3GPP TSG RAN WG1 #108-e R1-220xxxx

e-Meeting, February 21st – March 3rd, 2022

**Agenda Item: 7.1**

**Source: Moderator (Sharp)**

**Title: Summary of email discussion [108-e-NR-CRs-08]: Corrections on mapping between the Time domain resource allocation field value of the RAR UL grant and a row index of an allocated table**

**Document for: Discussion** **and Decision**

# Introduction

This contribution provides the summary of the following email discussion in RAN1#108-e, which was triggered by the draft CR in [R1-2202184](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_108-e/Docs/R1-2202184.zip) [1] and issue 2 in [R1-2202114](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_108-e/Docs/R1-2202114.zip) [2].

[108-e-NR-CRs-08] Issue#19 Corrections on mapping between the Time domain resource allocation field value of the RAR UL grant and a row index of an allocated table by February 23 – Liqing (Sharp)

* Relevant tdocs: [R1-2202184](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_108-e/Docs/R1-2202184.zip), [R1-2202114](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_108-e/Docs/R1-2202114.zip) (focus on issue 2)

# Discussions

## Issue description

In clause 6.1.2.1 of TS38.214 as below, it is specified that the *Time domain resource assignment* field value *m* of the DCI is mapped to a row index *m* + 1to an allocated table.

|  |
| --- |
| **TS38.214 V15.15.0**6.1.2.1 Resource allocation in time domainWhen the UE is scheduled to transmit a transport block and no CSI report, or the UE is scheduled to transmit a transport block and a CSI report(s) on PUSCH by a DCI, the *Time domain resource assignment* field value *m* of the DCI provides a row index *m* + 1to an allocated table. The determination of the used resource allocation table is defined in clause 6.1.2.1.1. The indexed row defines the slot offset *K2*, the start and length indicator *SLIV*, or directly the start symbol *S* and the allocation length *L*, and the PUSCH mapping type to be applied in the PUSCH transmission. |

However, the current specification only specifies the mapping between the TDRA field value of a DCI and a row index of an allocated TDRA table. As pointed out in [1] and issue 2 in [2], neither 38.213 nor 38.214 specifies how a TDRA field value of a RAR UL grant is mapped to a row index of an allocated TDRA table.

## First Round

**Question 1: Please provide your views on whether you see the missing case in the current spec description, i.e. the current spec description does not specify how a TDRA field value of a RAR UL grant is mapped to a row index of an allocated TDRA table.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Agree or not** | **Comments** |
| Ericsson | Yes |  |
| vivo | Yes |  |
| Samsung | Yes |  |
| LG | Yes |  |
| CATT | Yes |  |
| ZTE | Yes |  |
| Huawei, HiSilicon | Agree |  |
| Qualcomm | Yes |  |

**Question 2: Please provide your views on whether specification change is needed to solve the issue.**

* **If yes, whether the proposed change in** [**R1-2202184**](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_108-e/Docs/R1-2202184.zip) **[1] can be supported. Or any other suggested change?**
* **If no, please explain why.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Spec change is needed or not** | **Comments** |
| Ericsson | Yes |  |
| vivo | Yes |  |
| Samsung | Yes | We have minor comment. Since RAR UL grant will not have CSI report, the correct change might be:6.1.2.1 Resource allocation in time domainWhen the UE is scheduled to transmit a transport block and no CSI report by a DCI or a RAR UL grant, or the UE is scheduled to transmit a transport block and a CSI report(s) on PUSCH by a DCI |
| LG | Yes |  |
| CATT | Yes | We recognize that generally RAR UL grant should be treated the same as dynamic scheduling (DCI), but it is missed in several places in current 38.214. Another example is in TBS determination clause:

|  |
| --- |
| 6.1.4.2 Transport block size determination…- the TBS is assumed to be as determined from the DCI transported in the latest PDCCH or a RAR UL grant for the same transport block using . If there is no PDCCH for the same transport block using , and if the initial PUSCH for the same transport block is transmitted with configured grant, …- the TBS is assumed to be as determined from the DCI transported in the latest PDCCH or a RAR UL grant for the same transport block using . If there is no PDCCH for the same transport block using , and if the initial PUSCH for the same transport block is transmitted with configured grant, … |

To us, it is considerable to fix this part too. |
| Apple | OK |  |
| ZTE |  | For the first change, it is not needed as commented by Samsung. Ok with the second change.  |
| Huawei, HiSilicon | Yes | Additionally, case for MsgA PUSCH is also missing. |
| Qualcomm |  | We propose to discuss any change as Rel-16 CR. Rel-15 already works well.  |

##  Second Round

TBD

# Conclusion

TBD.

# References

1. [R1-2202184](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_108-e/Docs/R1-2202184.zip) “Corrections on mapping between the *Time domain resource allocation* field value of the RAR UL grant and a row index of an allocated table”, RAN1#108e, Sharp.
2. [R1-2202114](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_108-e/Docs/R1-2202114.zip) “Correction on time-domain resource allocation for Msg.3 PUSCH scheduled by RAR UL grant”, RAN1#108e, Qualcomm Incorporated.