3GPP TSG-RAN WG2 Meeting #122 R2-230xxxx
Incheon, South Korea, May 22 – 26 2023

Agenda Item: 9.5

Source: Session Chair (Samsung)

Title: Report from session on NR SL

Document for: Approval

Time Schedule
Please refer to the latest schedule in the RAN2 inbox on the public 3GPP servers.

## List and Status of Offline/Email Discussions

## Approved outgoing LSs

## 4.3 V2X and Sidelink corrections Rel-15 and earlier

REL-15 and Earlier WIs related to V2x and Sidelink are in scope but not listed explicitly (long list).

This Agenda Item is treated in the V2X and Sidelink Breakout session

### 4.3.0 In-Principle-Agreed CRs

### 4.3.1 Corrections

## 5.2 NR V2X

(5G\_V2X\_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Aug 20; WID: RP-200129).

CR rapporteurs will take care of miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company first for small changes (e.g. non-controversial clarification/correction, editorial correction, etc.).

### 5.2.0 In-principle agreed CRs

R2-2304854 Corrections including field description for transmission power Huawei, HiSilicon (Rapporteur), ZTE Corporation, Sanechips, CATT CR Rel-16 38.331 16.12.0 4067 1 F 5G\_V2X\_NRSL-Core R2-2304217

R2-2304855 Corrections including field description for transmission power Huawei, HiSilicon (Rapporteur), ZTE Corporation, Sanechips, CATT CR Rel-17 38.331 17.4.0 4068 1 A 5G\_V2X\_NRSL-Core R2-2304218

R2-2306369 Correction for Measurement Event Triggering Criteria Sharp Corporation CR Rel-16 38.331 16.12.0 4049 1 F 5G\_V2X\_NRSL-Core R2-2304078

* CRs in R2-2304854, R2-2304855 and R2-2306369 are agreed?

R2-2306110 Corrections on MAC reset regarding configured sidelink grant ASUSTeK, Huawei, HiSilicon, Samsung, vivo CR Rel-16 38.321 16.11.0 1605 2 F 5G\_V2X\_NRSL-Core R2-2304237 Withdrawn

### 5.2.1 Corrections

R2-2304829 Discussion on future extensibility of sl-FreqInfoList in R16/17 NR SL Spec vivo discussion Rel-16

R2-2304850 Potential issue caused by using destination index Huawei, HiSilicon, vivo discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2304851 Correction on destination index for SL measurement configuration Huawei, HiSilicon CR Rel-16 38.331 16.12.0 4077 - F 5G\_V2X\_NRSL-Core

R2-2304852 Correction on destination index for SL measurement configuration Huawei, HiSilicon CR Rel-17 38.331 17.4.0 4078 - A 5G\_V2X\_NRSL-Core

R2-2304853 Correction on destination index for SL DRX configuration Huawei, HiSilicon CR Rel-17 38.331 17.4.0 4079 - F NR\_SL\_enh-Core

* [AT122][501][V2X/SL] V2X corrections (Vivo)

 **Scope:** Discuss R2-2304829, R2-2304850, R2-2304851, R2-2304852, and R2-2304853 (including the need of correction). Prepare agreeable CRs (if needed).

 **Intended outcome:** Discussion summary in R2-2306701 and 38.331 CRs in R2-2306702/R2-2306703

**Deadline:** To be handled in comeback session in 5/25

R2-2304941 Correction on TS 38.304 for NR SL vivo CR Rel-16 38.304 16.9.0 0340 - F 5G\_V2X\_NRSL-Core

R2-2304942 Correction on TS 38.304 for NR SL vivo CR Rel-17 38.304 17.4.0 0341 - A 5G\_V2X\_NRSL-Core

* Agreed?

R2-2304991 Summary on user plane corrections for NR V2X LG Electronics Inc. discussion 5G\_V2X\_NRSL-Core withdrawn

## 6.7 NR Sidelink enhancements

(NR\_SL\_enh-Core; leading WG: RAN1; REL-17; WID: RP-202846)

Tdoc Limitation: 3 tdocs

Note for RRC and MAC CRs, CR rapporteur’s summary and suggestion may be provided. CR rapporteurs will take care of miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company first for small changes (e.g. non-controversial clarification/correction, editorial correction, etc.).

