3GPP TSG RAN WG2 Meeting #113-e R2-210xxxx

Online Jan 25th – Feb 5th 2021

**Title:** **[Draft]** Reply LS on PC5 DRX operation

**Response to:** R2-2010672/S2-2008326 LS on PC5 DRX operation

**Release:** Release 17

**Work Item:** NR\_SL\_enh-Core

**Source:** LG Electronics [To be RAN2]

**To:** SA2

**Cc:** RAN1

**Contact person:**

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

**Attachments:**

# 1 Overall description

RAN2 thanks SA2 for the questions in LS on PC5 DRX operation.

RAN2 has discussed the PC5 DRX operation and would like to answer to SA2 as follows:

**Q1)** For all the modes of communication (i.e. unicast, groupcast, and broadcast), whether the existing PC5 QoS parameters provided by the V2X layer to the AS layer are sufficient for the AS layer to determine the PC5 DRX parameters? Or, whether additional information is required or desired to be provided by the V2X layer to the AS layer?

In TR 23.776 some solutions propose that additional information could include, e.g.:

- Default PC5 DRX cycles per V2X service type/PQI/RAT type (e.g., PC5 DRX cycle and on duration)

- Application traffic pattern information (e.g., periodicity and burst sizes of V2X messages)

- The length of an offset that the AS layer can add to extend the PC5 DRX "ON periods"

Note that, none of the parameters listed above has reached consensus in SA2.

**A1)** The PC5 DRX parameters can be determined by AS layerand no additional input from V2X layer other than the currently available QoS is needed.

**Q2)** Once the AS layer determines the PC5 DRX parameters, whether the AS layer can provide the PC5 DRX related information to the V2X layer, e.g., the PC5 DRX cycle, ON duration and starting point of the ON duration?

**A2)** RAN2 confirms that for unicast, the PC5 DRX configuration may be negotiated between the UEs in AS layer. Therefore, other than DRX parameter negotiation/sharing reason, AS layer can provide the PC5 DRX related information to the V2X layer, and RAN2 is working on the detailed PC5 DRX parameters that apply to NR SL communications. RAN2 would keep SA2 updated on the RAN2 progress.

**Q3)** Once the AS layer determines the PC5 DRX parameters, whether sharing the PC5 DRX related information amongst UEs in the vicinity in V2X layer, is beneficial or feasible for broadcast and groupcast?

**A3)** RAN2 does not observe benefits of sharing the PC5 DRX related information amongst UEs in the vicinity for SL groupcast/broadcast in V2X layer.

**Q4)** What is the relationship between the PC5 DRX and the Uu DRX if both are activated on a UE?

**A4)** RAN2 is working on this aspect following the WID bullet of “Specify mechanism aiming to align sidelink DRX wake-up time with Uu DRX wake-up time in an in-coverage UE”. RAN2 would keep SA2 updated on the RAN2 progress.

# 2 Actions

**To 3GPP SA2:**

**ACTION:** RAN2 respectfully asks SA2 to take into account the above answers from RAN2 point of view.

# 3 Dates of next TSG RAN WG2 meetings

TSG RAN WG2 Meeting #113-bis-e 12 – 20 Apr 2021