**3GPP TSG-RAN 1 Meeting #7R1-240xxxx**

**Fukuoka, Japan, 20th - 24th May, 2024**

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| *CR-Form-v12.3* |
| **DRAFT CHANGE REQUEST** |
|  |
|  | **38.202** | **CR** | **-** | **rev** | **-**  | **Current version:** | **18.2.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | Correction to 38.202 on support of combination of SL CA and SL positioning |
|  |  |
| ***Source to WG:*** | Moderator (Qualcomm), Huawei, HiSilicon |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_pos\_enh2-Core |  | ***Date:*** | 2024-05-20 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-18 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | RAN1 agreed to introduce two new UE capabilities of SL CA and SL PRS transmission/reception in RAN1#116-bis.**Agreement**For a band configured with SL CA, confirm the related working assumption from RAN1 #116 with the introduction of the following new UE capabilities:* + One UE capability for SL PRS transmission for a band configured with SL CA
	+ One UE capability for SL PRS reception for a band configured with SL CA
	+ Note: there will not be two separate FG components for shared RP and dedicated RP

However, the impact on the sidelink "Transmission Type" combinations and the "Reception Type" combinations is not captured yet when UE reports such capabilities.  |
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| ***Summary of change:*** | Capture the impact on the sidelink "Transmission Type" combinations and the "Reception Type" combinations when UE reports the capabilities of SL CA and SL PRS transmission/reception.  |
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| ***Consequences if not approved:*** | The sidelink "Transmission Type" combinations and the "Reception Type" combinations when UE reports the capabilities of SL CA and SL PRS transmission/reception is not supported, which is not aligned with RAN1 agreement.  |
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| ***Clauses affected:*** | 6.3 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## 6.3 Sidelink

The tables 6.3-1 and 6.3-2 describe the possible combinations of physical channels that can be sent simultaneously in the sidelink by a UE. Table 6.3-1 introduces notation for a sidelink "Transmission Type" which represents a physical channel, and any associated transport channel. Table 6.3-2 describes the combinations of these "Transmission Types" which are supported by the UE depending on capabilities [8, TS 38.306], and enumerates how many of each can be transmitted simultaneously.

Table 6.3-1: Sidelink "Transmission Types"

|  |  |  |  |
| --- | --- | --- | --- |
| "Transmission Type" | Physical Channel | AssociatedTransport Channel | Comment |
| A | PSBCH | SL-BCH |  |
| B | PSSCH | SL-SCH |  |
| C | PSCCH | SL-SCH |  |
| D | PSFCH | N/A |  |
| E | SL PRS | N/A |  |

Table 6.3-2: Sidelink "Transmission Type" combinations

|  |  |
| --- | --- |
| Supported Combinations  | Comment |
| A | Note 2 |
| B | Note 2 |
| C | Note 2 |
| E | Note 4 |
| E | Note 5 |
| $N×$ D | Note 2 |
| B+C | Note 2 |
| Note 1: Depending on the UE capability, the UE may be able to perform simultaneous Uplink and Sidelink transmissions. If the simultaneous transmission of Sidelink and Uplink is beyond the UE capability, the one not prioritized can be dropped according to [TS 38.321].Note 2: Depending on the UE capability, the UE may be able to perform simultaneous sidelink communication transmissions of the same sidelink “Transmission Type” combinations across multiple SL carriers. Note 3: Simultaneous transmissions over multiple SL carriers with one or more UL carriers is left up to UE implementation.Note 4: Depending on the UE capability, the UE may be able to perform simultaneous SL PRS transmission and PSSCH transmission(s) for a shared SL PRS resource pool across multiple SL carriers.Note 5: Depending on the UE capability, applicable for a dedicated SL PRS resource pool across multiple SL carriers.  |

The tables 6.3-3 and 6.3-4 describe the possible combinations of physical channels that can be received simultaneously in the sidelink by a UE. Table 6.3-3 introduces notation for a sidelink "Reception Type" which represents a physical channel, and any associated transport channel. Table 6.3-4 describes the combinations of these "Reception Types" which are supported by the UE depending on capabilities [8, TS 38.306], and enumerates how many of each can be received simultaneously.

Table 6.3-3: Sidelink "Reception Types"

|  |  |  |  |
| --- | --- | --- | --- |
| "Reception Type" | Physical Channel | AssociatedTransport Channel | Comment |
| A | PSBCH | SL-BCH |  |
| B | PSSCH | SL-SCH |  |
| C | PSCCH | SL-SCH |  |
| D | PSFCH | N/A  |  |
| E | SL PRS | N/A |  |

Table 6.3-4: Sidelink "Reception Type" combinations

|  |  |
| --- | --- |
| Supported Combinations  | Comment |
| A |  |
| B | Note 1, Note 2 |
| C | Note 1, Note 2 |
| E | Note 3, Note 5 |
| $M\_{1}×$ E | Note 4 |
| $M×$ D | Note 2 |
| B+C | Note 1, Note 2 |
| Note 1: Corresponds to simultaneous reception within one sub-channelNote 2: Depending on the UE capability, the UE may be able to perform simultaneous sidelink communication receptions of the same sidelink “Reception Type” combinations across multiple SL carriers.Note 3: Applicable for a shared SL PRS resource pool. Corresponds to simultaneous reception within one sub-channel.Note 4: Applicable for a dedicated SL PRS resource pool with M1≥1. Corresponds to simultaneous reception within one dedicated SL PRS resource pool. Note 5: Depending on the UE capability, the UE may be able to perform simultaneous SL PRS reception and PSSCH reception(s) across multiple SL carriers. |