**3GPP TSG RAN WG1 #122 R1-250XXXX**

**Bengaluru, India, Aug 25th – 29th, 2025**

Agenda Item: 10.2

Source: Ad-Hoc Chair (Ericsson)

Title: Session notes for 10.2 NR MIMO Phase 6

Document for: Discussion, Decision

## NR MIMO Phase 6

*Please refer to RP-251856 for detailed scope of the WI.*

[122-R20-MIMO] Email discussion on Rel-20 MIMO – xxx

* To be used for sharing updates on online/offline schedule, details on what is to be discussed in online/offline sessions, tdoc number of the moderator summary for online session, etc

R1-2505948 Rel-20 NR MIMO Phase 6: Initial Rapporteur Workplan Rapporteur (MediaTek, CATT)

### Improvement of SRS capacity and coverage

*Including a) Multiple frequency-domain starting positions for SRS repetition, and b) Cross-slot SRS between one U slot and one adjacent S slot.*

**R1-2505274** Discussion on improvement of SRS capacity and coverage ZTE Corporation, Sanechips

**R1-2505812** Improvement of SRS capacity and coverage Lenovo

R1-2505164 Discussion on improvement of SRS capacity and coverage Spreadtrum, UNISOC

R1-2505209 Improvement of SRS capacity and coverage Huawei, HiSilicon

R1-2505242 NR MIMO Phase 6: SRS Enhancement InterDigital, Inc.

R1-2505283 Discussion on improving of SRS capacity and coverage TCL

Withdrawn

R1-2505286 Discussion on improving of SRS capacity and coverage TCL

R1-2505288 Improvement of SRS capacity and coverage MediaTek Inc.

R1-2505302 On improvement of SRS capacity and coverage CATT

R1-2505408 Discussion on improvement of SRS capacity and coverage vivo

R1-2505455 Discussion on the improvement of SRS capacity and coverage Xiaomi

R1-2505512 Discussion on SRS capacity and coverage improvement China Telecom

R1-2505576 Views on improvement of SRS capacity and coverage Samsung

R1-2505635 Improvement of SRS capacity and coverage Tejas Network Limited

R1-2505749 Discussion on enhancement of SRS capacity and coverage for MIMO phase 6 OPPO

R1-2505905 On Rel-20 MIMO SRS capacity and coverage improvement Apple

R1-2505936 Discussion on improvement of SRS capacity and coverage NEC

R1-2505946 Enhancements for SRS capacity and coverage Transsion Holdings

R1-2505965 Discussion on improvement of SRS capacity and coverage Fujitsu

R1-2505987 Improvement of SRS Capacity and Coverage Nokia

R1-2505997 Discussion on improvement of SRS capacity and coverage HONOR

R1-2506110 Discussion on improvements of SRS capacity and coverage Sony

R1-2506144 Discussion on Improvement of SRS Capacity and Coverage Rakuten Mobile, Inc

R1-2506210 SRS enhancements in 5G MIMO Phase 6 Qualcomm Incorporated

R1-2506267 Improvement of SRS capacity and coverage Sharp

R1-2506297 Discussion on Improvement of SRS capacity and coverage NTT DOCOMO, INC.

R1-2506367 On Rel-20 improvement of SRS capacity and coverage Ericsson

R1-2506369 Discussion on improvement of SRS capacity and coverage NICT

R1-2506381 Views on enhancements for Improvement of SRS capacity and coverage KDDI Corporation

**R1-2506461**

**Proposal 1-1-1**: For SRS configured with RPFS (P­F>1) and multiple repetitions (R > 1), support multiple frequency-domain starting positions across SRS repetitions within one frequency hop based on the followings:

* For each hop, the starting position patterns across the K different frequency locations are pre-defined
* The R repetitions are equally divided into K subgroups, each containing R/K consecutivesymbols.
* ~~FFS: whether non-consecutive symbols are supported for each subgroup.~~
* ~~FFS: is not an integer multiple of~~ *~~K.~~*



* Within each subgroup of R/K consecutivesymbols, the SRS is transmitted at the same starting position in frequency domain.
* Start position pattern is the same during the period for sounding all subbands (hopping period)

FFS: whether/how to support enabling legacy RPFS start RB index hopping across multiple SRS frequency hopping periods and enhanced RPFS start RB index hopping within each hop simultaneously.

Note: Clarify the hop is a legacy hope (work out on text)

### Enhancing DL CSI acquisition

*Including a) Early SRS/CSI/CSI-RS triggering, and b) CSI-RS density reduction for 48, 64, and 128 CSI-RS ports.*

**R1-2506166** On Rel-20 Enhanced DL CSI acquisition Ericsson

**R1-2506211** DL CSI acquisition enhancements in 5G MIMO Phase 6 Qualcomm Incorporated

R1-2505152 Enhancing DL CSI acquisition FUTUREWEI

R1-2505165 Discussion on enhancing DL CSI acquisition Spreadtrum, UNISOC

R1-2505210 DL CSI acquisition enhancment Huawei, HiSilicon

R1-2505243 NR MIMO Phase 6: DL CSI Enhancement InterDigital, Inc.

R1-2505275 Discussion on enhancing DL CSI acquisition ZTE Corporation, Sanechips

R1-2505284 Discussion on enhancing DL CSI acquisition TCL

R1-2505289 Enhancing DL CSI acquisition MediaTek Inc.

R1-2505303 On enhancements for DL CSI acquisition CATT

R1-2505409 Discussion on enhancing DL CSI acquisition vivo

R1-2505456 Discussion on enhancing DL CSI acquisition Xiaomi

R1-2505577 Views on enhancing DL CSI acquisition Samsung

R1-2505636 Enhancing DL CSI acquisition Tejas Network Limited

R1-2505647 Enhancing DL CSI acquisition Lenovo

R1-2505750 Discussions on Enhancing DL CSI Acquisition OPPO

R1-2505822 Discussion on enhancing DL CSI acquisition LG Electronics

R1-2505864 On DL CSI Acquisition Enhancements for FR1 Nokia

R1-2505906 On Rel-20 MIMO CSI enhancement Apple

R1-2505931 Discussion on Enhancing DL CSI acquisition NEC

R1-2505966 Discussion on enhancing DL CSI acquisition Fujitsu

R1-2505998 Discussion on enhancing DL CSI acquisition HONOR

R1-2506015 Discussions on enhancing DL CSI acquisition China Telecom

R1-2506016 DL CSI acquisition enhancements for Rel. 20 MIMO Fraunhofer IIS, Fraunhofer HHI

R1-2506060 Discussion on enhancing DL CSI acquisition for NR MIMO Phase 6 ETRI

R1-2506111 Discussion on DL CSI acquisition enhancements Sony

R1-2506137 Discussion on Early DL CSI Acquisition Enhancements Panasonic

R1-2506145 Discussion on Enhancement of CSI DL Acquisition Rakuten Mobile, Inc

R1-2506234 DL CSI Enhancements for NR Rel-20 AT&T

R1-2506266 Enhancing DL CSI acquisition Sharp

R1-2506298 Discussion on Enhancing DL CSI acquisition NTT DOCOMO, INC.

R1-2506319 Discussion on DL CSI acquisition ITRI, Acer Incorporated

R1-2506351 Discussion on enhancing DL CSI acquisition Google

R1-2506355 Views on DL Channel acquisition enhancements CEWiT, IITM

R1-2506370 Discussion on enhancing DL CSI acquisition NICT

R1-2506371 Discussion on Enhancing DL CSI acquisition IIT Kanpur

**R1-2506450**