

3GPP TSG RAN Rel-19 workshop
Taipei, June 15 - 16, 2023
Agenda item: 5

RWS-230348



Views on NCR & RIS in Rel-19

China Unicom

- ❑ Coverage is a fundamental aspect of cellular network deployments. Mobile operators rely on different types of network nodes to offer continuous coverage in their deployments. Deployment of regular base station is one option but it may not be always possible (e.g., no availability of backhaul) or economically viable.
- ❑ A network-controlled repeater is an enhancement over conventional RF repeaters with the capability to receive and process side control information from the network. ***Side control information could allow a network-controlled repeater to perform its amplify-and-forward operation in a more efficient manner.*** Potential benefits could include mitigation of unnecessary noise amplification, transmissions and receptions with better spatial directivity, and simplified network integration.

■ Side control information

- Frequency-selective RB-level beam scheduling
- Link-level On-OFF
- Multiple beams over the same T-F resource

■ Control Signaling (out of band)

- L1/L2 layer signaling
 - Beam information, Timing information, UL-DL TDD Configuration, On-OFF reporting
 - Specific SSB design
 - Flexible Backhaul link beam indication for interference coordination
- Higher layer signalling
 - RRC and MAC CE parameters
- UE features

■ Mobility management

- Intra-CU handover
- Support RRM measurement in RRC_CONNECTED mode

■ Power Control

- Semi-static and dynamic
- PA between Backhaul link and C-link
- PA for DL access link

- **Motivation:** A large number of theoretical innovations and prototype tests have demonstrated that RIS has advantages in low cost, low power consumption and easy deployment, which generates many potential opportunities and broad application prospects in the 5G and future 6G networks.

- **Objectives:**
 - **Study Channel Model**
 - Scatting pattern, reciprocity and cross polarization of RIS with GBSM and hybrid modeling methods
 - Large/small scale channel model

Thanks