### 6.7.0 In-principle agreed CRs

R2-2304760 Correction on the usage of default CBR values for NR sidelink OPPO, Xiaomi, CATT CR Rel-17 38.321 17.4.0 1611 1 F NR\_SL\_enh-Core R2-2304229

R2-2304843 Miscellaneous corrections on 38.331 for SL enhancements Huawei, HiSilicon (Rapporteur), Xiaomi CR Rel-17 38.331 17.4.0 4069 1 F NR\_SL\_enh-Core R2-2304235

R2-2306177 Corrections on MAC reset regarding configured sidelink grant ASUSTeK, Huawei, HiSilicon, Samsung, vivo CR Rel-17 38.321 17.4.0 1605 3 F NR\_SL\_enh-Core R2-2304237

* CRs in R2-2304760, R2-2304843, and R2-2306177 are agreed?

### 6.7.1 General and Stage 2 corrections

R2-2305225 Miscellaneous corrections on TS 38.300 for NR sidelink Xiaomi CR Rel-17 38.300 17.4.0 0673 - F NR\_SL\_enh-Core

R2-2304844 Corrections on TS 38.300 for SL enhancements Huawei, HiSilicon CR Rel-17 38.300 17.4.0 0669 - F NR\_SL\_enh-Core

R2-2305111 Correction to 38300 on IUC Ericsson, Apple CR Rel-17 38.300 17.4.0 0649 1 F NR\_SL\_enh-Core R2-2302839

R2-2305112 Correction to 38300 on IUC cast type Ericsson CR Rel-17 38.300 17.4.0 0650 1 F NR\_SL\_enh-Core R2-2302840

* [AT122][502][V2X/SL] 38.300 corrections (Xiaomi)

 **Scope:** Discuss R2-2305225, R2-2304844, R2-2305111, and R2-2305112 (including the need of correction). Prepare agreeable merged CR (if needed).

 **Intended outcome:** Discussion summary in R2-2306704 and 38.300 CR in R2-2306705

**Deadline:** Email approval at 5/25 18:00 (KST)

R2-2305058 Miscellaneous corrections for Stage 2 NR sidelink relay Apple CR Rel-17 38.300 17.4.0 0656 1 F NR\_SL\_relay-Core R2-2303384

* Moved to SL relay AI

### 6.7.2 Control plane corrections

R2-2306118 Discussion on deriving timer length for DRX timers ASUSTeK, vivo, ZTE Corporation, Sanechips discussion Rel-17 38.331 NR\_SL\_enh-Core

Proposal 1: For sidelink configured grant Type 2, the reference PDCCH, to derive the symbol length of drx-HARQ-RTT-TimerSL and slot length of drx-RetransmissionTimerSL, is the PDCCH activating the sidelink configured grant Type 2.

Proposal 2: Spec change is needed for SL UE to derive symbol length for drx-HARQ-RTT-TimerSL and the slot length for drx-RetransmissionTimerSL corresponding to SL configured grant Type 1.

 Proposal 3: RAN2 to selects from one of the following Options for derivation of timer length for drx-HARQ-RTT-TimerSL and drx-RetransmissionTimerSL for sidelink configured grant Type 1:

 - Option 1: referring to active DL BWP.

 - Option 1a: referring to active DL BWP of the PCell.

 - Option 1b: referring to active DL BWP where DCI format 3\_0 was monitored.

 - Option 2: referring to the DL BWP on which the PDCCH transmission indicating the PDSCH carrying the RRCReconfiguration containing rrc-ConfiguredSidelinkGrant for the corresponding SL grant was transmitted.

 - Option 3: referring to the SL BWP where the transport block is transmitted.

- Option 4: leave it to UE implementation.

