3GPP TSG-RAN WG2 #119bis-e R2-22xxxxx

Online Meeting, Oct 10th – 17th, 2022

Agenda Item: 6.11.1

Source: Ericsson

Title: [AT119bis-e][410][POS] Rel-17 positioning RRC CR (Ericsson)

Document for: Discussion, Decision

# Introduction

This document is to gather input for below email discussion.

* [AT119bis-e][410][POS] Rel-17 positioning RRC CR (Ericsson)

Scope: Check the rapporteur CR in R2-2210312 and update it with decisions of this meeting.

Intended outcome: Agreeable CR

Deadline: Friday 2022-10-14 1000 UTC

The below papers have been submitted for positioning correction which impacts RRC

1. [R2-2210312](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_119bis-e/Docs/R2-2210312.zip) Miscellaneous correction for Positioning Ericsson
2. [R2-2209429](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_119bis-e/Docs/R2-2209429.zip) Correction to RRC spec for RRC\_INACTIVE positioning Huawei, HiSilicon
3. [R2-2210480](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_119bis-e/Docs/R2-2210480.zip) Cancellation of UL MAC CE for MG activation/deactivation Samsung

# Contact Information

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| Company | Contact: Name (E-mail) |
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# Discussion

## R2-2210312 Miscellaneous correction for Positioning

The CR in R2-2210312 provides correction for below:

### LMI correction

* For LMI, it mentions LMI use also for preconfigured gap.
* Adds the clarification based upon RAN4 input that “UE does not autonomously activate or deactivate the preconfigured measurement gap after sending *LocationMeasurementIndication*”

Please Note that RAN4 has also sent an LS to RAN2

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_104-e/Docs/R4-2214335.zip>

Question 1: Do companies agree with the changes

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### Preconfigured Measurement Gap Update to consider scheduling request config

* To include the clause that UE can request measurement gap using MAC CE only if dedicated scheduling request for positioning measurement gap activation/deactivation is configured.

However, based upon the discussion online for the same clause addition in MAC spec, it was mentioned that if UE already has configured UL grant available then it would not matter whether for positioning scheduling request for positioning measurement gap activation/deactivation is configured or not.

Based upon above conclusion; the change may not be needed.

Question 2: Do companies agree with below?

UE does not need to be configured with dedicated scheduling request for positioning measurement gap activation/deactivation in order to request for positioning measurement gap activation/deactivation using MAC CE.

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### Editorial Correction

* Editorial correction of name of IE: change from PosGapConfig to PosMeasGapPreConfig
* MeasPosPreConfigGapId-r17 to PosMeasPreConfigGapId-r17

The motivation to change the 1st one is to reflect that it is preconfigured gap. The motivation for second is since we already start with “Pos” suffix for PosGapConfig then it would be good to also start with “Pos” suffix for MeasPosPreConfigGapId-r17

Question 2: Do companies agree with editorial change?

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## R2-2209429 Correction to RRC spec for RRC\_INACTIVE positioning

The CR appends the below field descriptions as below.

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| ***inactivePosSRS-TimeAlignmentTimer***  TAT value for SRS for positioning transmission during RRC\_INACTIVE State as specified in TS 38.321 [3]. The network always configures this when *SRS-PosRRC-InactiveConfig* is configured. |
| ***inactivePosSRS-RSRP-changeThreshold***  RSRP threshold for the increase/decrease of RSRP for time alignment validation as specified in TS 38.321 [3]. If this field is not configured, then the UE does not perform RSRP based TA validation. |

In MAC specification though below is captured.

The MAC entity shall consider the TA to be valid when the following condition is fulfilled:

1> compared to the stored downlink pathloss reference RSRP value, the current RSRP value of the downlink pathloss reference has not increased/decreased by more than *inactivePosSRS-RSRP-ChangeThreshold*, if configured; and

Further, in the MAC spec below procedure text is used.

2> if *inactivePosSRS-TimeAlignmentTimer* is configured and there is ongoing Positioning SRS Transmission in RRC\_INACTIVE as in clause 5.26:

3> start or restart the *inactivePosSRS-TimeAlignmentTimer* associated with the indicated TAG.

The above can be written as:

2> if there is ongoing Positioning SRS Transmission in RRC\_INACTIVE as in clause 5.26:

3> start or restart the *inactivePosSRS-TimeAlignmentTimer* associated with the indicated TAG.

This above change should reflect that *inactivePosSRS-TimeAlignmentTimer* would be always present when there is ongoing Positioning SRS Transmission in RRC\_INACTIVE

Companies are invited to provide comment if the updates should be reflected in the MAC procedural description or should be captured in RRC.

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## R2-2210480 Cancellation of UL MAC CE for MG activation/deactivation

The CR proposes to add below missing agreement in the RRC spec whereas the other agreements have been captured in MAC.

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| Proposal 4.5: the following options to cancel a triggered UL MAC CE for MG activation and deactivation should be captured in the spec; other options can be discussed in the running CR discussion.  • When the MAC CE is transmitted  **•** When a request from upper layers to transmit a new request to gNB for a new/modified gap configuration is received  **• When an indication from upper layers that the gaps are not needed any more or a gap with a new id needs to be activated is received**  • On MAC reset |

The related changes are shown below.

1> if and only if upper layers indicate to stop performing location measurements towards E-UTRA or NR or stop subframe and slot timing detection towards E-UTRA:

2> if there is no activated preconfigured measurement gap for positioning:

3> if there is previously triggered UL MAC CE transmission for the measurement gap activation for positioning:

4> indicate lower layers to cancel the triggered UL MAC CE transmission for the measurement gap activation as specified in TS 38.321 [6].

3> else:

4> initiate the procedure to indicate stop as specified in 5.5.6.3.

2> else if there is activated preconfigured measurement gap for positioning:

3> trigger the lower layers to deactivate all the activated measurement gap(s) for positioning as specified in TS 38.321 [6].

Question 2: Do companies agree with the change?

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# Conclusion

Based on the discussion in section 2 we propose the following:

# References

[1] AI 6.11.1