**3GPP TSG-RAN WG2 Meeting #121 DRAFT R2-230xxxx**

**Athens, Greece, 27 February – 03 March 2023**

**Title: [DRAFT]** Reply LS on Proposed method for Time Synchronization status reporting to UE(s)

**Response to:** S2-2301463/R2-2300075

**Release:** Release 18

**Work Item:** FS\_5TRS\_URLLC

**Source:** Nokia [TSG RAN WG2]

**To:** TSG SA WG2

**Cc:** TSG RAN WG3, TSG CT WG1

**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 LS S2-2301463 on Proposed method for Time Synchronization status reporting to UE(s).

RAN2 had discussions on the questions from SA2 and would like to provide the following feedback:

**On scope of the report ID:**

***SA2 question:*** *SA2 would like to kindly request RAN2 and RAN3 to provide feedback whether both scopes (group of cells per gNB, group of cells across gNBs) can be beneficial and supported.*

**RAN2 answer**: it is beneficial to avoid the UE getting RRC connection whenever it moves to another cell. Identifying cells within the same gNB for option a) can already be supported with gNB ID length broadcasted, while identification of cells across different gNBs sharing the report ID with option b) would need signalling to be defined in RAN2.

**On randomization of UEs getting connected:**

*From SA2 perspective, it is not required that the UE always transitions to RRC\_CONNECTED immediately to retrieve the latest available clock quality information. In order to reduce RACH access from many UE(s) (to move back to RRC\_CONNECTED state) at the same time, the following option has been considered pending RAN2 feedback:*

*It can be required that RAN randomizes the UE(s) re-connecting back to the network, i.e., to spread the UEs' connection attempts in the time domain, e.g., over the course of (1) few seconds (2) one minute, (3) several minutes. RAN2 is expected to determine whether and how this can be achieved.*

***SA2 question: SA2 would like to kindly request RAN2 to provide feedback whether this approach is feasible.***

**RAN2 answer**: It is feasible to randomize the UE(s) re-connection to the cell due to a new clock quality information available in the cell with current UAC framework. However, RAN2 would like to know if we can use existing one, e.g. the one for MO signalling, or if it would require a new category since it should not block access triggered by other MO signalling.

**2. Actions:**

**To SA2 group.**

**ACTION:** RAN2 respectfully asks SA2 to take the feedback into account and answer the question on access category.

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

RAN2#121-bis-e from 2023-04-17 to 2023-04-26 Electronic

RAN2#122 from 2023-05-22 to 2023-05-26 Incheon