3GPP TSG RAN#93e
September 13th-17th, 2021

RP-212332
Agenda Item 9.0.2

RedCap Enhancements

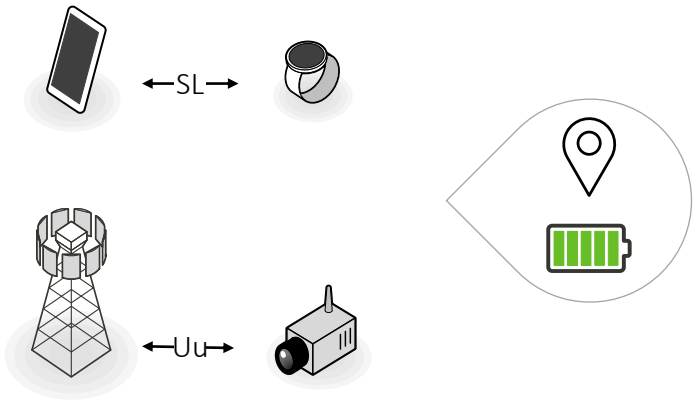
MediaTek Inc.

RedCap Enhancements
RAN1-led

3GPP TUs (Total w/ 9 meetings)			
RAN1	RAN2	RAN3	RAN4
12-14	8-11	-	9 (RF)

SA/CT Dependency: Yes (eDRX)

Considering all companies' input thus far, we see the following objectives as a reasonable set for completion in Release 18



- Objective I: PA less operation [RAN4, 1, 2]

  Define lower power class, also considering coverage impact

  Justification: Enables cost and power savings for specific RedCap scenarios (e.g. PAN/LAN operation)

- Objective II: eDRX > 10.24s in Inactive state [RAN2, SA2, CT1]

  Extension of eDRX beyond 10.24s in Inactive state (similar to Idle state)

  Justification: Enables energy-efficient sporadic small-data transmission

- Objective III: Low data rate RedCap UEs [RAN1, 2]

  Study low data rate RedCap UEs (including further study on 5MHz-only support), considering cost implications and interworking impact with Rel-17 RedCap deployments. Specification work dependent on study outcome.

  Justification: Further cost reduction for specific RedCap device types

- Objective IV: Low energy RedCap study [RAN1, 2, 4]

  Study LP-WUR alternatives – limiting specification work to enhancements based on existing WUS in this release. Impact on serving cell RRM is part of this study

  Justification: To study and define a completely new radio interface seems too ambitious for a single release. Also, if serving cell RRM measurements are not considered alongside LP-WUR operation, there will be no power saving gains associated with LP-WUR

  Note: For energy harvesting, a number of companies in the email discussion felt that this was more applicable to the Passive IoT use case, so this may be best addressed in the context of that item

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Thank You!