**3GPP TSG-RAN WG5 Meeting #100 R5-235817**

**Toulouse, France, Aug 21 - 25, 2023**

Title: LS on Applicability of the DEMOD and CSI requirements for IoT NTN UE

Response to: -

Release: Rel-18

Work Item: LTE\_NBIOT\_eMTC\_NTN\_req-UEConTest

Source: RAN WG5

To: RAN WG4

Cc: -

**Contact Person:**

Name: Dan Song

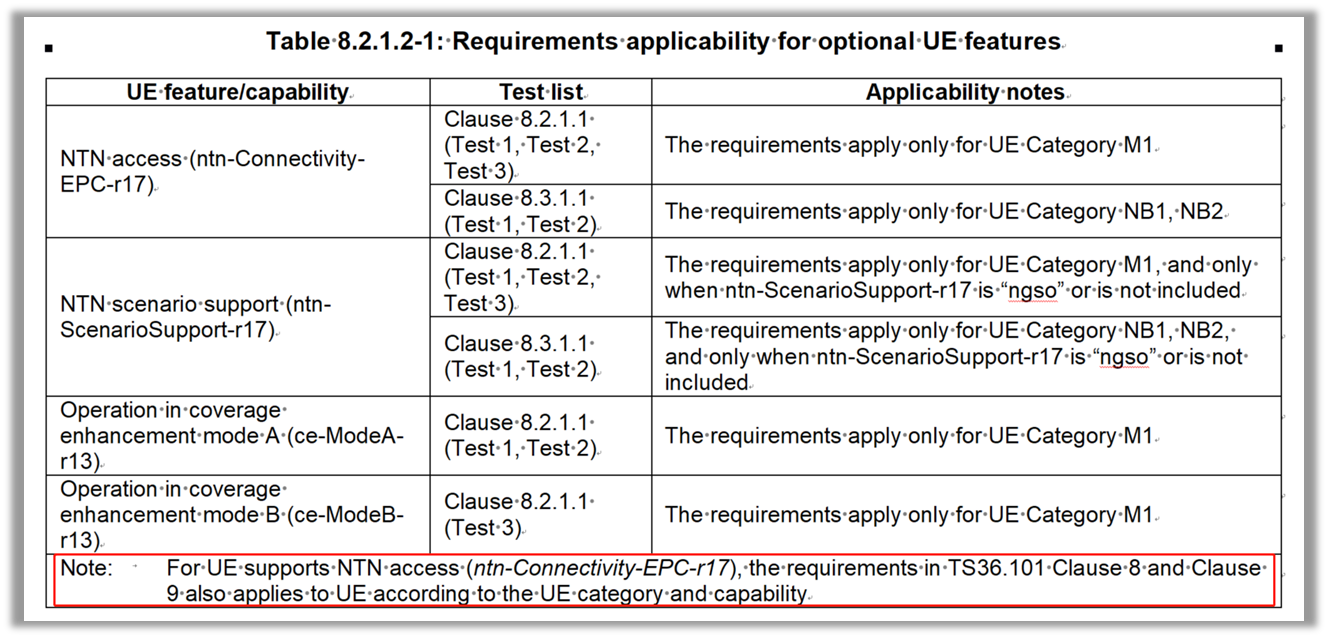
E-mail Address: [songdan@chinamobile.com](mailto:songdan@chinamobile.com)

**Send any reply LS to: 3GPP Liaisons Coordinator, <mailto:3GPPLiaison@etsi.org>**

Attachments:

**1. Overall Description:**

In TS 36.102 Table 8.2.1.2-1, it is indicated by Note that “For UE supports NTN access (ntn-Connectivity-EPC-r17), the requirements in TS 36.101 Clause 8 and Clause 9 also applies to UE according to the UE category and capability”.



After case-by-case evaluation, RAN5 found concerns in the following aspects (For details, please check R5-234756):

For eMTC NTN requirements in TS 36.101 Clause 8 Performance Requirements:

It is identified that no eMTC requirements can be applied to eMTC NTN UEs due to lack of requirements for “CBW=1.4MHz and Antenna Configuration=1\*1**”** from TS 36.521-1 Clause 9.

