3GPP TSG-RAN WG2 #118-e Tdoc R2-22xxxxx

Electronic meeting, 2022-05-09 - 2022-05-20

Agenda Item: 6.11.2.9

Source: Ericsson

Title: [Post118-e][602][POS] 38.331 positioning CR (Ericsson)

Document for: Discussion, Decision

# 1 Introduction

# 1 Introduction

This document is to collect comments for the CR:

* [Post118-e][602][POS] 38.331 positioning CR (Ericsson)

 Scope: Update and check the CR in R2-2206246.

 Intended outcome: Agreed CR

 Deadline: Short (for RP)

# 2 Contact Information

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# 3 Comments

**Please provide your review comments here**

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| Company | Comments |
| ZTE | In section 5.5.6.2, the ‘pre-configured measurement gap’ in step 2 should be ‘pre-configured measurement gap for positioning’.2> if preconfigured measurement gaps for positioning are configured and the UE considers that at least one of the preconfigured measurement gap for positioning is sufficient for the location measurement when activated:Rapporteur: Done |
| CATT | 1. In 5.5.6.2, there are “not preconfigured positioning measurement gap” and “preconfigured measurement gap for positioning” as highlighted below. The term needs to be aligned.

NOTE 2: When indication is received from upper layers for performing location measurement and there is pre-configured measurement gap configured (not preconfigured positioning measurement gap), the UE considers this pre-configured measurement gap to be not sufficient if the measurement gap is not considered to be always activated according to clause 9.1.7.2 of TS 38.133 [14].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> 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].Rapporteur: Done2. In section “5.7.X Derivation of pathloss reference for TA validation of SRS for Positioning transmission and CG-SDT in RRC\_INACTIVE”, the procedure of acquiring SIB2 and verification of the two parameters can be deleted, as it is a common procedure which has already contained in clause 5.2.2. In addition, there is a case, that *nrOfSS-BlocksToAverage* is not configured, is missing.The proposed change can be:Upon request from lower layer for pathloss reference derivation for TA validation for SRS for Positioning transmission or CG-SDT in RRC\_INACTIVE, the UE shall:~~1> Acquire~~ *~~SIB2,~~* ~~if stored version is invalid:~~~~2> verify the configuration of~~ *~~nrOfSS-BlocksToAverage~~* ~~and~~ *~~absThreshSS-BlocksConsolidation~~* ~~is available.~~~~3~~1> if *nrOfSS-BlocksToAverage* is not configured in SIB2, or if *absThreshSS-BlocksConsolidation* is not configured in SIB2, or if a*bsThreshSS-BlcoksConsolidation* is configured in SIB2 and the highest beam measurement quantity value is below or equal to *absThreshSS-BlockConsolidation*:~~4~~2> derive the downlink pathloss reference RSRP for TA validation as the highest beam measurement quantity value, where each beam measurement quantity is described in TS 38.215 [24].~~3~~1> else:~~4~~2> derive the downlink pathloss reference RSRP for TA validation as the linear average of the power values of up to *nrOfSS-BlocksToAverage* of the highest beam measurement quantity values above *absThreshSS-BlocksConsolidation*, where each beam measurement quantity is described in TS 38.215 [24].Rapporteur: Also for the else statement below; the parameter should be present in SIB2; hence the addition would be needed as highlighted below; so reference of SIB2 if done at start clause can simplify.~~4~~2> derive the downlink pathloss reference RSRP for TA validation as the linear average of the power values of up to *nrOfSS-BlocksToAverage* as configured in SIB2 of the highest beam measurement quantity values above *absThreshSS-BlocksConsolidation* as configured in SIB2, where each beam measurement quantity is described in TS 38.215 [24].3. According to the agreement “Add a new field description in SIB2 and a new clause for pathloss derivation for TA validation of SRSp transmission. No conclusion now on whether this clause can also be used for CG-SDT in RRC\_INACTIVE.”, the “CG-SDT in RRC\_INACTIVE” part in 5.7.X can be deleted and wait for the decision from the SDT.5.7.X Derivation of pathloss reference for TA validation of SRS for Positioning transmission ~~and CG-SDT in RRC\_INACTIVE~~Upon request from lower layer for pathloss reference derivation for TA validation for SRS for Positioning transmission ~~or CG-SDT in RRC\_INACTIVE~~, the UE shall:Rapporteur: As commented by SDT RRC Rapporteur; lets keep the section for both SDT and Positioning.4. In the field description of SIB2, the field description for pathloss derivation is missed.