* [AT122][503][V2X/SL] 38.331 correction on deriving DRX timer length (ASUSTek)

 **Scope:** Prepare 38.331 CR according to online agreement.

 **Intended outcome:** 38.331 CR in R2-2306706

**Deadline:** Email approval at 5/25 18:00 (KST)

R2-2306119 Corrections on deriving timer length for DRX timers (option 1a) ASUSTeK, ZTE Corporation, Sanechips CR Rel-17 38.331 17.4.0 4136 - F NR\_SL\_enh-Core

R2-2306257 Corrections on deriving timer length for DRX timers by relying on DCI format 3\_0 (option 1b) vivo CR Rel-17 38.331 17.4.0 4143 - F NR\_SL\_enh-Core

R2-2305276 Consideration on the time length for DRX timers CATT discussion Rel-17 NR\_SL\_enh-Core

R2-2305277 Correction on the time length for DRX timers CATT CR Rel-17 38.331 17.4.0 4098 - F NR\_SL\_enh-Core

R2-2304846 Corrections on TS 38.304 for SL enhancements Huawei, HiSilicon CR Rel-17 38.304 17.4.0 0338 - F NR\_SL\_enh-Core

R2-2304940 Corrections on TS 38.304 for NR SL enhancement vivo CR Rel-17 38.304 17.4.0 0339 - F NR\_SL\_enh-Core, NR\_SL\_relay-Core

* [AT122][504][V2X/SL] 38.304 correction (Huawei)

 **Scope:** Discuss only corrections on SL enhancement aspects (change 1 and 2) in R2-2304846 and R2-23049 (including the need of correction). Prepare agreeable CR (if needed)

 **Intended outcome:** Discussion summary in R2-2306707 and 38.304 CR in R2-2306708

**Deadline:** Email approval at 5/25 18:00 (KST)

R2-2305059 Correction on field description of sl-DestinationIdentityL2U2N Apple CR Rel-17 38.331 17.4.0 4086 - F NR\_SL\_relay-Core

R2-2305060 Corrections on triggering conditons of SUI message for SL relay Apple CR Rel-17 38.331 17.4.0 4087 - F NR\_SL\_relay-Core

* R2-2305059 and R2-2305060 are moved to SL relay AI

### 6.7.3 User plane corrections

R2-2306311 MAC PDU filtering Nokia, Nokia Shanghai Bell CR Rel-17 38.321 17.4.0 1627 - F NR\_SL\_enh-Core

Move MAC PDU filtering behaviour in a NOTE to normative text.

R2-2304995 Summary on user plane corrections for NR SL enhancements LG Electronics Inc. discussion NR\_SL\_enh-Core Late

R2-2304845 Correction on 38.321 for SL enhancements Huawei, HiSilicon CR Rel-17 38.321 17.4.0 1615 - F NR\_SL\_enh-Core

R2-2305226 Miscellaneous corrections on TS 38.321 for NR sidelink Xiaomi CR Rel-17 38.321 17.4.0 1618 - F NR\_SL\_enh-Core

R2-2305278 Correction on resource (re-)selection for NR sidelink CATT CR Rel-17 38.321 17.4.0 1619 - F NR\_SL\_enh-Core

* [AT122][505][V2X/SL] 38.321 corrections (LG)

 **Scope:** Discuss R2-2304845, R2-2305226, and R2-2305278 (including the need of correction). Prepare agreeable merged CR (if needed).

 **Intended outcome:** Discussion summary in R2-2306709 and 38.321 CR in R2-2306710

**Deadline:** Email approval at 5/25 18:00 (KST)

R2-2305589 Corrections on SRAP for SL relay NEC, Apple, Samsung, ZTE CR Rel-17 38.351 17.4.0 0020 2 F NR\_SL\_relay-Core R2-2304480

* Moved to SL relay AI

R2-2305224 Discussion on the usage of default CBR values for exceptional pool Xiaomi discussion

## 7.15 NR Sidelink evolution

(NR\_SL\_enh2; leading WG: RAN1; REL-18; WID: RP-230077)

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

### 7.15.1 Organizational

Includes Incoming LS, rapporteur inputs, and stage-2 running CR.

R2-2304618 LS on MCSt resource (re-)selection (R1-2304257; contact: OPPO) RAN1 LS in Rel-18 NR\_SL\_enh2-Core To:RAN2

* Noted ?

R2-2304665 Work plan of R18 SL-Evo OPPO, LG Work Plan Rel-18 NR\_SL\_enh2

* Noted ?

