**3GPP TSG-RAN WG2 Meeting #109-eR2-200xxxx**

**Online, 24th Feb - 6th Mar, 2020**

**Title:** [Draft] LS on DCP

**Response to:**

**Release:** Release 16

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

**Source:** Huawei [to be RAN2]

**To:** RAN1

**Cc:**

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**Attachments:**

**1. Overall Description:**

In RAN2#109-e, RAN2 discussed the MAC-PHY interactions for DCP (DCI with CRC scrambled by PS-RNTI) monitoring and the start of onDurationTimer. The following understanding regarding how to capture DCP between MAC and PHY was agreed from RAN2 point of view:

**MAC specification:**

1. MAC specifies the start of onDurationTimer and Active Time, including:
* MAC should start onDurationTimer according to DCP monitored by PHY
* MAC should start onDurationTimer in case DCP is overlapped with Active time, measurement gap and BWP switching period
* MAC should start onDurationTimer in case ps-Wakeup is set to true and no DCP is received from PHY

**PHY specification:**

1. PHY specifies DCP monitoring, including:
* When to start the monitoring (ps\_offset) and stop the monitoring (minimum gap based on UE capability)
* In case DCP is considered invalid from PHY perspective (scenarios FFS in RAN1, e.g. collisions with other RNTIs in the same slot, collision with SSB slots, etc.), PHY should not monitor DCP and indicates to MAC the start of onDurationTimer for the next DRX cycle
1. PHY indicates to MAC whether the monitored DCP indicates the start of onDurationTimer for the next DRX cycle
2. PHY should not specify the start of onDurationTimer and Active Time.

The RAN1 LS (R1 -1913480) on CSI/SRS reporting has also been discussed in RAN2#109-e. RAN2 understands the intention to control L1-RSRP reporting separately when onDurationTimer is not running due to DCP. There are two options to interpret the two flags for CSI/SRS reporting in RAN1 LS:

**Option 1:**

ps-TransmitPeriodicCSI = TRUE: Report all types of periodic CSI, including L1-RSRP (i.e. cri-RSRP and ssb-Index-RSRP)

ps-TransmitPeriodicL1-RSRP = TRUE: Only report L1-RSRP (i.e. cri-RSRP and ssb-Index-RSRP)

In this option, the two flags cannot both be set to TRUE and it is not possible to control the UE only to report periodic CSI apart from L1-RSRP.

**Option 2:**

ps-TransmitPeriodicCSI = TRUE: Report all types of periodic CSI apart from L1-RSRP (i.e. cri-RSRP and ssb-Index-RSRP)

ps-TransmitPeriodicL1-RSRP = TRUE: Only report L1-RSRP (i.e. cri-RSRP and ssb-Index-RSRP)

In this option, the two flags are independent and it is not possible to control the UE only to report periodic CSI apart from L1-RSRP.

**2. Actions:**

**To RAN1:**

RAN2 respectfully asks RAN1 to:

* Take above MAC-PHY interactions for DCP into account and update 38.213 running CR accordingly.
* Provide feedback on the preference of the two options for CSI reporting.

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

3GPP RAN2#109bis 20 - 24 Apr, 2020 Sapporo, Japan

3GPP RAN2#110 25 - 29 May, 2020 Athens, Greece