***absThreshSS-BlocksConsolidation***Threshold for consolidation of L1 measurements per RS index. If the field is absent, the UE uses the measurement quantity as specified in TS 38.304 [20]. This field is also used for deriving cell level pathloss reference for TA validation of positioning SRS transmission in RRC\_INACTIVE.***nrofSS-BlocksToAverage***Number of SS blocks to average for cell measurement derivation. If the field is absent the UE uses the measurement quantity as specified in TS 38.304 [20]. This field is also used for deriving cell level pathloss reference for TA validation of positioning SRS transmission in RRC\_INACTIVE.Rapporteur: We should not update field description rather the procedure should be updated to reflect which field description are used.5. In section 6.3.2 and 6.4① The following editor’s note can be deleted~~--Editor's Note: maxGapConfig is FFS--~~② The definition of maxGapConfig in section 6.4 can be deleted ~~maxGapConfig-r17 INTEGER ::= ffsUpperLimit -- Maximum number of Preconfigured Gaps is FFS~~Rapporteur: Done6. Under the current mechanism, if cell reselection occurs, UE will release the *srs-PosRRC-InactiveConfig*. However, when UE moves back to the original gNB who configures the SRS to the UE, this original gNB will configure SRS based on its previous SRS to this UE if the TAT is still valid. But the previous SRS in UE already invalid and released because of cell re-selection. This issue brings misalignment between UE and original gNB. In order to avoid wrong configuration, We suggest not supporting delta configuration for *srs-PosRRC-InactiveConfig*.– *RRCRelease* srs-PosRRC-Inactive-r17 ~~SetupRelease {~~ SRS-PosRRC-Inactive-r17 ~~}~~ OPTIONAL, -- Need ~~M~~RSRS-PosRRC-Inactive-r17 ::= OCTET STRING (CONTAINING SRS-PosRRC-InactiveConfig-r17)SRS-PosRRC-InactiveConfig-r17 ::= SEQUENCE { srs-PosConfig-r17 SRS-PosConfig-r17, bwp-SUL-r17 BWP OPTIONAL, -- Need S bwp-NUL-r17 BWP OPTIONAL, -- Need S srs-TimeAlignmentTimer-r17 TimeAlignmentTimer OPTIONAL, -- Need ~~M~~R inactivePosSRS-RSRP-changeThresh-r17 RSRP-ChangeThresh-r17 OPTIONAL -- Need ~~M~~R}SRS-PosConfig-r17 ::= SEQUENCE { ~~srs-PosResourceSetToReleaseList-r17 SEQUENCE (SIZE(1..maxNrofSRS-PosResourceSets-r16)) OF SRS-PosResourceSetId-r16 OPTIONAL,-- Need N~~ srs-PosResourceSet~~ToAddMod~~List-r17 SEQUENCE (SIZE(1..maxNrofSRS-PosResourceSets-r16)) OF SRS-PosResourceSet-r16 OPTIONAL,-- Need ~~N~~R ~~srs-PosResourceToReleaseList-r17 SEQUENCE (SIZE(1..maxNrofSRS-PosResources-r16)) OF SRS-PosResourceId-r16 OPTIONAL,-- Need N~~ srs-PosResource~~ToAddMod~~List-r17 SEQUENCE (SIZE(1..maxNrofSRS-PosResources-r16)) OF SRS-PosResource-r16 OPTIONAL -- Need ~~N~~R}Rapporteur: It does not appear we have enough support to change this. We can leave it as it is for now. |
| Huawei, HiSilicon | Dedicated configuration for both NUL and SUL should be optionally configured. Current R1 agreements contain the option that it is possible to configure posSRS-config on both NUL and SULSRS-PosRRC-InactiveConfig-r17 ::= SEQUENCE {srs-PosConfigNUL-r17 SRS-PosConfig-r17, OPTIONAL, -- Need Rsrs-PosConfigSUL-r17 SRS-PosConfig-r17, OPTIONAL, -- Need R bwp-SUL-r17 BWP OPTIONAL, -- Need S bwp-NUL-r17 BWP OPTIONAL, -- Need S srs-TimeAlignmentTimer-r17 TimeAlignmentTimer OPTIONAL, -- Need M inactivePosSRS-RSRP-changeThresh-r17 RSRP-ChangeThresh-r17 OPTIONAL -- Need M} |
| Huawei, HiSilicon | 2> if the *srs-PosRRC-InactiveConfig* is configured:3> apply the configuration and instruct MAC to start the *srs-TimeAlignmentTimer* ;The name of the timer should be *inactivePosSRS-TimeAlignmentTimer**Rapporteur: Done* |
| Huawei, HiSilicon | 1> else if cell reselection occurs when *srs-PosRRC\_InactiveConfig* is configured:2> indicate to the lower layer to stop *srs-TimeAlignmentTimer* transmission in RRC\_INACTIVE;2> release the *srs-PosRRC-InactiveConfig*.Same issue as above*Rapporteur: Done* |
| Fraunhofer | A small clarification to add to TS38.331 (in *SRS-PosRRC-InactiveConfig* field descriptions) to point to the procedure in TS38.321. ***inactivePosSRS-RSRP-changeThresh***RSRP threshold for the increase/decrease of RSRP for time alignment validation as specified in TS 38.321 [3].Rapporteur: Done |
