3GPP TSG-RAN WG2 #117-e Tdoc R2-22xxxxx

Electronic meeting, 2022-02-21 - 2022-03-03

Agenda Item: 8.11.1

Source: Ericsson

Title: [AT117-e][607][POS] Positioning running CR to 38.331 (Ericsson)

Document for: Discussion, Decision

# 1 Introduction

# 1 Introduction

This document is to collect comments for the RRC CRs:

* [AT117-e][607][POS] Positioning running CR to 38.331 (Ericsson)

Scope: Review and update the CR in R2-2203364, including merge of the draft CRs in R2-2203362 and R2-2203445.

Intended outcome: Endorsable CR in R2-2203602

Deadline: Friday 2022-02-25 1000 UTC – extended to Wednesday 2022-03-02 1000 UTC

# 2 Contact Information

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# 3 Discussion

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| Company | Comments |
| Qualcomm | posSIB types 6-4 and 6-6 are missing in *posSIB-ReqInfo-r16* and *PosSystemInformation-r16-IEs*.  *posSibType2-25-v17xy* appears twice in *PosSIB-Type-r16*; posSIB types 6-4, 6-5, 6-6 are missing. |
| Huawei, HiSilicon | 0/ The CR should only include those clauses that have spec impacts. It is hard for the secretary to merge it into a grand CR if all the clauses, necessary or un-necessary are included in the CR and inconvenient for people to review.  1/ looks like the following agreement has not been implemented  Agreements:  Proposal 6: TA timer configuration of SRS for positioning (SRSp) is invalidated upon any cell reselection (i.e. even if the UE does not initiate the RRC resume procedure) (11/12)  2/ the following agreement said that the configuration is in SRS-config, but the current CR includes it under *RRCReconfiguration*  Agreements:  Proposal 1 (modified): The SRS-TEG association reporting, if any, shall always be reported along with the UE Rx – Tx time difference measurement report for Multi-RTT with no additional periodicities (8/11) and to agree the TP on report of association for Multi-RTT in the annex (11/12). Any additional parameters can be discussed in the running CRs pending RAN1 input.  Proposal 2 (modified): For UL-TDOA, configure UE TxTEG Report Config in SRS-Config IE and a new RRC message to report the changes of UE TxTEG (9/11).  Proposal 5 (modified): Each of association information of UL SRS resources with timestamp indicating the change of the Tx TEG association (8/12) and agree the TP of UE-TxTEG-Report-v17xy-IEs via RRC in the annex.  3/ Current TA validation is captured in MAC spec, this is to follow what is done in SDT. So clause 5.x.3 is not needed  4/ We prefer to change the name of the clause 5.x Positioning to 5.x UE Tx TEG reporting and move to the clause 5.7 Other, like UE assistance information. The change for UL MAC CE for MG request can be integrated in the clause 5.5.6 for location measurement indication. The following conditions for when to trigger UL MAC CE and when to trigger Location Measurement Indication should be specified in clause 5.5.6.  Agreements:  For triggering condition for the UL MAC CE, reuse current RRC condition for Rel-16 PRS gap request, taking into account preconfigured MG. If the preconfigured MG is there and can satisfy the UE’s requirement, the UE uses MAC CE, otherwise RRC message as in Rel-16. The selection is specified in RRC. Reuse the “not configured or not sufficient” language from Rel-16.  5/ The following conditions to trigger the cancellation of MAC CE in the lower layer should be captured in the RRC spec.  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  6/ The following parameters for RSRP-based TA validation needs to be captured in the RRC spec. Note that in SDT, we have made the following agreement and we have agreed to follow SDT for TA validation.  12 The nrofSS-BlocksToAverage configuration in SIB2 is reused for the RSRP change based TA validation. nrofSS-BlocksToAverage configuration is not supported in RRC Release.  