**Question 1: What is** **RAN4’s plan to adapt LTE performance requirements for UEs supporting eMTC NTN only (not supporting TN)?**

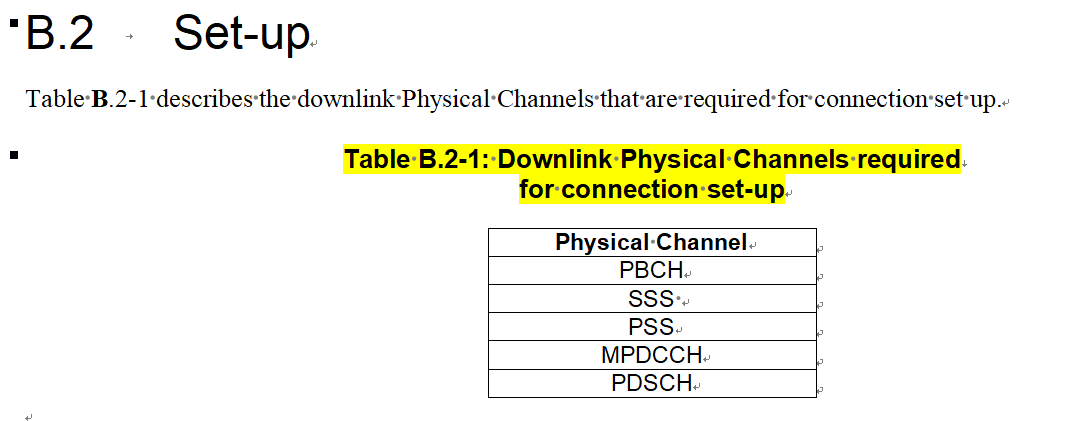
For requirements in TS 36.101 Clause 9 Reporting of Channel State Information:

It is observed that no need to consider CSI reporting for NB-IoT NTN UE or eMTC NTN Mode B UE. Besides, it is identified that no eMTC requirements from TS 36.521-1 Clause 9 can be applied to eMTC NTN Mode A UE due to lack of requirements for “CBW=1.4MHz”.

**Question 2: What is RAN4’s plan to define reporting of CSI requirements for UEs supporting eMTC NTN only (not supporting TN)?**

For Annex B.2 in TS 36.102:

Table B.2-1 is the only table in Section “B.2 Set-up”. It says “Table B.2-1 describes the downlink Physical Channels that are required for connection set up.” without indicating it is for Category M1 only or it is for both Category M1 and Category NB1/NB2. And it seems that there is no content for Category NB1/NB2 in Table B.2-1 yet.



**Question 3: What is the RAN4 guidance on how to interpret Table B.2-1? Is it for Category M1 UEs only and there will be additional table to address Category NB1/NB2? Or is it for both Category M1 UEs and Category NB1/NB2 UEs and Table B.2-1 needs updates on Category NB1/NB2?**

**2. Actions:**

**To RAN WG4:**

**ACTION:** RAN5 would like to kindly ask RAN4 to provide replies to the 3 questions. Early feedback to any of the questions will unblock IoT NTN conformance test definition in RAN5 specifications.

**Question 1: What is RAN4’s plan to adapt LTE performance requirements for UEs supporting eMTC NTN only (not supporting TN)?**

**Question 2: What is RAN4’s plan to define reporting of CSI requirements for UEs supporting eMTC NTN only (not supporting TN)?**

**Question 3: What is the RAN4 guidance on how to interpret Table B.2-1? Is it for Category M1 UEs only and there will be additional table to address Category NB1/NB2? Or is it for both Category M1 UEs and Category NB1/NB2 UEs and Table B.2-1 needs updates on Category NB1/NB2?**

**3. Date of Next RAN WG5 Meetings:**

TSG RAN WG5 Meeting #101 November 13th – 17th, 2023 Chicago, US

TSG RAN WG5 Meeting #102 Feb 26th – March 1st, 2024 Athens, GR