

# Views on Rel-19 RAN4-led RRM

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# Candidate Topics on RRM in Rel-19

- **RRM Enhancement in FR2**
  - RRM requirement enhancement with multi-Rx activation in FR2
    - RRM requirements for Inter-cell based mTRP scenario
    - RRM requirements for non-mTRP scenario
- **Measurement Gap Enhancement**
  - Independent measurement gap configuration for DC (PCell and PSCell)
    - EN-DC, NE-DC, NR-DC scenario for FR1 and FR2
  - Overhead reduction for multiple types of measurement gap

# FR2 Enhancement: Multi-Rx activation

- **Motivation**

- In FR2, RRM requirements such as evaluation, detection, measurement delay that take into account Rx beam sweeping cause longer latency.
  - Rx beam sweeping factor  $N = 8$  for FR2-1, and  $N = 12$  for FR2-2
- In Rel-18, RAN4 has discussed RRM requirements for simultaneous reception using multi-panels from mTRP based on Rel-17 group-based L1-RSRP measurement and report in FR2 with limited scenario
- It is expected enhanced RRM requirements with multi-panels activation to receive signal in FR2
  - E.g., Handover, SCell activation, L3 measurement requirements, inter-cell based mTRP, etc

- **Objective**

- Specify enhanced RRM requirements with multi-panel activation under non-mTRP scenario in FR2 (e.g., FR2-1 and FR2-2)
- Specify RRM enhancement for mTRP scenario in FR2
  - L3 measurements related requirements for intra-cell based mTRP
  - RRM requirements for inter-cell based mTRP
  - Relaxation of scheduling/measurement restriction

# Measurement Gap Enhancement

- **Motivation**

- Maximum 2 MGs are supported for UE not supporting per-FR gap and for UE supporting per-FR gap.
- For Dual-Connectivity mode, it is not efficient in aspect of measurement period due to MG sharing between PCell and PSCell.
  - In EN-DC
    - per-UE gap and FR1 gap are configured by MN
    - FR2 gap is configured by SN
  - In NE-DC and NR-DC
    - per-UE gap, FR1 gap, and FR2 gap are configured by MN
- Multiple types of measurement gap would be impact on throughput. Further consideration for overhead reduction of multiple types of measurement gap configuration should be studied.

- **Objective**

- Specify RRM requirements related to the concurrent MG configured independently per PCell and PSCell in DC mode
- Specify RRM requirements to reduce measurement gap overhead by multiple types of measurement gap configuration