**3GPP TSG RAN WG1 Meeting #110 R1-220xxxx**

**Toulouse, France, August 22-26, 2022**

**Agenda Item: 7.2.5**

**Source: Moderator (Huawei, HiSilicon)**

**Title: Summary of Correction on Priority rules for CSI reports in TS 38.214**

**Document for: Discussion and Decision**

# Introduction

This summary is priority rules for CSI reports in TS 38.214 [1]

**R1-2205783 Correction on Priority rules for CSI reports in TS 38.214    Huawei, HiSilicon**

**Background**

In the RAN1#109-e meeting, the remaining issues on UL prioritization cases related to SP-CSI were discussed. During the discussion, one issue raised was that whether the Priority rules for CSI reports in 5.2.5 of 38.214 are only applied for the channels with the same physical priority or also applicable to different priorities. Based on the discussion, it should be clarified that the rules in 5.2.5 are only for the same physical layer priority.

# Discussion

## Input papers to the meeting

Huawei/HiSilicon raises this issue in R1-2205783 [1]. It should be pointed out that without this clarification there is an ambiguity with 38.214 (Clause 5.2.5) in which priority rules of CSI reports with different priorities are discussed. If not clarified, this could then also conflict with 38.213, where the overlapping of CSI reports with different reports is resolved.

|  |
| --- |
| In the RAN1#109-e meeting, the remaining issues on UL prioritization cases related to SP-CSI were discussed in [R1-2205440]. During the discussion, one issue raised was that whether the Priority rules for CSI reports in 5.2.5 of 38.214 are only applied for the channels with the same physical priority or also applicable to different priorities. Based on the discussion, it should be clarified that the rules in 5.2.5 are only for the same physical layer priority.**TP for 38.214, Clause 5.2.5**< Unchanged parts are omitted >5 Priority rules for CSI reportsThe priority rules in this clause are applied for physical channels with same priority index according to clause 9 in [6, TS 38.213].CSI reports are associated with a priority value $Pri\_{iCSI}\left(y,k,c,s\right)=2∙N\_{cells}∙M\_{s}∙y+N\_{cells}∙M\_{s}∙k+M\_{s}∙c+s$ where-  for aperiodic CSI reports to be carried on PUSCH  for semi-persistent CSI reports to be carried on PUSCH,  for semi-persistent CSI reports to be carried on PUCCH and  for periodic CSI reports to be carried on PUCCH;-  for CSI reports carrying L1-RSRP or L1-SINR and  for CSI reports not carrying L1-RSRP or L1-SINR;- *c* is the serving cell index and $N\_{cells}$ is the value of the higher layer parameter *maxNrofServingCells*;- *s* is the *reportConfigID* andis the value of the higher layer parameter *maxNrofCSI-ReportConfigurations.*A first CSI report is said to have priority over second CSI report if the associated  value is lower for the first report than for the second report.Two CSI reports are said to collide if the time occupancy of the physical channels scheduled to carry the CSI reports overlap in at least one OFDM symbol and are transmitted on the same carrier. When a UE is configured to transmit two colliding CSI reports, - if *y* values are different between the two CSI reports, the following rules apply except for the case when one of the *y* value is 2 and the other *y* value is 3 (for CSI reports transmitted on PUSCH, as described in Clause 5.2.3; for CSI reports transmitted on PUCCH, as described in Clause 5.2.4): - The CSI report with higher  value shall not be sent by the UE.- otherwise, the two CSI reports are multiplexed or either is dropped based on the priority values, as described in Clause 9.2.5.2 in [6, TS 38.213].If a semi-persistent CSI report to be carried on PUSCH overlaps in time with PUSCH data transmission in one or more symbols on the same carrier, and if the earliest symbol of these PUSCH channels starts no earlier than N2+d2,1 symbols after the last symbol of the DCI scheduling the PUSCH where d2,1 is the maximum of the d2,1 associated with the PUSCH carrying semi-persistent CSI report and the PUSCH with data transmission, the CSI report shall not be transmitted by the UE. Otherwise, if the timeline requirement is not satisfied this is an error case.< Unchanged parts are omitted > |

## Round 1

Companies are encouraged to give their view on the following questions:

Question 1: Do you agree with the TP in [1] to clarify that the priority handling for CSI reports as specified in TS 38.214 is for the same PHY priority only?

|  |  |
| --- | --- |
| **Company** | **View** |
| Apple | It seems okay.  |
| ZTE | The intention is fine.  |
| Samsung | Do not agree. CSI report prioritization does not relate to channel priority – it is about whether or not there are enough resources to multiplex the CSI report and, if not, in which order the dropping occurs for parts of the CSI report. 38.214 is clear. The CR is not needed. |
| Qualcomm | Agree with Samsung that the specification is clear as it stands, but we are fine with providing further clarification either as proposed in by TP above or by drawing a conclusion.  |
| Spreadtrum | Support the intention, but we also think a conclusion is better. |

# Outcome

TBD.

# References

[1] R1-2205783, “Correction on Priority rules for CSI reports in TS 38.214”, Huawei, HiSilicon