

3GPP TSG RAN meeting #84

Newport Beach, California, June 3-7, 2019

Agenda item: 9.1

RP-191224

Motivation for new WID proposal on support of SON and MDT for NR

CMCC



Benefits of SON/MDT for NR

- First SON features were specified since Rel-8/Rel-9 and more features are further optimized/introduced in later releases, including
 - ANR
 - PCI selection
 - Coverage and Capacity optimization (CCO)
 - Mobility Load balancing optimization (MLB)
 - Mobility Robustness optimization (MRO)
 - RACH Optimisation
 - Energy saving
 - Minimization of Drive Tests (MDT)
- Many of the standardized SON/MDT features are implemented in LTE commercial networks and have provided means for a cost-efficient handing of the networks.
- The benefits of SON/MDT are still valid in NR and even more attractive. Nevertheless, only ANR has been specified in Rel-15 for NR.



Outcome of RAN-centric DCU SI

- The study item “Study on RAN-centric Data Collection and Utilization for LTE and NR” studied use cases of SON and MDT, and identified potential solutions for these use cases.
- The studies use LTE solutions as baseline and take the NR new architectures and features into account, e.g., MR-DC, CU-DU split architecture, beam, etc. The feasibility check of L1/L2 measurements specified in SA5 TS 28.552 was also accomplished.
- It is recommended in the conclusions of TR 37.816 to support SON and MDT features for NR in the potential Rel-16 WI



Objectives of the WID

- Support of SON features, including MRO, MLB, RACH optimization, CCO, PCI selection and energy saving, applicable to intra-system and inter-system scenarios [RAN3, RAN2]
 - Specification of the UE reporting necessary to enhance the network configuration [RAN2].
 - Specification of the inter-node information exchange, including possible enhancements to S1/NG, X2/Xn, and F1/E1 interfaces [RAN3]
- Support of MDT features for identified use cases, including coverage optimization, QoS verification via MDT, indoor MDT improvement and sensor data collection [RAN2, RAN3]
 - Specification of MDT initialization procedure [RAN3]
 - Specification of Logged MDT for both RRC_IDLE and RRC_INACTIVE UEs [RAN2]
 - Specification of Immediate MDT for RRC_CONNECTED UEs [RAN2, RAN3]
 - Specification of accessibility measurements [RAN2]
 - Specification of MDT for standalone split and non-split RAN architecture and DC scenario [RAN2, RAN3]
- Specification of L2 measurements [RAN2, RAN3]