| ZTE2 | In section 5.5.6.2, the note 2 clarifies what is ‘not sufficient’. However it only covers one case that the UE considers the pre-configured MG to be not always activated. There is other case with majority support in RAN2#118 discussion, that is: the UE considers the pre-configured MG to be always activated but the pre-configured MG can not satisfy UE’s PRS measurement requirement. In this case the pre-configured MG should also be assumed as ‘not sufficient’ and UE should send LMI for a new gap. To make the spec more clear and avoid further misunderstanding, this should be added in note 2:NOTE 2: When indication is received from upper layers for performing location measurement and there is pre-configured measurement gap configured (not preconfigured positioning measurement gap), the UE considers this pre-configured measurement gap to be not sufficient if the pre-configured measurement gap is not considered to be always activated according to clause 9.1.7.2 of TS 38.133 [14], or the pre-configured measurement gap is considered to be always activated but it can not satisfy UE’s PRS measurement requirement in the current BWP or SCell.Rapporteur: This is only for Note; this can be discussed and corrected in August meeting. |
| SDT rapporteur (ZTE) | With regards to the comment from CATT regarding section 5.7.X, the original thinking was that section 5.5.3.3 could be updated and reused for the pathloss reference derivation for both CG-SDT and positioning SRS. However, given that a new dedicated section (5.7.X) is being added for this, it should be applicable to both CG-SDT and Positioning SRS. Otherwise, it would be rather confusing with one feature having to reference section 5.5.3.3 and the other feature using this new section for similar functionality. So, my recommendation is to keep the new section applicable to both CG-SDT and positioning as is the case currently in the CR.Rapporteur: Thanks for the input.  |
| vivo | 1> else if cell reselection occurs when *srs-PosRRC\_InactiveConfig* is configured:2> indicate to the lower layer to stop *srs-TimeAlignmentTimer*~~transmission in RRC\_INACTIVE~~;2> release the *srs-PosRRC-InactiveConfig*.Remove the redundant phrase ‘transmission in RRC\_INACTIVE’Rapporteur: Done. |
| vivo | 2> apply the specified timing advance *mgta* to the gap occurrences calculated above (i.e. the UE starts the measurement *mgta* ms before the gap subframe occurrences);2> configure the measurement gap as indicated by *gapType*.1> for each FR1, FR2, and per UE measurement gap that is setup:Incorrect full stop. ‘.’ -> ‘;’2> else if the measurement gap is configured by *PosGapConfig*:3> consider the measurement gap to be deactivated;2> else:3> consider the measurement gap to be activated;‘;’ -> ‘.’ |
| vivo | NOTE 2: When indication is received from upper layers for performing location measurement and there is pre-configured measurement gap configured (not preconfigured positioning measurement gap), the UE considers this pre-configured measurement gap to be not sufficient if the measurement gap is not considered to be always activated according to clause 9.1.7.2 of TS 38.133 [14].Note 2 -> Note 1aAlready have a Note 2 below.Rapporteur: Done |
| vivo | ***dl-PPW-PreConfigToAddModList***Indicates a list of DL-PRS processing window configurations to be added for the dedicated DL BWPTo be added or modified |
| vivo |

| *DL--PPW-PreConfig* field descriptions |
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|  |
| ***dl-PPW--ID***Indicates the pre-configured ID for DL-PRS processing window configuration. |

Remove the duplicated ‘-‘Rapporteur: done |
| vivo | maxNrofPPW-ID-1-r17 INTEGER ::= 1616-> 15Done |
| vivo | 1> if the UE performs connection resumption in a different cell than the cell where *srs-PosRRC-InactiveConfig* was configured;2> release *srs-PosRRC-InactiveConfig,* if configured;Editor's Note: This agreement/clause may not be needed because we have this agreement TA timer configuration is invalidated upon any cell reselection; see 5.7.15.Follow the agreement to remove this part.Rapporteur: done |
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# Conclusion

In the previous sections we made the following observations: