3GPP TSG RAN#100
Taipei, Taiwan, June 12th-14th, 2023

RP-231457
Agenda Item 9.2.3

IMT-2020 submission of 3GPP satellite RITs

MediaTek Inc., Qualcomm Inc., Ericsson, Thales

Background

- At RAN#99, the IMT-2020 submission of 3GPP satellite Radio Interface Technologies (RITs) was discussed, and the corresponding documents in [1] and [2] were agreed, and **both NR NTN and IoT NTN** technology specifications were agreed to be included in the IMT-2020 submission from 3GPP

- According to ITU-R document [3]:
  - A (standalone) RIT needs to **fulfil the minimum requirements for three test environments** comprising the three usage scenarios (*see table below for description of usage scenarios and test environments from [4]*)
  - An SRIT consists of a number of component RITs complementing each other, **with each component RIT fulfilling the minimum requirements of at least one test environment and together as an SRIT fulfilling the minimum requirements of three test environments** comprising the three usage scenarios

Usage scenarios	eMBB-s	mMTC-s	HRC-s
Test environments	Rural-eMBB-s	Rural-mMTC-s	Rural-HRC-s

- RAN targets evaluation of NR NTN for all 3 test environments, and IoT NTN for Rural mMTC-s test environment, as part of the ongoing Study Item [1]

Proposal

TSG RAN to agree on the following structure for its IMT-2020 satellite submission:

- **RIT:** NR NTN
- **SRIT, consisting of the following component RITs:**
  - *Component RIT#1:* NR NTN
  - *Component RIT#2:* IoT NTN (both NB-IoT NTN & eMTC NTN)

References

[1] RP-230736, New SID: Study on Self-Evaluation towards IMT-2020 Satellite Radio Interface Submission; (*Ericsson, Qualcomm, Thales, MediaTek)*

[2] RP-230772, Draft LS to ITU-R WP4B on 3GPP submission towards IMT-2020 Satellite; (*3GPP TSG RAN, to: SA; cc: -; contact: Thales*)

[3] Document IMT-2020-SAT/2-E; (*ITU-R*)

[4] M.2514.0; (*ITU-R*)