**3GPP TSG RAN WG1 Meeting #109-e R1-220xxxx**

**E-Meeting, May 9 – May 20, 2022**

**Agenda Item: 7.2.5**

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

**Title: Summary of [109-e-R16-URLLC-03] Issue#3: Discussion on SRS configurations with usage of '*beamManagement*' in *srs-ResourceSetToAddModListDCI-0-2***

**Document for: Discussion and Decision**

# Introduction

Following email thread is dedicated to discuss the Determination of SRS resource set with usage ‘*beamManagement*’. This issue has been raised in R1-2203111 [1].

[109-e-R16-URLLC-03] Issue#5: Discussion on SRS configurations with usage of '*beamManagement*' in *srs-ResourceSetToAddModListDCI-0-2* by May 13 – Thorsten (Huawei)

**Due to the short time available for discussion, please provide you input for the first round before May 10, 17:00 pm (UTC)**

**Background**

In previous meetings the SRS configurations in srs-ResourceSetToAddModListDCI-0-2 with usage of value ‘*codebook*’, ’*nonCodebook*’ and ‘*antennaSwitching*’ were disucssed and addressed, however there is no disucssion/conclusion for the case of SRS resource set with usage set to '*beamManagement*' yet. Therefore, it seems further discussion/clarification is needed.

# Discussion

## Round 1

In Rel-15, the SRS resource set(s) configured in *srs-ResourceSetToAddModList* can be used for beam management. For SRS resource set(s) with *usage* set to ‘*beamManagement*’, FG 2-30 was introduced to let the UE report the maximum number of SRS resource sets and the maximum number of SRS resources per resource set that can be supported.

In Rel-16, independent from *srs-ResourceSetToAddModList* used for DCI format 0\_1/1\_1, *srs-ResourceSetToAddModListDCI-0-2* was introduced for DCI formats 0\_2/1\_2, and the SRS resource set(s) configured in *srs-ResourceSetToAddModListDCI-0-2* can be set to usage ‘*beamManagement*’.

In [1] it is suggested that similar to the previous discussions for the other usages of SRS resource sets, the maximum number of SRS resource sets configured with usage ‘*beamManagement*’ and the maximum number of SRS resource per set should not be increased compared to Rel-15, since this would need a new UE capability which is not reasonable for this functionality at this late stage.

To achieve that, it is proposed in [1] that the maximum value for the number of SRS resource set(s) reported in FG 2-30 shall be applicable regardless if SRS resource set(s) are configured in *srs-ResourceSetToAddModList* or in *srs-ResourceSetToAddModListDCI-0-2*. An approach similar to the agreement made last meeting for ‘*antennaSwitching*’ [2] is suggested, i.e. the SRS resource set(s) in *srs-ResourceSetToAddModListDCI-0-2* should be the same or a subset of the SRS resource set(s) in *srs-ResourceSetToAddModList*.

Additionally, it is suggested that the value reported for the maximum number of SRS resource per set shall be applicable to any SRS resource set with *usage* set to ‘*beamManagement*’, regardless is the SRS resource set is configured in *srs-ResourceSetToAddModList* or in *srs-ResourceSetToAddModListDCI-0-2*.

To reflect the above considerations, the following proposal is made.

***Proposal 1: In Rel-16, for SRS resource set(s) configured with usage ‘beamManagement’***

* ***The supported maximum number of SRS resource set(s) reported in FG 2-30 shall be applicable regardless of if SRS resource set(s) with usage set to 'beamManagement' are configured in srs-ResourceSetToAddModList or in srs-ResourceSetToAddModListDCI-0-2.***
* ***For usage ‘beamManagement’, the SRS resource set(s) in srs-ResourceSetToAddModListDCI-0-2 are the same or a subset of the SRS resource set(s) in srs-ResourceSetToAddModList.***
* ***The supported maximum number of SRS resources per set reported in FG 2-30 shall be applicable to any SRS resource set with usage set to 'beamManagement', regardless if the SRS resource set is configured in srs-ResourceSetToAddModList or in srs-ResourceSetToAddModListDCI-0-2.***

**Q1: Companies are encouraged to share their view whether they support Proposal 1. If disagree, please give also your reasons or come with comments for modification.**

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| Company | Comments |
|  |  |

## Round 2

TBD.

# Outcome

TBD.

# References

1. R1-2203111 “Remaining issues on SRS”, RAN1#109-e, e-Meeting, May 9-20, 2022, Huawei, HiSilicon
2. R1-2203011 “Final Report of 3GPP TSG RAN WG1 #108-e v1.0.0”, section 7.2.5 e-Meeting, MCC Support