3GPP TSG RAN#96
Budapest, HU, June 6th-9th 2022

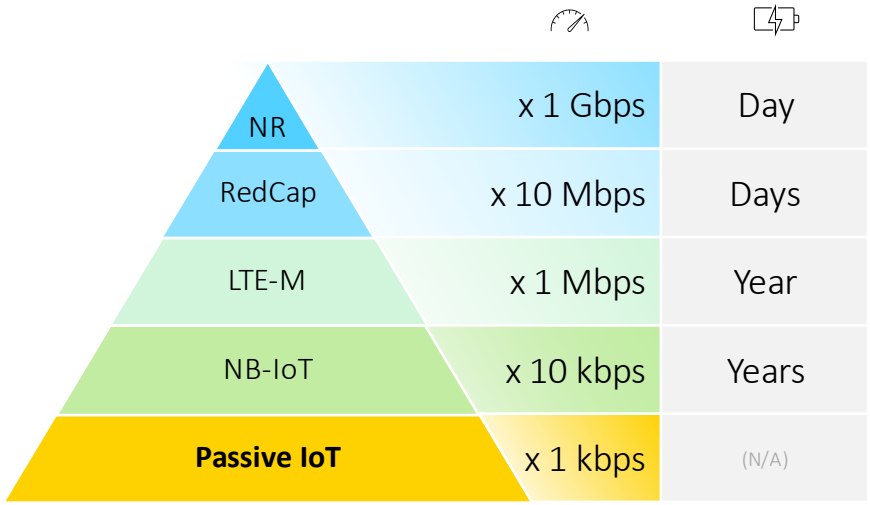
RP-221564
Agenda Item 9.11

Passive IoT – NOT another 3GPP LPWA

MediaTek Inc.

Background

- **Initial Proposal:** RAN Rel-18 WS, Jun/2021
  - RWS-210453
- **Related 3GPP Activity**
  - [SA1] Rel-19 Stage 1 Study ongoing
    - (link) – started Dec'21
    - TR 22.840 (link)
    - Related but not 1:1 mapped
    - It is important that RAN output feeds into SA1 study
  - [SA2] Rel-18: No work ongoing or planned
    - Rel-18 already over-packed
  - [RAN] Rel-18: No work ongoing
    - Email discussion RP-212688 (RAN#93e - #94e)



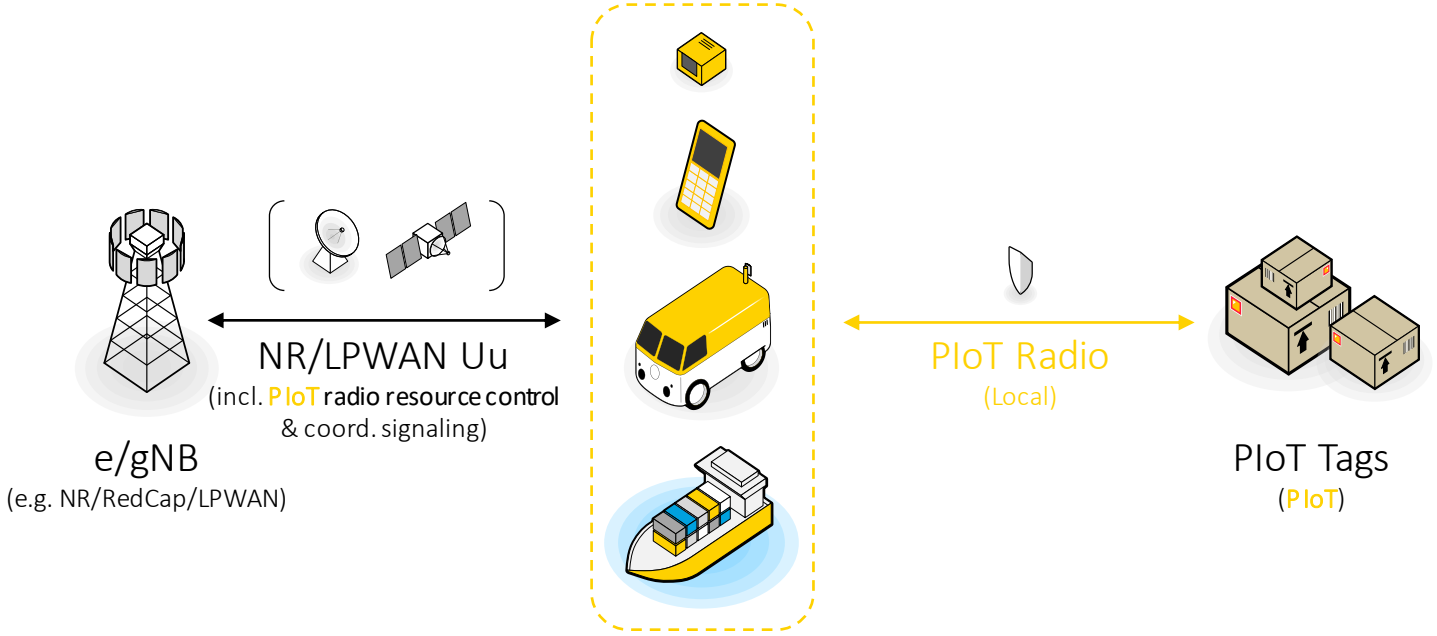
MediaTek View

Very focused RAN-level study – NO new 3GPP LPWAN

Passive IoT – "Passive IoT Tag"	
Power consumption	1 – 10µW
Complexity	Ultra-low
Coverage	10 – 30 m

Characteristics

- Battery-less PIoT Tag
- Small coverage: Reader UE can "manage" PIoT Tag
- Device-device interface only
  - e/gNB <*Uu*> UE **<PIoT>** PIoT Tag
- Spectrum
  - Very limited set of bands and Global operation
  - If Licensed spectrum: PIoT resources controlled + coordinated by e/gNB if available or Reader UE configuration.*
- DL triggered communication only
- Implicitly compatible with NTN
- Security: Reader UE <> PIoT Device
- (Extension of Relay use case)



PIoT: Passive IoT

NOTE *: Subset of existing control signaling framework for Uu control/coord. of SL operation could be leveraged

Thank You!