R2-2305179 Stage 2 Running CR of TS 38.300 for SL Evolution InterDigital discussion Rel-18 NR\_SL\_enh2

* [AT122][506][V2X/SL] 38.300 running CR (IDC)

 **Scope:** Discuss R2-2305179.

 **Intended outcome:** 38.300 running CR in R2-2306711 to be endorsed.

**Deadline:** Email approval at 5/25 18:00 (KST)

### 7.15.2 SL-U: SL Consistent LBT failure, SL LCP

Continue the discussion from RAN2#121bis-e, e.g. including further updates/details on SL C-LBT failure handling/recovery, details of SL LCP restriction, etc.

**SL C-LBT failure recovery (mode 2, RRC ide/inactive UE):**

* Option1: Rely on resource pool (re)selection (P1:5554)
* Option2: Exclusion of RB set(s) that SL C-LBT failure was detected in (candidate) resource selection + resource pool (re)selection
	+ When the UE switches to resource pool (re)selection?
		- When SL C-LBT failure was detected for all RB-sets within a resource pool? (P3:4805)
		- When SL C-LBT failure was detected for RB-sets > threshold within a resource pool? (P8:4831)
		- When the size of S\_A < threshold? (P10a:5089)
		- Up to UE implementation? (P1:4666)
	+ Whether L1 or MAC performs the resource exclusion?
		- In candidate resource selection by L1? (P2:4805)
		- In resource (re)selection triggering + resource (re)selection by MAC? (P2:4666)
* The UE (re)selects which resource pool?
	+ A resource pool that doesn’t have any RB-set that SL C-LBT failure was detected? (P2:5554)
	+ A resource pool where RB-set(s) that SL C-LBT failure was not detected > threshold? (P10:4831)

**SL C-LBT failure recovery (mode 1)**

* Leave it to gNB implementation (P4:4831)

**SL C-LBT failure recovery (mode 2, RRC connected UE)**

* Follow mode 1 solution?
* Follow mode 2 solution?

**SL C-LBT failure and S-SSB? (P14:4831)**

* SL C-LBT failure takes SL LBT failure of S-SSB into account
* SL C-LBT failure does NOT take SL LBT failure of S-SSB into account
* Send LS to RAN1 to let them make decision?

**SL C-LBT failure and PSFCH? (P15:4831)**

* SL C-LBT failure takes SL LBT failure of PSFCH into account
* SL C-LBT failure does NOT take SL LBT failure of PSFCH into account

**SL C-LBT cancellation**

* Mode 1
	+ Upon SL C-LBT failure MAC CE transmission (P5:4666)
* Mode 2 (RRC idle/inactive UE)
	+ Upon resource pool (re)selection (P11:5089)
	+ SL consistent LBT failure recovery parameters are reconfigured (P18:4831)
	+ PC5 MAC reset (P18:4831)
	+ Reconfiguration of resource pool(s) that include SL RB set(s) with triggered but not cancelled SL consistent LBT failure (P18:4831)
	+ Transition between RRC\_CONNECTED mode and RRC\_IDLE/INACTIVE mode (P18:4831)
	+ RA mode change (P7a:5227)
	+ Reconfiguration of RB sets (P3:4934)
	+ Based on timer (P17:4831)
	+ Based on measured channel condition (P17:4831)
* Mode 2 (RRC connected UE)
	+ Follow mode 1 solution?
	+ Follow mode 2 solution?

**Enhanced LCP**

* When enhanced LCP should be used? (P13:4666/P2:4788)
	+ Generated MAC PDU or data in the buffer meets shared COT requirements
		- Transmission to COT initiating UE
		- CAPC value is equal or lower than shared COT (P11:4805)
	+ Selected resource is within a shared COT
	+ Type 2 LBT is used
* Do we really need to specify for all other cases when legacy LCP (with type 1 LBT) is used?

R2-2304666 Discussion on C-LBT and LCP Enhancement OPPO discussion Rel-18 NR\_SL\_enh2

R2-2304764 Discussion on shared COT and LCP vivo discussion Rel-17

R2-2304788 Discussion on SL consistent LBT failure and LCP impact LG Electronics Inc. discussion NR\_SL\_enh2

R2-2304805 Discussion on SL consistent LBT failure and LCP enhancement Huawei, HiSilicon discussion Rel-18 NR\_SL\_enh2

R2-2304831 Remaining issues on SL consistent LBT failure vivo discussion Rel-18

R2-2304934 Discussion on left issues for SL-U LBT SHARP Corporation discussion NR\_SL\_enh2

