3GPP TSG-RAN WG2 Meeting #115 Electronic R2-210xxxx

Online Meeting, August 16th – 27th 2021

**Agenda item: 8.11.1**

**Source: CATT**

**Title: [AT115-e][612][POS] Reply LS to SA2 on scheduled location time (CATT)**

**WID/SID: NR\_pos\_enh-Core**

**Document for: Discussion and Agreement**

# 1 Introduction

This document is to kick off the following email discussion:

* [AT115-e][612][POS] Reply LS to SA2 on scheduled location time (CATT)

Scope: Reply to the SA2 LS on scheduled location time, indicating RAN2 view on the latency benefit (to the extent agreement is possible) and understanding of RAN2 spec impact.

Intended outcome: Approvable LS in R2-2108943

Deadline: Tuesday 2021-08-24 0800 UTC

This email discussion continues to discuss the possible content for the Reply LS.

# 2 Contact Information

Respondents to the email discussion are kindly asked to fill in the following table.

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| Company | Contact: Name (E-mail) |
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# 3 References

1. R2-2107680 "Summary of agenda 8.11.2 Latency enhancements" Intel Corporation discussion Rel-17 NR\_pos\_enh
2. R2-2106968 Response LS on Scheduling Location in Advance to reduce Latency (S2-2105122; contact: CATT) SA2 LS in Rel-17 5G\_eLCS\_ph2 To:RAN2 Cc:RAN1, RAN3

# 4 Discussion

## 4.1 Benefit analysis

According to the Summary of agenda 8.11.2 [1] and RAN2 on-line discussion, most companies believe that the benefit of scheduled location time in terms of reducing LCS latency is mainly reflected in the preparation phase of the positioning procedure, i.e. The LMF can complete the capabilities and assistance Data transmission in advance before initiating the corresponding location measurement procedure. Some companies do not see the latency benefit in general. They think this is for a specialised use case where the preparation phase can be handled earlier, and they see more of a benefit in reliability/accuracy of the location estimate.

**Question 1: Do you agree that the benefit of scheduled location time in terms of reducing LCS latency is mainly reflected in the preparation phase of the positioning procedure？ Please share your comments here.**

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In the execution phase of the positioning procedure, there are two views to be considered:

* Option 1: LMF can initiate the corresponding location measurement procedure at or close to the scheduled location time;
* Option 2: LMF can send the Scheduled Location Time to NG-RAN and UE in order to trigger measurements at or close to the scheduled location time;

According to the Summary of agenda 8.11.2 [1] and RAN2 on-line discussion, both of the two options can meet SA2's requirement that the LMF must obtain a current location of the UE at or close to the scheduled location time. However, the difference between the two options lies in whether the location information of the UE can be accurately reflected. So most companies think the scheduled location time does not provide more benefits in the reduction of the LCS latency during execution phase of the positioning procedure.

**Question 2: Do you agree that the scheduled location time does not provide more benefits in the reduction of the LCS latency during execution phase of the positioning procedure？ Please share your comments here.**

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**Summary:**

## 4.2 Specification impact

With regard to the impact of specification, based on the Summary of agenda 8.11.2 [1], there are two options:

* Option A: The scheduled location time does not need to be indicated to the UE or NG-RAN, since the LMF can implicitly trigger the positioning procedures at or close to it. Therefore, it is transparent to UE/NG-RAN stage-3 positioning procedures.
* Option B: Latency reduction can be accomplished by sending the scheduled location time T to the UEs and TRPs in order to trigger measurements at or close to it. Therefore, LPP and/or NRPPa signaling needs to be updated to indicate this information.

It is mainly related to the discussion of the previous chapter, if the above Q2 can be confirmed by most companies, it can be assumed that from the specification impact point of view, the scheduled location time T is transparent to UE/NG-RAN stage-3 positioning procedures.

**Question 3: Do you agree that the scheduled location time T is transparent to UE/NG-RAN stage-3 positioning procedures？Please share your comments here.**

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## 4.3 Discussion about draft Reply LS

Based on the previous discussion, we draft the following contents of the Reply LS：

**1. Overall Description:**

RAN2 would like to thank SA2 for the LS on scheduled location time.

RAN2 thinks that this is for a specialised use case where the preparation phase can be handled earlier, but the scheduled location time does not provide more benefits in the reduction of the LCS latency during execution phase.

In addition, from the specification impact point of view, the LMF can implicitly trigger the positioning procedures at or close to the time point. Therefore, it is transparent to UE / NG-RAN stage-3 positioning procedures.

**2. Actions:**

**To SA2:**

RAN2 respectfully requests SA2 to take the above information into account.

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

TSG-RAN2 Meeting #116e 01 - 11 Nov 2021 Electronic Meeting

TSG-RAN2 Meeting #116bis-e 17 - 26 Jan 2022 Electronic Meeting

**Question 4: Do you agree with the above contents？Please share your comments in the table.**

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# 5 Conclusion

TBD