3GPP TSG RAN WG2 #121bis-e R2-23xxxxx

Online, 17th – 26th April 2023

**Title:** DRAFT LS on Cell DTX/DRX activation/deactivation

**Response to:**

**Release:** Release 18

**Work Item:** Netw\_Energy\_NR-Core

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

**To:** RAN1

**Cc:**

**Contact person:** Marcin Augustyniak

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**Attachments:** none

# 1 Overall description

RAN2 has discussed the topic of Cell DTX/DRX and achieved the following agreements:

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| --- |
| RAN2#121* There will be no impact to RACH, paging, and SIBs in idle/inactive for both gNB and Rel-18 and legacy UEs
* Rel-18 NES capable CONNECTED UE(s) can perform RACH and receive SIBs in non-active duration of cell DTX and/or DRX (i.e., same behavior for cell DTX and cell DRX). No further enhancements for CBRA and CFRA will be pursued.
* Pattern configuration for cell DRX/DTX is common for Rel-18 UEs in the cell. FFS whether we have DTX UE specific inactivity timer . FFS on configuration signaling and stage 3.
* Confirm study item agreement that we can have separate DTX and DRX configuration. We will focus on designing DTX/DRX for at least single configuration. FFS whether multiple configuration of cell DTX or DRX will be supported.

RAN2#121bis-e* A periodic cell DTX/DRX configuration is explicitly signalled to the UEs.
* A periodic cell DTX/DRX pattern is configured by UE specific RRC signalling.
* The Cell DTX/DRX configuration contains at least: periodicity, start slot/offset, on duration.
* As a baseline Cell DTX/DRX is activated/deactivated implicitly by RRC signalling, i.e. activated immediately once configured by RRC and deactivated once the RRC configuration is released.
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In addition to the agreed dedicated RRC signalling also L1 and L2 is considered for Cell DTX/DRX activation/deactivation. It is currently left open whether dedicated or group L1 signalling would be utilised. L2 is currently used for UE C-DRX activation, but it cannot be grouped. From RAN2 point of view, majority of companies see a benefit with L1 signalling for Cell DTX/DRX activation/deactivation. From proponent companies’ perspective the key benefits being:

* Reduced signalling overhead caused by multiple dedicated RRC messages (group common signalling)
* Reduced latency of activation/deactivation with RRC signalling (more dynamic changing)

RAN2 kindly requests RAN1 to provide information regarding **feasibility and reliability** of using L1 signalling for Cell DTX/DRX activation and deactivation. Our question is related only to Cell DTX/DRX activation and deactivation and we would like to focus on a single Cell DTX/DRX configuration, as agreed in our previous meeting.

Once L1 signalling for activation and deactivation of Cell DTX/DRX for a single configuration is decided in RAN1 please inform us about the **decision and** **design details**.

# 2 Actions

**To RAN1**

**ACTION:** RAN2 respectfully asks RAN1 to provide information regarding the benefit, feasibility and reliability of using L1 signalling for Cell DTX/DRX activation and deactivation. Once L1 signalling for activation and deactivation of Cell DTX/DRX is decided in RAN1 please inform RAN2 about the decision and design details.

# 3 Dates of next TSG RAN WG2 meetings

TSG RAN WG2 Meeting #122 22nd - 26th May 2023 Incheon, KR

TSG RAN WG2 Meeting #123 21st – 25th August 2023 Toulouse, FR