R2-2304975 Discussion on Sidelink consistent LBT failure and LCP ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_enh2

R2-2305027 Remaining issues on consistent LBT failure Ericsson discussion Rel-18 NR\_SL\_enh2

R2-2305089 Discussion on SL LCP and consistent LBT failure recovery Apple discussion Rel-18 NR\_SL\_enh2

R2-2305173 LBT Failure for SL Unlicensed InterDigital discussion Rel-18 NR\_SL\_enh2

R2-2305174 Implementing LCP for SL Unlicensed InterDigital discussion Rel-18 NR\_SL\_enh2

R2-2305227 Discussion on SL consistent LBT failure Xiaomi discussion

R2-2305228 Discussion on LCP restriction from COT sharing Xiaomi discussion

R2-2305283 Further Discussion on SL LBT and LCP CATT discussion Rel-18 NR\_SL\_enh2

R2-2305357 Further dicsussion on SL consistent LBT failure NEC discussion Rel-18 NR\_SL\_enh2

R2-2305554 Discussion on aspects related to consistent LBT failure and COT sharing Spreadtrum Communications discussion Rel-18

R2-2305734 Remaining details of SL LCP and SL consistent LBT procedure Lenovo discussion Rel-18 NR\_SL\_enh2-Core

R2-2305924 On recovery of Consistent LBT failure Nokia, Nokia Shanghai Bell discussion NR\_SL\_enh2

R2-2305931 R2-23xxxxx On the applicability of enhanced LCP Nokia, Nokia Shanghai Bell discussion NR\_SL\_enh2

R2-2305946 On SL-U LBT failure Intel Corporation discussion Rel-18 NR\_SL\_enh2

R2-2305949 On Shared COT and Enhanced SL LCP Intel Corporation discussion Rel-18 NR\_SL\_enh2

R2-2306055 Discussion on SL C-LBT failure and SL LCP Qualcomm India Pvt Ltd discussion

R2-2306386 Discussion on SL Consistent LBT failure ITL discussion Rel-18

R2-2306519 SL C-LBT Failure recovery Samsung discussion

### 7.15.3 SL-U: SL resource (re)selection, MCSt impacts

Includes further updates/details on e.g. SL resource (re)selection with SL LBT impact, etc.

**MAC resource (re)selection with the consideration of intra-UE LBT impact**

* Option1: Wait for more RAN1 progress (to handle inter-UE LBT impact) (P2:5229)
* Option2: Adopot option 1 of RAN1 agreement
	+ N is (pre)configured (P2:4793)
	+ N is based on UE selection (P2:6525)
* Option3: Up to UE implementation (P1:5090)

**MCSt (questions on the LS: 4618)**

* Question 1
	+ Feasible (P1:6233)
	+ Not feasible
		- Due to need of HARQ feedback (4806)
* Question 2
	+ Feasible (P4:6256)
	+ Not feasible (P1:5229)
		- Existing resource (re)selection triggering is per TB independently
		- Unclear how to derive a single set of parameters for multiple TBs
* Question 3
	+ Feasible (P5:5090/5177/P5:6256)
		- Based on what?
	+ Not feasible
* Preferred option from RAN2 point of view
	+ Option 1 (P1:4806)
	+ Option 2 (P4:4793/P1:5284)
	+ Option 3 (P3:6525)

**MCSt (FFS whether SL LBT failure triggers resource (re)selection or not)**

* Yes (P3:4806/P4-5:5686)
* No (P3:4793)

R2-2304667 Discussion on Resource (Re)selection OPPO discussion Rel-18 NR\_SL\_enh2

R2-2306233 Discussion on R1 LS on MCSt OPPO discussion Rel-18 NR\_SL\_enh2

R2-2304683 Consideration on MCSt impact NEC discussion NR\_SL\_enh2

R2-2304684 SL resource (re)selection NEC discussion NR\_SL\_enh2

R2-2304793 Discussion on SL resource (re)selection and MCSt impact LG Electronics Inc. discussion NR\_SL\_enh2

R2-2304806 Consideration on SL resource (re)selection and MCSt Huawei, HiSilicon discussion Rel-18 NR\_SL\_enh2

