**3GPP TSG RAN Meeting #90e RP-20xxxx**

**Electronic Meeting, Dec, 2020**

**Agenda item: 9.1.5**

**Source: CMCC**

**Title: Email discussion for [90E][][]**

**Document for: Information**

# 0. Introduction

This is an email discussion summary for RAN4 R17 non-spectrum proposal on ATG.

The target of this email discussion is to generate an agreeable WID for ATG focusing on the most important set of (max 2-3) objectives.

1. Rel-17 WI on ATG for NR

Related contributions in RAN#90

RP-202348 Email discussion summary for RAN4 R17 proposal on ATG

RP-202316 Motivation for new WI on air-to-ground network for NR

RP-202317 New WID on air-to-ground network for NR

RP-202692 Views on Rel-17 RAN4-led non-spectrum WIs and Sis

## 1.1 Objective 1: RF requirements

Specify features to core specifications of RF requirements for coexistence between ATG and IMT terrestrial network [RAN4]

* Identify key characteristics where it is absolutely necessary to differentiate ATG BS and UEs from ground based BS and UEs
  + Aim to reuse existing requirements for BS and UE where possible.
* Study and specify the framework how ATG core requirements are defined.
  + This includes identifying whether the requirements are captured within the existing specifications or new specifications are created.
  + Determine whether conducted, OTA or both types of requirement are required for both the BS and UE
* Identify the FR1 potential band(s) to be used as example for ATG
* Perform RF1co-existence evaluation for ATG network (e.g. ACLR, ACS)
* Specify new UE/BS type(s) for ATG network if necessary
  + Taking into account identified differences between ATG and ground based systems
* Specify RF requirements for ATG UE/BS
  + Considering the results of co-existence simulations in terms of impact on emissions and RX requirements, cell sizes and link budgets, technology capabilities, likely BS and UE architectures and other relevant aspects.
* Specify test procedures for ATG BS conformance testing
  + Determine at an early phase whether conducted, OTA or both types of testing are needed

Q1: Companies are invited to share views on objectives

|  |  |  |
| --- | --- | --- |
| Company | Do you agree to include objective 1 in Release 17 ATG WI? | Any wording change suggestion on objective 1? |
|  |  |  |
|  |  |  |

## 1.2 Objective 2: RRM core requirements

* Indentify and specify RRM core requirements for ATG, starting once the Rel-17 NTN WI has progressed sufficiently and taking into account the decisions/outcome of Rel-17 NTN work item.
  + RRM core requirements for ATG UE. [RAN4]
    - Considering the different nature of ATG UEs and their view of the network, increased cell sizes and other relevant aspects.

Q2: Companies are invited to share views on objectives

|  |  |  |
| --- | --- | --- |
| Company | Do you agree to include objective 2 in Release 17 ATG WI? | Any wording change suggestion on objective 2? |
|  |  |  |
|  |  |  |

## 1.3 Objective 3: RRM/Demod performance

* Indentify and specify RRM/Demod performance requirements for ATG, starting once the Rel-17 NTN WI has progressed sufficiently and taking into account the decisions/outcome of Rel-17 NTN work item.
  + RRM performance requirements and test cases for ATG UE type. [RAN4]
  + Demodulation performance requirements and test cases for ATG UE/BS. [RAN4]

Q3: Companies are invited to share views on objectives

|  |  |  |
| --- | --- | --- |
| Company | Do you agree to include objective 3 in Release 17 ATG WI? | Any wording change suggestion on objective 3? |
|  |  |  |
|  |  |  |

1. Intermediate summary