3GPP TSG RAN#103
March 18 – 21, 2024
Maastricht, The Netherlands

RP-240447
Agenda Item 9.7.2.7

On 4Rx to 2Rx relaxation for XR devices

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Background

- **RAN#97e** Proposal to relax the 4Rx UE mandate in existing high FR1 bands to cater for form-factor limited XR device that require demanding XR services. 100MHz maxCBW for high data rates (i.e. not RedCap UE)
- **RAN#98e** ≠ from3GPP UE types incl. RedCap UE. Identification to the network required
- **RAN#100** Smartphones excluded
- **RAN#101** Non-RedCap XR wearable UE. Only #Rx antennas is relaxed
- **RAN#102** Way forward endorsed in RP-234015
  - RAN2/3 to provide draft CRs (for RAN#103)
  - RAN4 to provide draft CRs (for RAN#103)
    - Incl. definition from RAN#101 (RP-232657)
    - Feasibility of tightened 2Rx REFSENS requirements (vs. Existing REFSENS for 2Rx and 4Rx) in bands where 4Rx is mandatory, and Feasible REFSENS values
    - Conducted requirements and OTA considerations

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Proposals

- RAN2 Status since RAN#102 (CR sets: RP-240706, RP-240707)
  - Default Barring vs. Default Access

- **Proposal 1** – Default Barring
  - RAN#103 approves CRs with Default Cell Barring i.e. explicit indication from the network is required to access the network

- RAN4 Status since RAN#102 (LS in: RP-240035)
  - Definition transposed to RAN4 specification
  - Conducted Rx sensitivity requirements: RAN plenary to select between
    a) 0.5dB Rx sensitivity improvement vs. 2Rx ; or
    b) Same Rx sensitivity as 4Rx UE
  - OTA Rx sensitivity requirements
    - To specify OTA TRS requirements per band for both 4Rx XR and 2Rx XR for the NR bands mandating 4Rx, based on measurement campaign of 4Rx XR, considering the performance degradation value for 2Rx based on 4Rx measurement campaign

- **Proposal 2** – Conducted Rx sensitivity requirements
  - RAN#103 proceeds with a) noting however that n104 (6425-7125MHz) has not been reliably verified due to lack of implementation and deployment.
    - The use of "[*value*]" is recommended

- **Proposal 3** – OTA Rx sensitivity requirements
  - In view of the time and effort needed, RAN#103 proceeds with work in Rel-19

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Thank you!

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