**3GPP TSG-RAN** **WG2 Meeting #116bis-e R2-220xxxx**

**Online, January 17 – January 25, 2022**

**Title: [DRAFT] LS on PDCCH Skipping in RRC\_CONNECTED**

**Response to:** -

**Release:** **Rel-17**

**Work Item:** **NR\_UE\_pow\_sav\_enh-Core**

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

**To: RAN1**

**Cc:**

**Contact Person:**

**Name: Anil Agiwal**

**E-mail Address: anilag@samsung.com**

# **1. Overall Description**

RAN2 has discussed the impact of PDCCH skipping on SR and RA procedure. Following agreements were made in RAN2#116bis-e:

1. UE ignores PDCCH skipping while the SR is pending.
2. If PDCCH skipping is applied to RNTI(s) monitored during RAR/MsgB window, the UE ignores PDCCH skipping during the RAR/MsgB window.
3. UE ignores PDCCH skipping while contention resolution timer is running.

**Question 1: RAN2 would like to know whether PDCCH skipping is applied to RNTI(s) monitored during RAR/MsgB window for RAR/MsgB reception.**

**Question 2: RAN2 would like to know if RAN1 prefers to capture the above agreements in RAN1 specification or prefer these to be captured in MAC specification.**

RAN2 also discussed the impact of PDCCH skipping on DCP monitoring. If DCP monitoring occasions overlap with PDCCH skipping duration, UE cannot monitor DCP. To address this, RAN2 has discussed following approaches:

Approach 1: If UE can not monitor DCP due to PDCCH skipping, physical layer of UE does not report Wake-up indication bit to higher layer. Higher layer reuses the *ps-Wakeup* to determine whether to start the *drx-onDurationTimer* or not.

Approach 2: If UE can not monitor DCP due to PDCCH skipping, physical layer of UE reports a value of 1 for Wake-up indication bit to higher layer.

Approach 3: PDCCH skipping only applies in Active Time and hence DCP cannot be missed due to PDCCH skipping.

**Question 3: RAN2 would like to ask RAN1 whether a) Physical layer of UE reports a value of 1 for Wake-up indication bit to higher layer or b) Physical layer of UE does not report Wake-up indication bit to higher layer, in case UE cannot monitor DCP due to PDCCH skipping; or if Approach 3 can be assumed.**

RAN2 also discussed potential impact on CSI/SRS transmissions due to PDCCH skipping.

**Question 4: RAN2 would like to know whether UE should continue transmitting CSI/SRS during the PDCCH skipping duration or not?**

**2. Actions:**

RAN2 respectfully asks RAN1 to take above agreements into account in their work and provide response to above questions.

**3. Date of Next RAN2 Meetings:**

TSG-RAN WG2 Meeting #117-e 21 February - 3 March 2022 Electronic

ASN1 review 20 – 22 April 2022 Electronic

TSG-RAN WG2 Meeting #118-e 16 – 27 May 2022 Electronic