R2-2304976 Discussion on SL resource (re)selection for SL-U ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_enh2

R2-2305028 Resource selection and reselection for SL-U Ericsson discussion Rel-18 NR\_SL\_enh2

R2-2305090 Discussion on resource (re)selection and MCSt in SL-U Apple discussion Rel-18 NR\_SL\_enh2

R2-2305175 Mode 2 Resource Selection Considering LBT Impacts InterDigital discussion Rel-18 NR\_SL\_enh2

R2-2305176 Discussion on RAN1 LS on MCSt InterDigital discussion Rel-18 NR\_SL\_enh2

R2-2305177 Draft Response LS on MCSt resource (re)selection InterDigital LS out Rel-18 NR\_SL\_enh2-Core To:RAN1

R2-2305229 Discussion on resource allocation for SL-U Xiaomi discussion

R2-2305284 Discussion on MCSt CATT,GOHIGH discussion Rel-18 NR\_SL\_enh2

R2-2305686 Discussion on resource (re)selection for NR SL-U Lenovo discussion Rel-18

R2-2305923 On MCSt impacts on the resource selection procedure Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_SL\_enh2

R2-2306256 Discussion on Multi-Consecutive Slots transmission vivo discussion

R2-2306525 SL resource (re)selection Samsung discussion

### 7.15.4 SL-U: Others

Includes further updates/details on e.g. leftovers on SL CAPC, SL DRX and SL CG, etc.

**Consideration of default priority in best-matched rule?**

* Yes (P1:4807/P1:4977/P1:5091/P3:5687)
	+ Default priority 1 is mapped to SL CAPC 1?
* No (P2:4757)

**Confirm the WA#1**

* Working assumption: In case of multiple PSFCH occasion per PSCCH/PSSCH, if HARQ A/N is successfully transmitted in one PSFCH occasion, Rx UE starts the sl-drx-HARQ-RTT-Timer for the corresponding Sidelink process in the first slot after the end of the corresponding PSFCH transmission carrying the SL HARQ feedback.
* Working assumption: In case of multiple PSFCH occasion per PSCCH/PSSCH, if LBT failure happens in all PSFCH occasions, Rx UE starts the sl-drx-HARQ-RTT-Timer for the corresponding Sidelink process in the first slot after the end of the last PSFCH occasion for the SL HARQ feedback.
	+ Yes (P3:4757/P1:4794/P3:4807/P9:5230)
	+ Yes only for UC (P1:6384)
		- For GC, Rx UEs start the sl-drx-HARQ-RTT-Timer for the corresponding Sidelink process in the first slot following the last PSFCH occasion for SL HARQ feedback (P3: 6384)

**Confirm the WA#2**

* Working assumption: Not define shared COT as SL DRX active time.
	+ Yes (P4:4757/P8:4977/P2:5091/P8:5230)
	+ No, wait for RAN1 conclusion on additional ID (P2:4794/P4:4807/P9:5687)

**SL CAPC when CAPC of the default SLRB is not configured (P1:4757)**

* Option1: up to UE implementation to decide it based on the CAPC of the associated QoS flows
* Option2: select the lowest CAPC priority level (highest value) among the associated QoS flows (P2:4807, P4:5687)

R2-2304757 Discussion on the other remaining issues in SL-U OPPO discussion Rel-18 NR\_SL\_enh2

R2-2304794 Discussion on SL-U others LG Electronics Inc. discussion NR\_SL\_enh2

R2-2304807 Impact on SL CAPC and SL DRX Huawei, HiSilicon discussion Rel-18 NR\_SL\_enh2

R2-2304977 Discussion on SL CAPC and SL CG ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_enh2

R2-2305030 Other aspects on SL-U Ericsson discussion Rel-18 NR\_SL\_enh2

R2-2305091 Discussion on remaining issues on CAPC and SL DRX in SL-U Apple discussion Rel-18 NR\_SL\_enh2

R2-2305230 Discussion on other aspects for SL-U Xiaomi discussion

R2-2305285 Consideration on CAPC and LBT impacts CATT discussion Rel-18 NR\_SL\_enh2

R2-2305687 Other remaining issue for NR SL-U Lenovo discussion Rel-18

R2-2305947 Discussion on SL-U open aspects Intel Corporation discussion Rel-18 NR\_SL\_enh2 R2-2302873

R2-2306384 Discussion on SL DRX in SL-U ITL discussion Rel-18

R2-2306523 Remaining issues Samsung discussion

### 7.15.5 SL-FR2

Includes e.g. identification of RAN2 scopes and proposals, further updates/details from RAN2#121bis-e discussion, updates/details of related RAN1 discussion, etc.

