3GPP TSG RAN#102
December 11th – 15th, 2023

RP-233493

Views on Rel-19 RAN4-led Cross Area

LG Electronics

Candidate Topics on Cross Area

- **Inter-band CA in FR2**
  - CBM based inter-band UL CA in FR2-1
    - For all device types

- **ATG Evolution**
  - ATG operation in
    - Intra/inter-band CA in FR1
    - FR2 frequency band

CBM based Inter-band CA

- **Motivation**
  - Inter-band UL CA in FR2-1 based on CBM
    - So far, inter-band UL CA in FR2-1 has been specified based on IBM (independent beam management) even though discussing CBM based UE in earlier release

- **Objective**
  - Inter-band UL CA in FR2-1 based on CBM
    - Specify RF requirements for CBM based inter-band UL CA in FR2-1
    - Specify RRM requirements for CMB based inter-band UL CA in FR2-1
    - Specify the requirements for all device types in FR2-1

ATG Evolution

- **Motivation**
  - In Rel-18, the requirements for ATG with Omni-directional antenna and antenna array are defined in FR1 frequency band.
  - From the perspective of increasing capacity and reducing interference of TN network (i.e., existing network), expansion into FR1 intra/inter-band CA and FR2 frequency band are an important features of ATG operation.

- **Objective**
  - For intra / inter-band CA in FR1
    - Specify RF Tx/Rx and RRM requirements
    - Co-located based deployment can be high priority
  - For FR2 frequency band
    - Specify RF Tx/Rx requirements
    - Specify RRM requirements
      - The principle of FR1 with directional antenna can be baseline
  - For optimization in FR1 frequency band
    - Specify scheduling restriction and guard period as large TDD cell deployment