



Agenda item: 9.1.2.3

Views on Release-19 NR NTN

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“Way forward and next steps” in summary document RP-2302613

Based on the offline discussion the following potential focus objectives have been identified:

- **Coverage enhancements for Downlink**
- **Coverage enhancements for Uplink**
- **Regenerative payload**
- **Mobility enhancements**
- **Enhanced GNSS Operation**
- **Uplink capacity / throughput enhancement**
- **Robust Notification/Alert**
- **MBS via NTN (->) Broadcast only for NGSO**
- **REDCAP**

DL coverage enhancement

- Both Link level solution and System level solution should be studied
 - For Link level solution, firstly identify the target link margin improvement
 - Study system level solution includes enhancing power sharing between beams
 - NES techniques (e.g. R18 NES and/or R19 NES) can be considered to make some beams non-active.

Uplink Capacity enhancement

- Each UE would occupy more time resources for repetitions of UL transmission, which leads to reduction of UE multiplexing capability from the system perspective. Recommend improving UE multiplexing with reasonable RAN impact.
 - Recommend OCC based solution
 - Sub-PRB based frequency resource allocation would cause huge RAN impacts.

Regenerative payload

- On-satellite gNB may be realized by the legacy functions from the RAN perspective
 - Specify the support of On-satellite gNB in Stage-2 RAN specification
 - Consider also On-satellite {gNB + UPF}
- Support of Inter-Satellite Links does not have RAN specification impacts

Enhanced GNSS Operation

- Focus on temporary degradation of GNSS performance
 - GNSS incapable UE should not be in the scope
 - Study potential enhancements for compensation of UL time and frequency synchronization

DL coverage enhancement

- Both Link level solution and System level solution

Uplink Capacity enhancement

- OCC based UE multiplexing

Regenerative payload

- On-satellite gNB, Inter-Satellite Link

Enhanced GNSS Operation

- Enhancing compensation of UL time and frequency synchronization

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Be Original.