**3GPP TSG-RAN WG2 Meeting # 117-e *R2-220xxxx***

**Electronic Meeting, 21st February– 3rd March, 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **37.985** | **CR** |  | **rev** | **-** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <http://www.3gpp.org/Change-Requests>.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Draft CR to introduce Rel-17 sidelink DRX for TR 37.985 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_V2X\_NRSL-Core | | | | |  | ***Date:*** | | | 2022-02-21 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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 can be 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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | SL DRX operation should be added to TR 37.985. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add SL DRX operation for unicast, groupcast and broadcast to TR 37.985. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | SL DRX in TR 37.985 is not completed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | 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:*** | |  | | | | | | | | |

## 9.3 Sidelink DRX

To aid in power consumption reduction for P-UEs, as well as other applications, NR-V2X supports DRX operation on sidelink. It is similar to DRX on the Uu interface, with DRX active and inactive times occurring on a periodically-repeating cycle. In the DRX active part of the cycle, full or partial sensing is performed as usual, together with reception and decoding of PSCCH, PSSCH, etc. In the DRX inactive part, a UE only performs reception of PSCCH and SL-RSRP measurements for sensing. When resource (re-)selection is performed, the physical layer ensures that at least a subset of the resources reported to the MAC layer are within the active time of the UE to which the intended transmission will be sent.

SL DRX is supported for unicast, groupcast, and broadcast. For unicast, SL DRX is configured per pair of source L2 ID and destination L2 ID. RX UE may send assistance information to the TX UE to assist the determination of the SL DRX configuration for the RX UE. The RX UE may accept or reject the SL DRX configuration via PC5-RRC signalling.

For groupcast and broadcast, SL DRX is configured based on QoS profile and Destination L2 ID with multiple SL DRX configurations supported. UE needs to perform down selection on cycle/timers when multiple QoS profiles are configured for that L2 ID. A default DRX configuration can be used for a QoS profile which cannot be mapped into a DRX configuration configured for the dedicated QoS profile(s). TX profile is introduced for groupcast and broadcast to ensure the backward compatibility. A TX profile is indicated from upper layer to AS layer and identifies one or more sidelink feature groups.

Alignment of Uu DRX and SL DRX for a UE in RRC\_CONNECTED is supported for unicast, groupcast, and broadcast.

Details of the sidelink DRX operation for NR sidelink communication are specified in TS 38.321 [21, clause 5.x].