[104-e-NR-5G\_V2X-01]: PS-1: SL max data rate – till 1/28, with potential CRs till 2/2– Jeongho (Samsung)

* Editorial changes for FD-OCC, CSI-RS resources, reference in SCI fields, MCS threshold for SL PT-RS can be discussed in the CR preparation.

In this email thread, RAN1 will discuss to confirm the overhead value for the SL max data rate.

***Issue#1: Confirm the overhead values for SL max data rate***

* [5, Samsung], [7, Ericsson]
* In TS38.306, there are brackets for the overhead value in calculation of SL max data rate. RAN1 needs to confirm those values.
* It is recommended to remove brackets.
* A draft LS can be seen in the same folder of this document.

Proposal

The following text proposal is adopted for TS38.306 and send an LS to RAN2 to inform.

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| 4.1.5 Supported max data rate for SL For NR sidelink, the approximate data rate is computed as follows.  wherein  Rmax = 948/1024,  is the the maximum number of supported layers for sidelink transmission (or reception) given by UE capability on supporting rank 2 PSSCH transmission and higher layer parameter *rankTwoReception*,  is the maximum supported modulation order between 6 or 8 given by higher layer parameter *sl-Tx-256QAM* and *sl-Tx-256QAM*,  is the scaling factor for sidelink transmission and reception given by higher layer parameter *scalingFactorTxSidelink* and *scalingFactorRxSidelink* respectively, as specified in TS 36.331 [17] and TS 38.331 [9], and can take the values 1, 0.8, 0.75, and 0.4.  is the numerology (as defined in TS 38.211 [6])  is the average OFDM symbol duration in a subframe for numerology , i.e. . Note that normal cyclic prefix is assumed.  is the maximum possible RB allocation in bandwidth BW for PSSCH, where BW is the UE supported maximum bandwidth in the given band or band combination,  is the overhead and takes the following values  0.23, for frequency range FR1 for SL  0.25, for frequency range FR2 for SL |

Each company is encouraged to provide the views on the above issue and proposal.

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| Company | Views |
| Sharp | Fine with the proposal. |
| vivo | We are fine to confirm the RAN1 working assumption, but please note that RAN1 cannot agree on a TP of RAN2 spec. We can only inform RAN2 about RAN1’s decision and leave the spec change to RAN2. |
| ZTE,Sanechips | OK with typo correction, prefer to capture it in the reply LS  is the maximum supported modulation order between 6 or 8 given by higher layer parameter *sl-Tx-256QAM* and *sl-Rx-256QAM*, |
| Ericsson | Fine with the proposal and the corresponding LS to RAN2. |
| NEC | Ok |
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***Issue#Editorial:***

The following issues will be treated in CR preparation session.

- [4, Intel]: FD-OCC

- [6, Sharp]: CSI-RS resources

- [8, Nokia, NSB]: Reference in SCI fields

- (If agreed in MIMO session for UL PT-RS) [3, LG] MCS threshold for SL PT-RS

# Reference

1. R1-2100135 Draft TP on physical strucutre for NR sidelink OPPO
2. R1-2100410 Maintenance on physical layer structure for NR sidelink vivo
3. R1-2100514 Discussion on essential corrections in physical layer structure LG Electronics
4. R1-2100629 Correction to FD-OCC for PSCCH Intel Corporation
5. R1-2101174 Maintenance for NR Sidelink Physical Layer Structure Samsung
6. R1-2101532 Remaining issues on physical layer structure and procedures for NR sidelink Sharp
7. R1-2101709 Draft\_CR\_TS38.306 Ericsson
8. R1-2101760 Remaining details for Physical layer structure for sidelink Nokia, Nokia Shanghai Bell
9. R1-2100136 Remaining open issues and corrections for physical layer procedure OPPO
10. R1-2100335 Discussion and TPs on physical layer procedures in NR V2X CATT, GOHIGH
11. R1-2100516 Discussion on essential corrections in physical layer procedure LG Electronics
12. R1-2100631 Corrections to sidelink procedures Intel Corporation
13. R1-2100735 Remaining issues on physical layer procedures for NR sidelink Fujitsu
14. R1-2100800 Remaining issues on sidelink physical layer procedure Spreadtrum Communications
15. R1-2101344 Remaining Issues of Sidelink Physical Layer Procedures Apple
16. R1-2101438 Remaining Issues in Physical Layer Procedure Qualcomm Incorporated
17. R1-2101583 Maintenance for sidelink physical layer procedure NTT DOCOMO, INC.
18. R1-2101649 Remaining issues on type-1 HARQ-ACK codebook considering multiple sidelink reosurce pools ASUSTeK
19. R1-2101650 Remaining issues on sidelink procedure ASUSTeK
20. R1-2101733 Correction on determination of PSFCH resources based on a set of configured PRBs Huawei, HiSilicon
21. R1-2100137 Remaining open issues and corrections for mode 1 and mode 2 RA OPPO
22. R1-2100204 Remaining details of sidelink resource allocation mode 2 Huawei, HiSilicon
23. R1-2100334 Discussion and TPs on resource allocation in NR V2X CATT, GOHIGH
24. R1-2100411 Maintenance on resource allocation mechanisms for NR sidelink vivo
25. R1-2100515 Discussion on essential corrections in resource allocation for Mode 1 and 2 LG Electronics
26. R1-2100630 Corrections to Mode-2 resource allocation Intel Corporation
27. R1-2100734 A remaining issue on Mode-1 resource allocation for NR sidelink Fujitsu
28. R1-2100799 Remaining issues in NR sidelink mode 2 resource allocation Spreadtrum Communications
29. R1-2100937 Remaining issues on mode1 ZTE, Sanechips
30. R1-2100938 The slot set for SL resource allocation procedure ZTE, Sanechips
31. R1-2100945 Remaining issues on resource allocation mode 2 NEC
32. R1-2101073 Remaining issues on resource allocation mode 2 for NR V2X ETRI
33. R1-2101175 Draft CR on Sidelink Physical Duration to Logical Slot Conversion Samsung
34. R1-2101176 Maintenance for NR Sidelink Mode 2 Operation Samsung
35. R1-2101345 Remaining Issue of Mode 1 Resource Allocation Apple
36. R1-2101346 Remaining Issues of Mode 2 Resource Allocation Apple
37. R1-2101436 Remaining Issues in Mode 1 Resource Allocation Qualcomm Incorporated
38. R1-2101437 Remaining Issues in Mode 2 Resource Allocation Qualcomm Incorporated
39. R1-2101533 Remaining issues on resource allocation for NR sidelink Sharp
40. R1-2101571 Remaining issues on sidelink mode 2 ASUSTeK
41. R1-2101581 Maintenance for resource allocation mechanism mode 1 NTT DOCOMO, INC.
42. R1-2101582 Maintenance for sidelink synchronization and mode 2 NTT DOCOMO, INC.
43. R1-2101759 Remaining details for Resource allocation for sidelink - Mode 2 Nokia, Nokia Shanghai Bell
44. R1-2100333 Discussion and TPs on sidelink synchronization mechanism and physical layer structure in NR V2X CATT, GOHIGH
45. R1-2100412 Maintenance on NR sidelink synchronization and procedures vivo
46. R1-2100936 Remaining issues on sidelink synchronization ZTE, Sanechips
47. R1-2101534 Remaining issues on synchronization mechanism for NR sidelink Sharp
48. R1-2101732 Correction on PSBCH payload generation Huawei, HiSilicon
49. R1-2101707 Draft\_CR\_TS38.212 Ericsson
50. R1-2101708 Draft\_CR\_TS38.213 Ericsson