**3GPP TSG-RAN1 Meeting # 106-eR1-2107317**

**E-Meeting, August 16th – August 27th, 2021**

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| *CR-Form-v12.1* |
| **[Draft] CHANGE REQUEST** |
|  |
|  | **38.213** | **CR** | - | **rev** | - | **Current version:** | **16.6.0** |  |
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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 |  | Radio Access Network | **x** | Core Network |  |

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| ***Title:***  | [Draft] CR on Simultanous NR SL and LTE SL Operation |
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| ***Source to WG:*** | Qualcomm, [Apple], [NEC] |
| ***Source to TSG:*** | RAN WG1 |
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| ***Work item code:*** | 5G\_V2X\_NRSL-Core |  | ***Date:*** | 2021-08-16 |
|  |  |  |  |  |
| ***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:*** | Current specifications could be interpreted to require the UE to exclusively either perform operation on LTE SL or NR SL even though it could be able to perform both operations simultaneously.The related RAN1 agreements only indicated that UE perform the high priority operation without stating UE behavior for the low priority one.Working assumption:* For Tx/Tx overlap,
	+ If packet priorities of both LTE and NR sidelink transmissions are known to both RATs prior to time of transmission subject to processing time restriction, then the packet with a higher relative priority is transmitted
		- In case the priorities of LTE and NR SL transmissions are the same, then it is up to UE implementation as to which transmission is chosen (e.g., taking into account congestion, etc.)
	+ If packet priorities of both LTE and NR sidelink transmissions are not known to both RATs prior to time of transmission subject to processing time restriction, then it is up to UE implementation to manage Tx/Tx overlaps (e.g., LTE transmissions are always prioritized, etc.)
	+ RAN1 does not assume any impact to LTE physical layer specifications

Agreements:* For Tx/Rx overlap,
	+ If packet priorities of both LTE and NR sidelinks are known to both RATs prior to time of transmission/reception (subject to processing time restrictions), then the packet with a higher relative priority is transmitted/received
		- In case the priorities of LTE and NR sidelink packets are the same, then it is up to UE implementation as to which packet is transmitted/received
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| ***Summary of change:*** | Remove the restriction that the UE must only perform the higher priority operation. |
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| ***Consequences if not approved:*** | Misalignment between RAN1 agreements causing unnecessary dropping of operations on LTE SL or NR SL for UEs that can perform both operations, and potentially leading to system performance degradation. |
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| ***Clauses affected:*** | 16.4 |
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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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

-----------------------------------------------------begin text proposal for 38.213-----------------------------------------------------

16.2.4.1 Simultaneous NR and E-UTRA transmission/reception

If a UE

- would transmit a first channel/signal using E-UTRA radio access and second channels/signals using NR radio access, and

- a transmission of the first channel/signal would overlap in time with a transmission of the second channels/signals, and

- the priorities of the channels/signals are known to both E-UTRA radio access and NR radio access at the UE $T$ msec prior to the start of the earliest of the two transmissions, where $T\leq 4$ and is based on UE implementation,

the UE transmits the channels/signals of the radio access technology with the highest priority as determined by the SCI formats scheduling the transmissions or, in case of a S-SS/PSBCH block or a sidelink synchronization signal using E-UTRA radio access, as indicated by higher layers or, in case of PSFCH, equal to the priority of the corresponding PSSCH.

If a UE

- would respectively transmit or receive a first channel/signal using E-UTRA radio access and receive a second channel/signal or transmit second channels/signals using NR radio access, and

- a transmission or reception of the first channel/signal would respectively overlap in time with a reception of the second channel/signal or transmission of the second channels/signals, and

- the priorities of the channels/signals are known to both E-UTRA radio access and NR radio access at the UE $T$ msec prior to the start of the earliest transmission or reception, where $T\leq 4$ and is based on UE implementation, and

the UE transmits or receives the channels/signals of the radio access technology with the highest priority as determined by the SCI formats scheduling the transmissions or, in case of a S-SS/PSBCH block or a sidelink synchronization signal using E-UTRA radio access, as indicated by higher layers or, in case of PSFCH, equal to the priority of the corresponding PSSCH.

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