**3GPP TSG-RAN WG4 Meeting # 106 draft R4-2303538**

**Athens, Greece, 27 February –03 March, 2023**

**Agenda item:** 10.5.8

**Source:** MediaTek Inc.

**Title:** WF on IoT NTN UE RF requirement

**Document for:** Approval

# 1 Proposals relevant to CR

### Sub-topic 2-1

*Sub-topic description: Updates in clause 3, clause 6 tx power, spectrum emission and spurious emission, and clause 7 rx refsens and spurious response.*

**Issue 2-1-1: TS36.102 clause 3 updates**

Agree Option 1 as proposed CR in R4-2303537

**Issue 2-1-2: TS36.102 clause 6 tx power updates**

Agree Option 1 as proposed CR in R4-2303537

**Issue 2-1-3: TS36.102 clause 6.5A.1 tx spectrum emission updates**

Agree Option 1 as proposed CR in R4-2303536

**Issue 2-1-4: TS36.102 clause 6.5A.4 tx spurious emission updates**

Agree Option 1 as proposed CR in R4-2303537

**Issue 2-1-5: TS36.102 clause 7 REFSENS updates**

Agree Option 1 as proposed CR in R4-2303537

**Issue 2-1-6: TS36.102 clause 7 rx spurious response updates**

Agree Option 1 as proposed CR in R4-2303537

### Sub-topic 2-2

*Sub-topic description: MPR and A-MPR*

**Issue 2-2-1: 16QAM MPR for Cat-M1**

Agree Option 1 as proposed CR in R4-2303535

**Issue 2-2-2: NS\_24 A-MPR values for Cat-M1**

Agree CR in R4-2303535

### Sub-topic 2-3

*Sub-topic description: Additional spurious emissions about NS\_02N(FCC emission mask) and guard band aspects*

**Issue 2-3-1: ΔfOOB in additional spurious emissions for Cat-M1**

Agree Option 1 as proposed CR in R4-2303537

**Issue 2-3-2: NS\_02N guard band values for category NB1/NB2**

Agree CR in R4-2303534

# 2 Proposals

### Sub-topic 2-4

*Sub-topic description: ETSI harmonised standard requirements*

*The main controversial issues are related to:*

* *The applicability of the ETSI 301 681 mask for b255 and other ETSI requirements for b256,*
* *the correct interpretation, and then how to define requirements to fulfil it.*

**Issue 2-4: ETSI masks**

* Proposals
  + Proposal 1:
  + Option1: Do not capture ETSI requirements for NTN UEs in 3GPP at this point of time.
  + Option2: Except for ETSI EN 301 681 requirements, other ETSI requirements for NTN UE in 3GPP are currently not captured until obvious issues are detected
  + Proposal 2: [For fulfilling ETSI EN 301 681 requirement for NTN IoT UE b255, the guard band is applicable.]
  + Proposal 3: The guard band in Proposal 2 needs NS signalling.

Recommended WF

Further discussion in RAN4#106-bis-e meeting

### Sub-topic 2-5

*Sub-topic description: NS values and corresponding bits in RRC*

*The main controversial issues are related to:*

* *The NS integer value and corresponding bit in RRC are not specified.*

**Issue 2-5: NS integer values and the corresponding bits in RRC NS signalling**

* Regarding the NS values and the corresponding bits in the RRC NS signalling, x
  + Option 1: reuse LTE method for NTN IoT, i.e., using global integer value and choose the particular value for NTN IoT band. (e.g., reuse the NS\_02 integer value for NS\_02N)
  + Option 2: explicitly indicate which integer value in the NS bits it uses, like defined in NR.

Recommended WF

Further discussion in RAN4#106-bis-e meeting

### Sub-topic 2-6

*Sub-topic description: RF requirements verification aspects*

**Issue 2-6: RF requirements verification**

**<Agreement in Main session>**

* Zero doppler shall be applied for all RF requirements unless otherwise stated (i.e., except for frequency error at least with NGSO)