R2-2304758 Discussion on SL-FR2 impact OPPO discussion Rel-18 NR\_SL\_enh2

R2-2304685 Sidelink Operation on FR2 NEC discussion NR\_SL\_enh2

R2-2304718 Discussion on SL-FR2 aspects in RAN2 Nokia, Nokia Shanghai Bell discussion Rel-18

R2-2304765 Discussion on FR2 vivo discussion Rel-17

R2-2304796 Discussion on RAN2 aspects of SL-FR2 LG Electronics Inc. discussion NR\_SL\_enh2

R2-2304847 Discussion on SL-FR2 Huawei, HiSilicon discussion Rel-18 NR\_SL\_enh2

R2-2304978 Discussion on sidelink FR2 ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_enh2

R2-2305029 SL in FR2 Ericsson discussion Rel-18 NR\_SL\_enh2

R2-2305092 Discussion on RAN2 aspects of SL FR2 Apple discussion Rel-18 NR\_SL\_enh2

R2-2305220 Discussion on SL-FR2 impact to RAN2 Xiaomi discussion

R2-2305236 Discussion on sidelink operation on FR2 licensed spectrum China Telecom discussion Rel-18 NR\_SL\_enh2

R2-2305286 Discussion on Sidelink Operation on FR2 CATT discussion Rel-18 NR\_SL\_enh2

R2-2305688 Discussion on FR2 operation for NR SL Lenovo discussion Rel-18

R2-2306056 Discuss on SL-FR2 Qualcomm India Pvt Ltd discussion

R2-2306472 RAN2 Aspects of NR Sidelink Operation in FR2 Fraunhofer IIS, Fraunhofer HHI discussion Rel-18 R2-2303483

R2-2306522 SL-FR2 Samsung discussion

### 7.15.6 SL-CA

Includes further updates/details on SL CA. Note this work assumes a very high degree of reuse from LTE V2X.

**FFS on backward compatibility issue in SL CA (for GC/BC)**

* No issue with service-to-carrier mapping (P3:4668)
* Need TX profile to handle the compatibility issue (P2:5093)

**FFS on how to determine per carrier CBR**

* Same principle as LTE V2X CA (P4:4668)
* New definition of carrier level CBR (P2:4848/P6:5093)

**FFS on TX carrier (re)selection triggers, LCP impact, and CBR-based carrier reselection/keeping for UC**

* Same as GC/BC (P12:4668/P1:4848/P8-10:4979/P5:5031/P5:5093/P1:5948)

**FFS on LCID to identify duplicated SL LCHs for UC**

* Same as GC/BC (P13:4668/P9:4832/P4:4848/P8:5093)
* Configurable by PC5-RRC (P11:4979)

**Criterion for packet duplication**

* SLRB configures PDCP duplication or not (P5:4979)
	+ SL PDCP duplication configuration via PC5-RRC for UC (P5:4832)
* Threshold of reliability from QoS profile (P3:4686)

**SL CA before unicast link is established (P16-17:4832)**

* Yes or No?

**PDCP duplication/SL CA for SL SRB (P6-7:4832)**

* Yes or No?

**DTX based SL RLF in SL CA**

* The counting is calculated per carrier or across all carriers (P15:4668/P2:4686/P11:5031/P5:5231)
* Enhancement of DTX based SL RLF with the consideration of per carrier and/or across all carriers in SL CA

R2-2304668 Discussion on Carrier Aggregation OPPO discussion Rel-18 NR\_SL\_enh2

R2-2304686 Sidelink CA operation NEC discussion NR\_SL\_enh2

R2-2304798 Discussion on remaining issues of SL-CA enhancements LG Electronics Inc. discussion NR\_SL\_enh2

R2-2304832 Further discussion on the support of CA for NR Sidelink Mode-2 vivo discussion Rel-18

