**3GPP TSG RAN WG1 #105-e R1-210xxxx**

**e-Meeting, May 10th – 27th, 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  | **38.214** | **CR** | **draft** | **rev** | **0** | **Current version:** | **16.5.0** |  |
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| *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 sidelink resource identification procedure to prevent infinite loop issue – implementation of the agreement from [104b-e-NR-5G\_V2X-03] |
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| ***Source to WG:*** | Moderator (Intel Corporation), […] |
| ***Source to TSG:*** | RAN WG1 |
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| ***Work item code:*** | 5G\_V2X\_NRSL-Core |  | ***Date:*** | 2021-05-25 |
|  |  |  |  |  |
| ***Category:*** | ***F*** |  | ***Release:*** | Rel-16 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | Resource identification procedure in section 8.1.4 may stuck in an infinite loop due to excessive exclusion in step 5. The agreement made in [104b-e-NR-5G\_V2X-03] provides a solution to prevent that. |
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| ***Summary of change:*** | After executing step 5, a UE checks if the number of excluded single-slot resources in this step is greater that (1-X)\*M\_total, and if true, discards the result of step 5 execution.Agreement* Update the specification of identification of candidate resources for Mode-2 resource allocation in section 8.1.4 of TS 38.214 to handle the case when X·M\_total number of identified resources could not be reached after any number of loop iterations
	+ If the number of the excluded resources in step 5 is larger than (1-X)·M\_total, a UE skips step 5

**Conclusion*** In the following agreement made in [104b-e-NR-5G\_V2X-03], “a UE skips step 5” is interpreted as that the UE re-initializes S\_A to the set of all the candidate single-slot resources as in step 4 and proceeds to step 6.

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| * Update the specification of identification of candidate resources for Mode-2 resource allocation in section 8.1.4 of TS 38.214 to handle the case when X·M\_total number of identified resources could not be reached after any number of loop iterations
	+ If the number of the excluded resources in step 5 is larger than (1-X)·M\_total, a UE skips step 5
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| ***Consequences if not approved:*** | There is a significant range of system configuration parameters which can lead to the infinite loop issue, where the UE behaviour is undefined. |
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| ***Clauses affected:*** | 8.1.4 |
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|  | **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 ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** |  |

### 8.1.4 UE procedure for determining the subset of resources to be reported to higher layers in PSSCH resource selection in sidelink resource allocation mode 2

<< UNCHANGED PARTS OMITTED >>

4) The set is initialized to the set of all the candidate single-slot resources.

5) The UE shall exclude any candidate single-slot resource from the set if it meets all the following conditions:

- the UE has not monitored slot in Step 2.

- for any periodicity value allowed by the higher layer parameter *sl-ResourceReservePeriodList* and a hypothetical SCI format 1-A received in slot with '*Resource reservation period*' field set to that periodicity value and indicating all subchannels of the resource pool in this slot, condition c in step 6 would be met.

5a) If the number of candidate single-slot resources remaining in the set is smaller than , the set is initialized to the set of all the candidate single-slot resources as in step 4.

6) The UE shall exclude any candidate single-slot resource from the set if it meets all the following conditions:

<< UNCHANGED PARTS OMITTED >>