**3GPP TSG-RAN WG4 Meeting #111 R4-2408933**

**Fukuoka City, Fukuoka , Japan, 20th – 24th May, 2024**

**Agenda item:** 7.20.5

**Source:** Moderator (LG Electronics)

**Title:** Topic summary for [111][122] NR\_SL\_enh2\_UERF\_R18

**Document for:** Information

# Introduction

*This topic summary is for Rel-18 NR Sidelink Evolution in Agenda 7.20.1, and 7.20.1.1 as follows.*

* *Topic#1: SL-U UE RF requirements maintenance*

# Topic #1: SL-U UE RF requirements maintenance

*Main technical topic overview. The structure can be done based on sub-agenda basis.*

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2408827 | OPPO | This CR is to capture the endorsed draft CRs in the RAN4#110bis meeting.  To provide a formal CR as a formal version for TR 38.786. |
| R4-2408828 | OPPO | This CR is to capture the agreed draftCRs in RAN4#110bis meeting.  To provide a formal version of TS 38.101-1. |
| R4-2408835 | OPPO | Reserved : Big CR to TR 38.786 UE NR sidelink evolution after RAN4#111 |
| R4-2408836 | OPPO | Reserved : Big CR to TS38.101-1 for Sidelink enhancement after RAN4#111 |
| R4-2407098 | Apple | Observation 1a: There are two unlicensed bands, 5GHz and 6GHz, supported by the 3GPP specifications.  Observation 1b: While the 5GHz band is represented by band n46 with 4 NS flags, the 6GHz band is represented by bands n96 and n102, which have 14 different flags.  Observation 2a: The 6GHz band has quite diverse regulations and, depending on the country, may have different operational modes.  Observation 2b: The 6GHz band regulations are not yet finlised in some countries.  Observation 3a: The LPI mode of the 6GHz band is restricted for the use case with the indoor access point, which must be connected to a power cable.  Observation 3b: The SL-U feature can be used only with the VLP mode, which is intentionally limited by regulations to the low power client-to-client communication to enable both indoor and outdoor usage.  Observation 3c: The work scope for the SL-U feature can be limited only to the VLP NS flags.  Proposal 1a: Complete the Rel-18 SL-U WI focusing on the core functionality (or a limited set of NS flags from the 5GHz band).  Proposal 1b: SL-U support for the 6GHz band can be done in the follow-up work potentially limiting the scope of the work only to the VLP NS flags.  Proposal 2: For a case with transmissions over a contiguous set of blocks, the SL-U A-MPR values should be same as for NR-U (otherwise the 3GPP needs to understand the reason why they are different). |
| R4-2407557 | CATT, CICTCI | CR : Update 5.3.3 to add the support for SL-U RB set and intra-cell guard band. |
| R4-2408732 | LG Electronics | Draft CR : TS38.101-1  - A-MPR for NS\_28 is specified based on the RAN4 agreement.  - for NS\_31 A-MPR, NOTE3 and NOTE4 in Table 6.2E.3F.2-2, NOTE2 and NOTE3 in Table 6.2E.3F.2-3 are not necessary. |
| R4-2408734 | LG Electronics | Draft CR: TS38.101-1  - Based on the TR 38.786, A-MPRs for NS\_29, NS\_30, NS\_54, NS\_59, NS\_63, NS\_64, NS\_65, NS\_66, NS\_67, NS\_68, and NS\_69 are specified.  - NS\_71 A-MPR is specified with same NS\_67 A-MPR as NR-U. |
| R4-2408829 | OPPO | Draft CR: TR38.786  - Add the simulation result for NS\_29 and NS\_54 |
| R4-2408830 | OPPO | Proposal: It is proposed to capture the simulation results into TR 38.786.  - PSSCH and PSCCH for SL-U A-MPR with NS\_29 and NS\_54. |
| R4-2409051 | LG Electronics | Draft CR: TR38.786  - Adds the missing NS\_71 to sections describing the NS\_67 as the requirements for these two NS are the same. |

## Open issues summary

*Before Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

### Sub-topic 1-1 : Rel-18 SL-U UE RF maintenance

*Sub-topic description*

*Open issues and candidate options before meeting:*

**Issue 1-1: SL UE RF maintenance work in Rel-18**

* Proposals
  + Proposal 1a: Complete the Rel-18 SL-U WI focusing on the core functionality (or a limited set of NS flags from the 5GHz band).
  + Proposal 1b: SL-U support for the 6GHz band can be done in the follow-up work potentially limiting the scope of the work only to the VLP NS flags.
  + Proposal 2: For a case with transmissions over a contiguous set of blocks, the SL-U A-MPR values should be same as for NR-U (otherwise the 3GPP needs to understand the reason why they are different).
* Recommended WF
  + Further discuss on the proposal 1a and 1b
  + Moderator’s view
    - For proposal 2, RAN4 discussed it in the past RAN4 meetings and agreed to specify SL-U A-MPR requirement considering Outer RB set and Inner RB set. And RAN4 already specified different A-MPR values from those of NR-U in higher modulation order based on the simulation results. It should be respected.

LGE: We prefer 1b. We will see the regulation further. We can provide the revised CR.

Apple: We can proceed with 1b.

OPPO: is it influencing the finished NS values? It is the last meeting. For the following work, what is the plan?

Meta: RAN4 have agreement for scope and not do VLP mode. VLP can be supported in Rel-19 and we can update the WID scope.

LGE: to OPPO, the intention is to align the value already in the spec. We can discuss whether we need to revise the existing 3NS. Our proposal is not to continue the Rel-18 work. The regulation changes sometimes. If it changes, it is business as usual that we need discuss them.

Agreement:

* SL-U support for the 6GHz band can be completed by limiting the scope of the work only to the VLP NS flags.

**Issue 1-2: draft CR to TR38.786**

* Proposals
  + R4-2409051 (LGE)
  + R4-2408829 (OPPO)
* Recommended WF
  + R4-2409051 and R4-2408829 can be endorsed.

**Issue 1-5: CR/draft CR to TS38.101-1**

* Proposals
  + R4-2407557 (CATT)
  + R4-2408732 (LGE)
  + R4-2408734 (LGE)
* Recommended WF
  + Based on comment on-line session, endorse all CR/draftCR to complete all SL-U maintenance work in this meeting.