RRC configures the following parameters for validation for SRS transmission in RRC\_INACTIVE:   * *inactivePosSRS-RSRP-ChangeThreshold*: RSRP threshold for the increase/decrease of RSRP for time alignment validation; * *nrofSS-BlocksToAverage*: number of SSBs with highest RSRPs for derivation of downlink pathloss reference for TA validation; * *inactivePosSRS-AbsThreshSS-BlocksConsolidation*: absolute RSRP threshold for determining the set of SSBs for derivation of downlink pathloss reference for TA validation.   7/ DL-PRS-ProcessingWindowPreConfig has been agreed to be configured under BWP with the following R1 agreement, and RAN1 is also planning to remove cell ID from the PRS processing window configuration. Processing type should also be included.  **Agreement**   * The PRS processing window is configured per DL BWP. * Processing type, to be selected from 1A, 1B and 2, will be provided associated with the PRS processing window if and only if multiple processing types per band in the UE capability signaling is supported. * No need to provide band ID and CC ID associated with the PRS processing window. * A single priority indicator is provided for a PRS processing window, which applies to all PRS within the PRS processing window for the corresponding DL BWP. * The maximum number of activated PRS processing windows per DL BWP is 1. * The maximum number of activated PRS processing windows across all active DL BWPs is 4.   + The maximum number of activated PRS processing windows overlapping in time across all active DL BWPs is 1   8/ prefer to change the name of the field measGapPreConfigList to “PosMeaGapPreConfigList”. Should use AddModList/RemoveList for it  9/ the bwp-r17 in SRS-PosRRC-InactiveConfig should be replaced with pointA, subcarrierSpacing, cyclic prefix. Having BWP would imply this SRS is configured within a BWP  10/ the srs-PosConfig-r17 can follow the following structure for NUL and SUL as SDT    Within BWP-Uplink-inactivePosSRS, there should be pointA, subcarrierSpacing, cyclic prefix, for uplinkCommon and srs-PosRRC-InactiveConfig for uplinkdedicated  11/ why is srs-PosRRC-InactiveConfig-r17 need N? We suggest to use SetupRelease with need M  12/ the SRS resource set ID in the Tx TEG association reporting should be removed, as stated in the LS to RAN1. |
| CATT | *ue-TxTEG-RequestUL-TDOA-Config* should be moved to SRS-Config according to the agreement.  The impacted parts can be found as below: 5.X.2.2 Initiation RRCReconfiguration-v17xy-IEs ::= SEQUENCE {  ue-TxTEG-RequestUL-TDOA-Config-r17 SetupRelease { UE-TxTEG-RequestUL-TDOA-Config-r17 } OPTIONAL, -- Need M  nonCriticalExtension SEQUENCE {} OPTIONAL  } |
| vivo | 1. initiate transmission of the *UEPositioningAssistanceInfo* message in accordance with 5.7.XX.3 to provide the association.  The clause number is wrong  2. MAC layer is responsible for monitoring the time validity of SRSp and RSRP changes. Thus, the clause 5.x.3 can be removed.  3. merge 5.x.4 into 5.5.6.2  1> if and only if upper layers indicate to start performing location measurements towards E-UTRA or NR or start subframe and slot timing detection towards E-UTRA, and the UE requires measurement gaps for these operations while measurement gaps are either not configured or not sufficient:  2> if the preconfigured measurement gaps are configured and the UE considers that one of the preconfigured gaps meet the measurement gap requirements:  3> trigger the lower layer to initiate the Positioning Measurement Gap Activation procedure as specified in TS 38.321;  2> else:  3> initiate the procedure to indicate start;  4. merge 5.X.2 under 5.7 as 5.7.4b  5. in the UE-TxTEG-RequestUL-TDOA-Config, the oneShot indication can be an optional IE with value ENUMERATED {true} and periodicReporting shall be an optional IE.  6. align the RRC parameters in SRS-PosRRC-InactiveConfig with that in MAC running CR.  7. Add the field description of UE-TxTEG-AssociationList:  List of associations between UL-SRS resources for positioning and the UE Tx TEG ID. The list includes the initial association and the changed association within the configured period. If only the initial association is included, it implies that the association has not changed during the configured period. |
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# 4 Conclusion