**3GPP TSG-RAN4 Meeting #97-eR4-2017265**

**, 2-13 Nov., 2020**

**Agenda item:** **12.4.1**

**Source: Apple**

**Title: Work plan for R17 Further RRM enhancement for NR and MR-DC WI**

**Document for:** **Approval**

# Introduction

In last RAN plenary #89e meeting, the new WID of Further RRM enhancement for NR and MR-DC [1] has been approved. The scope of this WI is:

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| 1. SRS antenna port switching [RAN4]
	* Specify RRM requirement for SRS antenna port switching, e.g.
		+ Interruption requirement
		+ Potential impact on other RRM requirements
2. HO with PSCell [RAN4]
	* Determine the scenarios for HO with PSCell for which RRM requirements are to be specified
		+ from NR SA to EN-DC
		+ from EN-DC to EN-DC
		+ from NE-DC to NE-DC
		+ from NR-DC to NR-DC
	* Study the UE behavior for HO with PSCell
		+ Existing requirements for HO and PSCell addition as baseline
		+ Timeline and interaction between HO and PSCell addition
	* Specify RRM requirements for HO with PSCell based on agreed UE behavior
3. PUCCH SCell activation/deactivation [RAN4]
	* Specify SCell Activation Delay Requirement for Deactivated PUCCH SCell (including valid TA and invalid TA)
	* Specify SCell Activation Delay Requirement for Deactivated PUCCH SCell with Multiple SCells (including valid TA and invalid TA)
	* Specify SCell Deactivation Delay Requirement for Activated PUCCH SCell
	* Specify SCell Deactivation Delay Requirement for Activated PUCCH SCell with Multiple SCells.
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Based on the time budget in RP-202053, the following work plan is proposed.

# Work plan for R17 NR RRM further enhancement WI

* 1. **3GPP RAN4 #97e meeting (November, 2020)**
		+ Discuss to achieve consensus on the work plan
	2. **3GPP RAN4 #98e meeting (February, 2021, 1.5TU, Core part)**
		+ SRS antenna port switching [RAN4]
	+ Initial discussion on Interruption requirement
	+ Initial discussion on the impact(s) to other RRM requirements
		- HO with PSCell [RAN4]
	+ Discussion and conclude on scenarios for HO with PSCell
	+ Initial discussion on UE behavior for HO with PSCell
		- PUCCH SCell activation/deactivation [RAN4]
	+ Initial discussion on SCell Activation/Deactivation Delay Requirement for single PUCCH SCell (including valid TA and invalid TA)
	1. **3GPP RAN4 #98bis-e meeting (April, 2021, 1.5TU, Core part)**
		+ SRS antenna port switching [RAN4]
	+ Discussion on Interruption and other related RRM requirement
	+ Conclude on the impact(s) to other RRM requirements
		- HO with PSCell [RAN4]
	+ Discussion on UE behavior for HO with PSCell in all possible scenarios
		- PUCCH SCell activation/deactivation [RAN4]
	+ Discussion on SCell Activation/Deactivation Delay Requirement for single PUCCH SCell (including valid TA and invalid TA)
	+ Initial discussion on SCell Activation/Deactivation Delay Requirement for multiple PUCCH SCells (including valid TA and invalid TA)
	1. **3GPP RAN4 #99-e meeting (May, 2021, 1.5TU, Core part)**
		+ SRS antenna port switching [RAN4]
	+ Further discussion on Interruption and other related RRM requirement
		- Initial draft CR(s) on TS38.133 is expected
		- Sending LS to other working group(s) if needed
		- HO with PSCell [RAN4]
	+ Further discussion on requirements for HO with PSCell in all possible scenarios
		- Initial draft CR(s) on TS38.133 is expected
		- Sending LS to other working group(s) if needed
		- PUCCH SCell activation/deactivation [RAN4]
	+ Discussion on SCell Activation/Deactivation Delay Requirement for single PUCCH SCell (including valid TA and invalid TA)
		- Initial draft CR(s) on TS38.133 is expected
	+ Discussion on SCell Activation/Deactivation Delay Requirement for multiple PUCCH SCells (including valid TA and invalid TA)
		- Initial draft CR(s) on TS38.133 is expected
	+ Sending LS to other working group(s) if needed
	1. **3GPP RAN4 #100 meeting (August, 2021, 1.5TU, Core part)**
		+ SRS antenna port switching [RAN4]
	+ Finalization on Interruption and other related RRM requirement
		- Agree CR(s) on TS38.133
		- HO with PSCell [RAN4]
	+ Finalization on requirements for HO with PSCell in all possible scenarios
		- Agree CR(s) on TS38.133
		- PUCCH SCell activation/deactivation [RAN4]
	+ Finalization on SCell Activation/Deactivation Delay Requirement for single and multiple PUCCH SCell(s) (including valid TA and invalid TA)
		- Agree CR(s) on TS38.133
	1. **Performance part would be planned in the future.**

# References

[1] RP-202053, WID of Further RRM enhancement for NR and MR-DC, Apple, RANP #89e meeting