

**3GPP TSG RAN meeting #102**  
**Edinburgh, Scotland, December 11-15, 2023**  
**Agenda Item: 9.1.4.2**  
**Document for: Discussion**

**RP-233602**



# Views on RF/OTA Topics for Rel-19

**China Unicom**

# 1. UE RF FR1 enhancements: Tx Power enhancement

## □ Background & Motivations

- Increasing the transmit power of UE has significant benefits on extending uplink coverage area and improving the experience of users.
- In the previous releases, features on Tx power enhancements (e.g. HPUE, power boosting, increased Tx power limit, etc.) were studied and standardized in order to allow UEs to transmit at higher Tx power.
- MPR (Allowed maximum power reduction) is allowed by UE to guarantee the service quality for higher order modulations and transmit bandwidth configurations. **Lower MPR would also allow UE to transmit at higher power to achieve better UL performance.** However, MPR related enhancement were not studied before.

## □ Proposals

- **To study/specify the MPR-reduction related mechanisms/requirements with following aspects**
  - relaxed ACLR and EVM requirements, depending on modulation orders
  - reduced PAPR level

## 2. OTA enhancements: Reverberation Chamber (RC) Test for FR2-1

### □ Background & Motivations

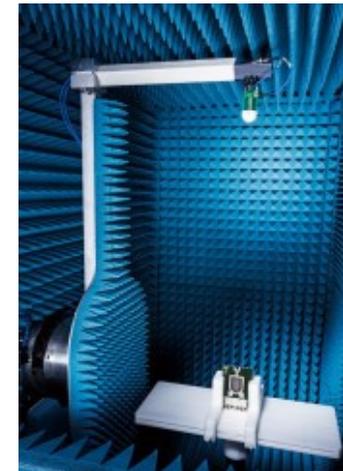
- Reverberation Chamber has the advantage of faster testing time comparing with anechoic chamber on RF parameters (e.g. TRP, etc.) for UE. RC has been widely used in LTE/NR FR1 TRP testing and NR BS testing.
- Due to increase in the complexity of OTA testing, the industry has recognized the importance of reducing the testing time for FR2-1 UEs. RC would be a potential solution to **reduce the time needed for the UE performance verification process.**
- Several OTA testing related Work/Study had been carried out in previous releases based on anechoic chamber assumptions for FR2-1. And relevant work on reverberation chamber for UE testing was not studied in previous release.



Reverberation Chamber

### □ Proposals

- **To consider the RC Method as a candidate alternative method for TRP and TRP-based test cases such as spurious emission for NR FR2-1 UE RF testing.**



Anechoic Chamber

Thanks!