**3GPP TSG-RAN WG2 Meeting #124** **R2-231xxxx**

**Chicago, USA, 13th – 17th Nov., 2023**

**Title: Email discussion on the running MAC CR**

**Source: Huawei, HiSilicon**

**Agenda item: 7.2.2**

**Document for: Discussion and Decision**

# Background

The following post meeting email discussion has been planned during RAN2#123bis:

**[Post124][414][POS] Rel-18 positioning 38.321 CR (Huawei)**

Scope: Finalise and check the Rel-18 positioning 38.321 CR.

Intended outcome: Agreed CR

Deadline: Short (for RP)

This contribution intends to collect the comments on the running MAC CR for the different features in R18 positioning

# 2 Discussion

|  |  |  |
| --- | --- | --- |
| Company+index  (e,g, HW000) | Excerpted spec with issues | Comments |
| Intel | **SL#Change21:** Add SL-PRS delay budget to the spec | While SL-PRS delay budget has been added in the text, there is no definition added in section 3.1. In our understanding, RAN1 expects RAN2 to capture it, so it would be good to have the corresponding definition in the MAC spec (since the term is used quite frequently) |
| Intel | In section 5.22.1.1, the “shall” has been changed to “may”:  Sidelink grant is received dynamically on the PDCCH, configured semi-persistently by RRC or autonomously selected by the MAC entity. The MAC entity ~~shall~~ may have a sidelink grant on an active SL BWP to determine a set of PSCCH duration(s) in which transmission of SCI occurs and a set of PSSCH duration(s) in which transmission of SL-SCH associated with the SCI occurs. | This seems to be a change to existing behavior (not directly for SL positioning). We are not clear which SL issue serves as the motivation for this change and more importantly, this seems like an NBC change |
| Intel | In section 5.22.1.4.1.3, the wording has a typo:  the MAC PDU includes zero MAC SDUs and the MAC PDU is not associated with SL-PRS transmission on SL-PRS shared resource pool. | Typo: Should be "…not associated **with** SL-PRS…" |
| OPPO001 | In section 5.4.4  3> if an SL-PRS resource overlaps with the PUCCH resource for the SR transmission occasion for the pending SR triggered as specified in clause 5.22.1.5, and the MAC entity is not able to perform this SR transmission simultaneously with the transmission of the SL-PRS resource, and the priority of the triggered SR determined as specified in clause 5.22.1.5 is higher than the priority of the MAC PDU determined as specified in clause 5.22.1.3.1a for the SL-PRS resource: | In clause 5.22.1.3.1a, regarding the priority, we use the term Priority of a MAC PDU and SL-PRS, if available. For example, as quoted from the clause, ‘priority of a MAC PDU and SL-PRS, if available, is determined by the highest priority of the logical channel(s),MAC CE(s) in the MAC PDU or SL-PRS.’  We think that the description in section 5.4.4 should be aligned with 5.22.1.3.1a too:  ‘…… is higher than the priority of the MAC PDU **and SL/PRS, if available**, determined as specified in clause 5.22.1.3.1a for the SL-PRS resource:’ |
| OPPO002 | In section 5.8.3  After a sidelink grant is configured for a configured grant Type 2, the MAC entity shall consider sequentially that the first slot of Sth sidelink grant occurs in the logical slot for which:  CURRENT\_slot = (*sl-StartSlotCG-Type2* + S × *PeriodicitySL*) modulo T'max  where *sl-StartSlotCG-Type2* refers to the logical slot of the first transmission opportunity of PSSCH where the configured sidelink grant was (re)initialised. | The IE ***sl-StartSlotCG-Type2*** may needs to be enhanced to embrace the dedicated resource pool case wherein PSSCH is not configured, but SL-PRS transmission occasion(s) should be considered. |
| OPPO003 | 5.22.1.2 TX resource (re-)selection check  If the TX resource (re-)selection check procedure is triggered on the selected pool of resources for a Sidelink process according to clause 5.22.1.1, the MAC entity shall for the Sidelink process:  1> except for SL-PRS transmission on SL-PRS dedicated resource pool, if PSCCH duration(s) and 2nd stage SCI on PSSCH for all transmissions of a MAC PDU of any selected sidelink grant(s) are not in SL DRX Active time as specified in clause 5.28.3 of the destination that has data to be sent; or  1> except for SL-PRS transmission on SL-PRS dedicated resource pool, if the selected sidelink grant cannot accommodate a RLC SDU by using the maximum allowed MCS configured by RRC in *sl-MaxMCS-PSSCH* associated with the selected MCS table and the UE selects not to segment the RLC SDU; | It seems no need to mention ‘except for SL-PRS transmission on SL-PRS dedicated resource pool’, since RAN1 has already agreed that dedicated resource pool cannot be used for transmission of PSSCH  Similar for the next modification in the clause, since the SL-PRS dedicated resource pool cannot accommodate RLC SDU naturally: |
| OPPO004 | 5.22.1.3.1a Sidelink process  1> if a positive acknowledgement to this transmission of the MAC PDU and SL-PRS, if avaliable, was received according to clause 5.22.1.3.2; or  1> if negative-only acknowledgement was enabled in the SCI and no negative acknowledgement was received for this transmission of the MAC PDU and SL-PRS, if avaliable, according to clause 5.22.1.3.2:  2> flush the HARQ buffer of the associated Sidelink process. | It seems adding the ‘SL-PRS’ has an implication that ack/nack on the SL-PRS is enabled, which is against RAN1 agreement that there is no ack/nack on the SL-PRS. Prefer the following modification:  1> if a positive acknowledgement to the MAC PDU of this transmission was received according to clause 5.22.1.3.2; or  1> if negative-only acknowledgement was enabled in the SCI and no negative acknowledgement was received for the MAC PDU of this transmission according to clause 5.22.1.3.2:  2> flush the HARQ buffer of the associated Sidelink process. |
| ZTE |  | In legacy (R16), Tx UE selects radio resources regardless of which Rx UE the resource is used for(i.e., destination UE).  SL-DRX is introduced in R17, so R17 Tx UE should select radio resources within Rx UE’s DRX active time.  However R18 SL dedicated pool will not work together with SL DRX. So R16 wording should be reused for R18 SL positioning rather than R17 wording. Following green part should be deleted.  5> else if the selected resource pool is SL-PRS dedicated resource pool:  6> randomly select the time and frequency resources for one transmission opportunity from the resource pool as specified in clause 5.28.2 of the destination UE selected, according to the remaining SL-PRS delay budget of the SL-PRS transmission(s).  BTW the core wording ‘the destination UE selected’ presents 5 times in tracking. All of these places should make the change. |
| ZTE |  | 5.22.1.3.xx Processing of sidelink grant on SL-PRS dedicated resource pool  5.22.1.3.xxa Sidelink process associated with SL-PRS dedicated resource pool  Sidelink process (with capital ‘S’) is for dedicated pool process, and sidelink process (lowercase ‘s’) is for SL data legacy process?  If so, suggest to clarify it in the begining of 5.22.1.3.1 Sidelink HARQ Entity |

# 7 Summary

*NADA*