**3GPP TSG-RAN WG4 Meeting # 100-e R4-2115373**

**Electronic Meeting, August 16-27, 2021**

**Agenda item:** 9.24

**Source:** OPPO

**Title:** WF on R17 NR SL Relay RRM

**Document for:** Approval

# Topic #1: Work Plan for NR\_SL\_relay\_RRM

**Agreement:** RRM work plan for Rel-17 NR SL Relay in R4-2113289 is approved.

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| 1. 3GPP RAN4 #100e meeting (August, 2021, 0.5TU, Core part)
* Discussions on:
	+ Work plan
	+ Potential impact on RRM core requirements, e.g., relay discovery and (re)selection
* Agreement on:
	+ Consensus on the work plan
	+ Identification of RRM core requirements
1. 3GPP RAN4 #101e meeting (November, 2021, 0.5TU, Core part)
* Discussions on:
	+ Technical aspects of RRM core requirements for relay discovery and (re)selection and others if any
* Agreement on:
	+ RRM requirements for relay discovery and (re)selection
	+ Work split on draft CR responsible companies
1. 3GPP RAN4 #102(e) meeting (February, 2022, 0.5TU, Core part)
* Discussions on:
	+ Remaining issues on RRM requirement for relay discovery and (re)selection
	+ Draft CRs
	+ List of Test Cases
* Agreement on:
	+ Finalization on RRM core requirements
	+ **Big CR**
	+ List of Test Cases
1. 3GPP RAN4 #102bis meeting (April, 2022, 0.25TU, Performance part)
* Discussions on:
	+ Test cases on RRM requirements for relay discovery and (re)selection
	+ Potential RRM performance requirements
* Agreement on:
	+ Test cases on RRM requirements for relay discovery and (re)selection
	+ Work split for draft CR for test cases
1. 3GPP RAN4 #103 meeting (May, 2022, 0.25TU, Performance part)
* Discussions on:
	+ Remaining issues on test cases
	+ Draft CRs for test cases
* Agreement on:
	+ Conclusion on the remaining test cases
	+ Draft CRs and Draft big CR
1. 3GPP RAN4 #104 meeting (August, 2022, 0.25TU, Performance part)
* Discussions on:
	+ Remaining issues on test cases
	+ Draft CRs
* Agreement on:
	+ Finalization on RRM performance requirements
	+ **Big CR**
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# Topic #2: RRM scope of NR\_SL\_relay\_RRM

*Note: The content marked with green highlight is what was agreed in 1st round discussion.*

## Sub-topic#1: Scope of NR SL relay RRM

*Agreements:*

* *RAN4 specifies NR SL relay discovery and (re)selection requirements, and re-use LTE relay discovery and (re)selection as baseline*
* *Whether to specify cell reselection requirements for NR sidelink discovery on non-serving carrier needs more RAN2’s input.*
* *Other RRM impact (if identified) should not be precluded, given the early phase in the WI and topic is being discussed in other WG.*
* *Multi-hop/UE-to-UE sidelink relay is not in the scope of this WI.*

*Companies’ views on RRM requirement category would be captured in the WF* ***for information****:*

|  |  |
| --- | --- |
| **RRM requirement category** | **Whether or not applicable to Rel-17 NR SL Relay RRM** |
| **OPPO** | **QC** | **Huawei** | **Ericsson** |  |  |  |  |
| UE transmit timing | NO | No | No | **FFS** |  |  |  |  |
| Initiation / Cease of SLSS transmission | NO | No | No | No |  |  |  |  |
| L1-RSRP measurement | NO | No | No |  |  |  |  |  |
| Congestion control measurements | NO | No | No |  |  |  |  |  |
| Scheduling available requirements | NO | No | No |  |  |  |  |  |
| Interruptions to serving cells at discovery configuration | **FFS** | **FFS** | **FFS** | **FFS** |  |  |  |  |
| Interruptions to serving cells during discovery | **FFS** | **FFS** | **FFS** | **FFS** |  |  |  |  |
| Cell reselection for discovery on non-serving frequency | **FFS** | **FFS** | **FFS** | **FFS** |  |  |  |  |
| Selection / reselection of synchronization reference | NO | NO | No |  |  |  |  |  |
| Selection / reselection of relay UE | **YES** | YES | Yes | Yes |  |  |  |  |
| Intra-frequency measurement accuracy requirements | **YES** | YES | Yes |  |  |  |  |  |

## Sub-topic#2: How to specify selection/reselection requirements

### Issue 2-4: RSRP measurements for NR sidelink relay UE

*Agreements:*

* *The definition of RSRP used for NR SL relay UE needs RAN2’s decision.*

*Discuss in next meeting based on further input from RAN2:*

* *Option 1: L1 SL-RSRP or PSBCH-RSRP could be considered.*
* *Option 2: wait for RAN2’s input on RSRP.*

### Issue 2-5: Measurement accuracy requirement

*Agreements:*

* *Measurement accuracy requirement is depending on the definition of RSRP in issue 2-4.*

### Issue 2-6: Measurement and evaluation delay requirement

*Agreements:*

* *The measurement and evaluation requirements for ProSe relay UE in LTE can be reused as baseline.*
	+ *FFS the definition of discovery period*
	+ *FFS the number of samples which depends on accuracy requirement.*

### Issue 2-7: Whether to use DRX for delay requirements of relay discovery and (re)selection.

*Tentative Agreements:*

* *Option 1: DRX is not precluded from R17 NR SL relay WID. R17 NR SL relay WID can follow or reuse both R16 SL and R17 SL’s agreements as baseline.*
* *Option 2: The relay requirements should be defined without assuming DRX. R17 NR SL relay WID is just based on R16 SL procedure.*
* *Option 3: FFS. Depend on RAN2’s decision whether to consider DRX.*

### Issue 2-8: Synchronization assumption

*FFS: Remote UE is only allowed to select candidate relay UE assuming the same synchronization source.*