Agreement: Update the field description for existing capability supportedModulationOrderDL as shown below, allowing applying the existing UE reported parameter value (supportedModulationOrderDL) with 1024-QAM scaling factor (in which case the existing parameter description must be updated to allow it to take the value of 1024-QAM).**

| ***supportedModulationOrderDL***Indicates the maximum supported modulation order to be applied for downlink in the carrier in the max data rate calculation as defined in 4.1.2. If included, the network may use a modulation order on this serving cell which is higher than the value indicated in this field as long as UE supports the modulation of higher value for downlink. If not included:- for FR1, the network uses the modulation order signalled per band i.e. [pdsch-1024QAM-FR1] when [pdsch-1024QAM-FR1] is signalled for the band , otherwise the network uses the modulation order signalled in *pdsch-256QAM-FR1*.- for FR2, the network uses the modulation order signalled per band i.e. *pdsch-256QAM-FR2* if signalled. If not signalled in a given band, the network shall use the modulation order 64QAM.In all the cases, it shall be ensured that the data rate does not exceed the max data rate (*DataRate*) and max data rate per CC (*DataRateCC*) according to TS 38.214 [12]. | FSPC | No | N/A | N/A |
| --- | --- | --- | --- | --- |

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**2. Actions:**

**To RAN WG2**

**ACTION:** RAN1 kindly asks RAN2 to take into account the RAN1 NR UE features in the attachment for designing corresponding capability signalling in Rel.17.

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

TSG-RAN WG1 Meeting #109-e May 16 to May 27, 2022 E-meeting