3GPP TSG-RAN WG2 Meeting #113bis-eR2-2104587

**Electronic Meeting, April 12 – 20, 2021**

**Title: [draft] Response LS on Scheduling Location in Advance to reduce Latency**

**Response to: R2-2102665 (S2-2102048) LS on Scheduling Location in Advance to reduce Latency**

**Release:** Rel-17

**Work Item:** NR\_pos\_enh

**Source:** Qualcomm Incorporated (to be RAN2)

**To:** SA2

**Cc:** RAN1, RAN3

**Contact Person:**

#### Name:                   Sven Fischer

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**1. Overall Description:**

RAN2 thanks SA2 for their LS on Scheduling Location in Advance to reduce Latency and the endorsed CR 0151r1 to TS 23.273 in S2-2102047.

RAN2 discussed the subject matter and have some questions for clarification to enable us to better understand the feature. Before RAN2 can decide on support of the feature as defined in the SA2 endorsed CR 0151r1 to TS 23.273 in S2-2102047, RAN2 would first like to understand what the CR describes. Please see below for RAN2 questions:

1. Definition of "scheduled location time":

 The definition of scheduled location time is not fully clear to RAN2 since the SA2 endorsed CR describes the scheduled location time differently in different parts of the CR and there is a different description of scheduled location time in the SA2 LS itself. RAN2 would like to have a clear definition of scheduled location time first as this impact what is signalled to UE and/or NG-RAN. Please see below for detailed comments:

 In section 4.1c it says "The request includes the scheduled location time T" which is described as the start of location preparation phase. So, time T is the scheduled location time.

 Section 4.1c also says "the scheduled location time allows an external LCS Client, AF or the UE to specify a time in the future at which a current location of the UE is to be obtained". However, in Figure 4.1c-1, the time when the LCS client, AF or UE obtains the location is T+t2. The time T in the figure is shown as the time at which the UE or NG-RAN obtains the location measurements.

 The SA2 LS description also states "…support scheduling of location of a target UE in advance using a scheduled location time at which location measurements for the target UE would be obtained by the UE (in the case of DL measurements) and/or NG-RAN (in the case of UL measurements)". This seem to align with the time T in Figure 4.1c-1 which show it as a scheduled measurement time.

 In section 6.3.1, step 25 describes the scheduled location time as the time at which the LMF must obtain the UE location, not the time at which the LCS client receives the location or the time at which the LMF schedules the measurement.

2. In section 6.1.2, there is the following editor’s note:

 "Editor's note: Feedback from RAN is needed to verify whether location measurements can be scheduled to occur at a UE or NG-RAN at a specific scheduled location time."

 Please clarify the requirement whether measurements in UE/NG-RAN need to be scheduled at the scheduled location time received from 5GC or at a time before the scheduled location time received from 5GC.

3. Can SA2 clarify the time format used for the scheduled location time T which is provided to an LMF (e.g., UTC, etc.)?

4. For a Deferred 5GC-MT-LR for periodic location events, RAN2's understanding is that a scheduled location time may apply for the first periodic location report only. For each succeeding periodic location report, the

 "scheduled location time" is equivalent to the periodic reporting interval. Please confirm whether RAN2's understanding is correct, or whether different location times T can apply for succeeding periodic location reports.

5. Clause 4.1c says "A scheduled location time can be used with a 5GC-MT-LR, 5GC-MO-LR or deferred 5GC-MT-LR for periodic *or triggered* location events."

 RAN2 would like to understand how a scheduled location time can be applicable to triggered location events given its sporadic nature.

**2. Actions:**

**To SA2 group.**

**ACTION:** RAN2 kindly asks SA2 to provide answers to the questions above.

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

TSG-RAN2 Meeting #114e 19-27 May 2021 Electronic Meeting

TSG-RAN2 Meeting #115 16-27 August 2021 Electronic Meeting