**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. |

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