3GPP TSG-RAN WG2 #110-e R2-2005937

Online, 1 – 12 June 2020

**Title: Draft LS reply on PUR transmission for NB-IoT/eMTC**

**Response to:** R2-2004345/R1-2002944 and R2-2004342/R1-2002846

**Release:** Release 16

**Work Item:** NB\_IOTenh3-Core, LTE\_eMTC5-Core

**Source:** Ericsson [To be RAN2]

**To:** RAN1

**Contact Person:**

#### Name: Tuomas Tirronen

E-mail Address: tuomas.tirronen@ericsson.com

**Send any reply LS to:** 3GPP Liaisons Coordinator, mailto:3GPPLiaison@etsi.org

**Attachments: *None***

**1. Overall Description:**

RAN2 thanks RAN1 for their LS on PUR working assumption for NB-IoT/eMTC in R1-2002944 and LS reply on open PUR issues for NB-IoT/eMTC in R1-2002846.

RAN2 has made the following agreements in RAN2#110-e related to these LSs:

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| RAN1 LSs:* Confirm the feasibility of RAN1 working assumption on search space priority, send a reply LS to RAN1.
* Update RRC with DCI adjustment on repetitions.
* When repetition adjustment DCI is detected, MAC layer expects the 3-bit index from PHY layer and further provides it to RRC layer. RRC layer updates the PUR configuration with the provided information.
* Ask RAN1 to provide indications on the 3-bit repetition adjustment, L1 ACK/fallback indication to upper layers in their specifications.
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In R1-2002944 RAN1 has provided the following RAN1 working assumption:

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| **Working Assumption*** #1: When PUR transmission overlaps with WUS, PUR transmission is prioritized
	+ For eMTC, this applies only to HD-FDD UEs
* #2: When PUR SS monitoring overlaps with Paging CSS, PUR SS monitoring is prioritized
* #3: When PUR SS monitoring overlaps with WUS, PUR SS monitoring is prioritized

If it is concluded by RAN2 that the working assumption is feasible, the working assumption will be automatically confirmed. |

RAN2 would like to inform RAN1 that RAN2 thinks the working assumption is feasible from RAN2 point of view and can be confirmed.

In R1-2002846 RAN1 has provided the following reply to RAN2 questions:

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| RAN1 considers that the answers to the questions above are covered through the following response:* The L1 adjustment on the (N)PUSCH repetition number is intended to apply for future PUR UL transmissions until a new L1 adjustment or RRC reconfiguration is received, i.e. the UE uses the information from the most recently received L1 adjustment or RRC (re)configuration.
* The decision on whether the L1 adjustment on the (N)PUSCH repetition number is intended to update the higher layer (i.e. RRC) configuration or to be used instead of the configuration provided by higher layers can be made in RAN2, and then RAN1 will update the RAN1 specifications in accordance with the RAN2 decision if needed.
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RAN2 would like to inform RAN1 that RAN2 will update their specifications so that the adjustment on the (N)PUSCH repetition number provided in L1 ACK of fallback indicator updates the repetition number configuration in PUR configuration in RRC layer.

RAN2 expects that PHY layer will provide a 3-bit repetition adjustment index to higher layers so that the value can be stored in the PUR configuration. This applies to NB-IoT, eMTC CE Mode A and CE Mode B. Furthermore, RAN2 expects indications on L1 ACK or fallback will be provided to higher layers.

The repetition parameter stored in the PUR configuration will be provided to PHY layer in PUR grant when the lower layers are configured for PUR when PUR UL transmission is triggered by RRC layer.

**2. Actions:**

**To RAN1**

**ACTION:**

RAN2 respectfully request RAN1 to take the above information into account and update their specifications if needed.

**3. Date of Next TSG-RAN WG2 Meetings:**

TSG-RAN WG2#111 17th - 28th Aug 2020 Online meeting

TSG-RAN WG2#112 2nd – 13th Nov 2020 Online meeting