

3GPP TSG RAN#104

June 17 – 20, 2024

Shanghai, China

RP-241363

Agenda Item 9.2.2

Ambient IoT: RAN1/RAN4 Work Split

Coexistence and Interference Study

MediaTek Inc.

Background

- **RAN1#117:** whether RAN1 can do co-existence and interference study in parallel to RAN4
 - No consensus due to different understanding on the SID
- Ambient IoT SID includes:

1. Evaluation assumptions

[...]

- a. Define necessary further evaluation assumptions of deployment scenarios for coverage and coexistence evaluations [RAN1, RAN4]

[...]

2. [...]

RAN1-led:

For the Ambient IoT DL and UL:

- [...] Study necessary characteristics of carrier-wave waveform for a carrier wave provided externally to the Ambient IoT device, including for **interference handling** at Ambient IoT UL receiver, and at NR basestation. [...]

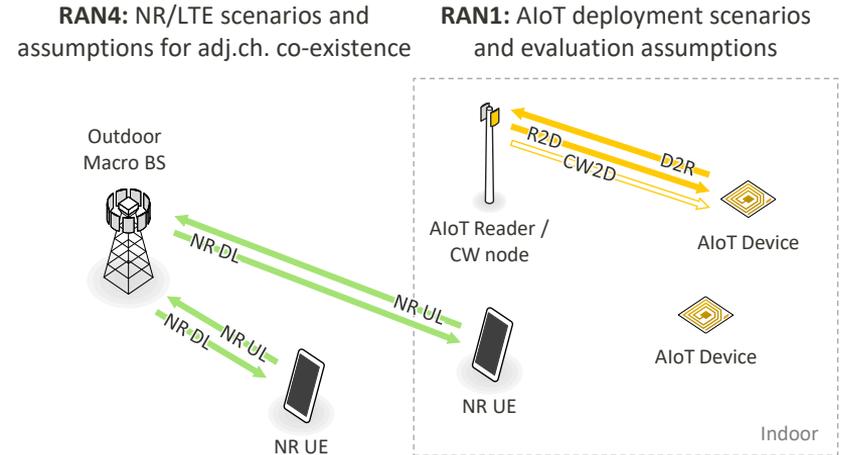
RAN4-led:

- **Coexistence study** of Ambient IoT and NR/LTE. [...]

- RAN4#111 agreed to study adjacent-channel co-existence
- Co-channel coexistence plan still undecided, and other aspects such as evaluation assumptions

Proposed RAN1/4 work split to avoid parallel work

- “Co-existence” in SID is more for the adjacent-channel co-existence case, typically handled by RAN4
 - However, RAN1 should provide guidance on AIoT deployment scenarios and evaluation assumptions for RAN4 reference
- **Proposal 1**
 - For the "adjacent channel" co-existence study, RAN4 takes RAN1 input regarding AIoT deployment scenarios and evaluation assumptions
- **Proposal 2**
 - For “inter-RAT co-channel” interference handling
 - RAN4 to provide guidance on interference profile (e.g., device power leakage model)
 - RAN1 to perform system level analysis of impact and any functional solutions



Thank you!