R2-2304848 Discussion on SL CA operation Huawei, HiSilicon discussion Rel-18 NR\_SL\_enh2

R2-2304979 Discussion on sidelink CA ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_enh2

R2-2305031 Aspects of SL CA Ericsson discussion Rel-18 NR\_SL\_enh2

R2-2305093 Discussion on Sidelink CA Apple discussion Rel-18 NR\_SL\_enh2

R2-2305178 Carrier Aggregation for NR SL InterDigital discussion Rel-18 NR\_SL\_enh2

R2-2305231 Discussion on carrier aggregation for NR sidelink Xiaomi discussion

R2-2305287 Discussion on NR sidelink CA CATT discussion Rel-18 NR\_SL\_enh2

R2-2305358 Discussion on carrier selection for SL CA NEC discussion Rel-18 NR\_SL\_enh2

R2-2305689 Discussion on multi-carrier operation for NR SL Lenovo discussion Rel-18

R2-2305948 Discussion on NR SL Carrier Aggregation Intel Corporation discussion Rel-18 NR\_SL\_enh2

R2-2306057 Discussion on SL CA Qualcomm India Pvt Ltd discussion

R2-2306315 On support of Sidelink CA in NR Nokia, Nokia Shanghai Bell discussion

R2-2306471 RAN2 Aspects of NR Sidelink Carrier Aggregation Fraunhofer IIS, Fraunhofer HHI discussion Rel-18 R2-2303482

R2-2306518 SL CA for unicast Samsung discussion

### 7.15.7 SL-Co-Ex

Any required RAN2 discussion or spec impact to complete SL Co-Ex.

**No stage-2 RAN2 work (except capturing RAN/RAN1 agreements in MAC if needed) (4669)**

**List of raised RAN2 works**

* RAN1 FFS on frequency domain resource restriction (4849)
	+ RAN1 will make decision and RAN2 just captures RAN1 conclusion?
* UE behaviour on subsequent NR slot when the first NR slot overlapping with LTE subframe is dropped (4980)
	+ RAN1 scope? For same TB case, R1 agreed to rely on UE implementation. FFS for different TB case.
* Random resource selection enhancement in case of Co-Ex (5032)
	+ Not included in WID
* Further optimization based on whether SL HARQ feedback is enabled or not for the PSSCH (5094)
	+ RAN1 scope? Note it can be based on resource pool configuration as in legacy
* RAN2 impacts from RAN1 conclusion of power limitation for the second slot power (5825)
	+ RAN1 decided it’s up to UE implementation
* Further rule for the 2nd slot selection (5825)
	+ RAN1/RAN scope? Capturing RP conclusion is sufficient.
* [AT122][507][V2X/SL] Any essential stage-2 RAN2 work for SL Co-Ex (OPPO)

 **Scope:** Discuss whether there is any essential stage-2 RAN2 work for SL Co-Ex completion (based on the individual proposals in contributions).

 **Intended outcome:** Discussion summary in R2-2306712

**Deadline:** To be handled in comeback session in 5/25 (KST)

R2-2304669 Discussion on LTE-V2x and NR-V2x Co-Existence OPPO discussion Rel-18 NR\_SL\_enh2

R2-2304830 Discussion on RAN2 impact on LTE sidelink and NR sidelink co-existence vivo discussion Rel-18

R2-2304849 Support of co-channel coexitence for LTE SL and NR SL Huawei, HiSilicon discussion Rel-18 NR\_SL\_enh2

R2-2304980 Discussion on Co-channel coexistence for LTE sidelink and NR sidelink ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_enh2

R2-2305032 Discussion and LTE and NR coexistence Ericsson discussion Rel-18 NR\_SL\_enh2

R2-2305094 Discussion on resource selection in co-channel existence Apple discussion Rel-18 NR\_SL\_enh2

R2-2305288 Discussion on Coexistence for LTE sidelink and NR sidelink CATT discussion Rel-18 NR\_SL\_enh2

R2-2305690 Discussion on co-channel coexistence for LTE and NR SL Lenovo discussion Rel-18

R2-2305825 Identified issues for Sidelink Coexistence Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_SL\_enh2

R2-2306058 Discussion on SL Co-existence Qualcomm India Pvt Ltd discussion

R2-2306521 SL Co-Ex Samsung discussion