**3GPP TSG-RAN WG3 Meeting #119 R3-230811**

**Athens, Greece, 27 Feb – 03 Mar 2023**

**Title: [DRAFT]** Reply LS on proposed method for time synchronization status reporting to UE(s)

**Response to:** R3-230037 / S2-2301463

**Release:** Release 18

**Work Item:** FS\_TRS\_URLLC

**Source:** RAN3

**To:** SA2, RAN2

**Cc:** -

**Contact Person:**

#### Name: Sean Kelley

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

**Attachments:** -

**1. Overall Description:**

RAN3 would like to thank SA2 for the LS on proposed method for time synchronization status reporting to UE(s). RAN3 has evaluated the questions asked by SA2, and would like to provide the following answers:

**For the 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.*”

**RAN3 answer**:

- The “group of cells within a single gNB” is beneficial for typical deployment scenarios where clock quality information is the same for some or all cells of a gNB. However, RAN3 understands that the specification impacts (if any) are primarily in RAN2 scope. RAN3 would like to note that the clock quality information can be different for different gNB-DUs of the same gNB.

- RAN3 does not see a need to support “group of cells across gNBs” in Release 18, considering its limited applicability and the likely specification effort (e.g. coordination of the reference report ID over the Xn interface).

**For the question**: “*SA2 would like to kindly request RAN3 to provide feedback whether the following attributes are available in RAN: time source, traceability to UTC or GNSS, synchronization state, clock accuracy, clock frequency stability, PTP clockClass.*”

**RAN3 answer**:

- The attributes “time source”, “traceability to UTC or GNSS”, “synchronization state”, “clock accuracy”, and “PTP clockClass” are available at the gNB.

- The attribute “*clock frequency stability*” is available at the gNB, under the assumption that it is *offsetScaledLogVariance* as defined in TS 23.501 or similar definition.

- RAN3 assumes that a gNB may report all, some, or none of the attributes based on the gNB implementation. Encoding details for these attributes require further RAN3 discussion and will be determined during the work item phase.

**2. Actions:**

**To SA2, RAN2.**

**ACTION:** RAN3 respectfully asks SA2 and RAN2 to consider the above feedback.

**3. Date of Next TSG-RAN WG3 Meeting:**

RAN3#119-bis-e from 2023-04-17 to 2023-04-26 Online

RAN3#120 from 2023-05-22 to 2023-05-26 Incheon