

3GPP TSG RAN Rel-19 workshop

Taipei, June 15 - 16, 2023

Agenda item: 5. Specific RAN1/2/3-led Rel-19 topics

RWS-230143

# Continual SON/MDT enhancements

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# SON/MDT Background

- ◆ Self-Organising Networks (SON), which encompasses solutions for network self-configuration and self-optimisation, was introduced in LTE to support deployment of the system and performance optimization. SON for NR was first introduced in Rel-16 and further enhanced in Rel-17 and Rel-18.
- ◆ During Rel-18 SON/MDT WI, the main objective is focused on MRO for the following cases:
  - MR-DC SCG failure scenario
  - Inter-system handover voice fallback
- ◆ Other Rel-16/17 features have also been considered in Rel-18 SON/MDT Enh WID, which are listed below:
  - MR-DC CPAC
  - Successful Pscell change report
  - Successful Handover report
  - NPN
  - RACH report
  - fast MCG recovery
  - NR-U (MRO and UL MLB)
- ◆ Support of signaling based MDT when it is configured in E-UTRAN but with the following cases:
  - UE reselects to NR while logged measurements are collected
  - UE reselects to NR after logged measurements are collected and before uploading the logged MDT report

# SON/MDT Motivation/Justification for Rel-19

- ◆ From the principles that we have been taking, we need to take real commercial interests and the stability and technological maturity into account for some Rel-16/Rel-17 features.
- ◆ Rel-18 new features are also considered in Rel-19 SON/MDT enhancements, a short study of use cases will be needed.

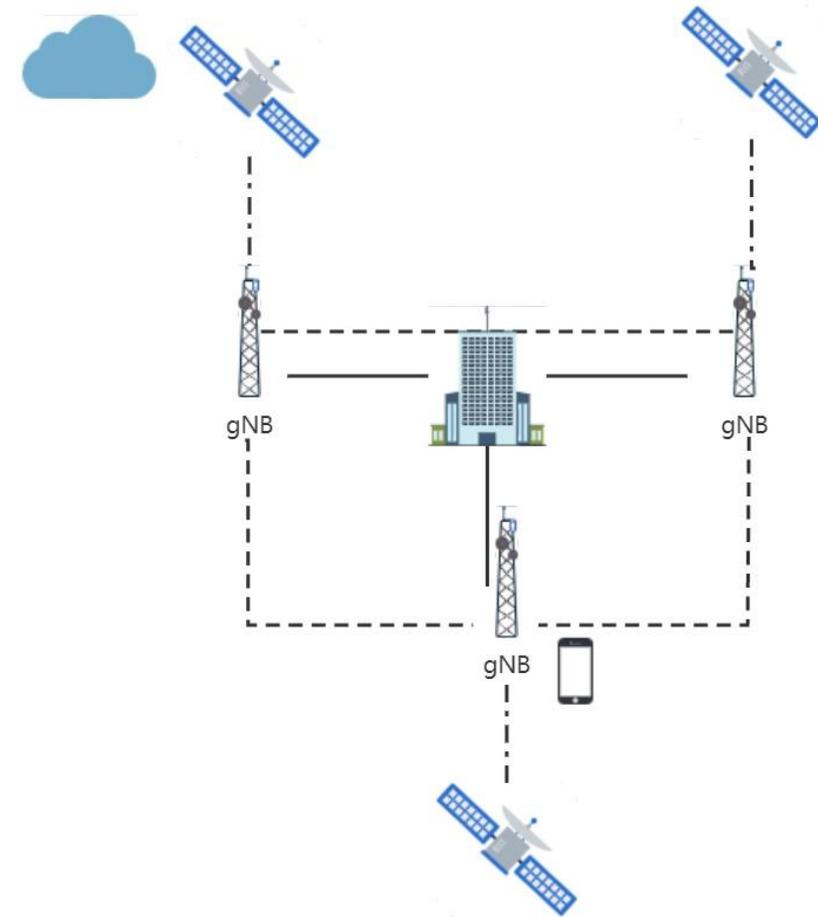


Figure 1: SON/MDT for mobility optimization

# SON/MDT Objectives

- ◆ For SON, specification of the UE reporting necessary to enhance the network configuration [RAN2].
- ◆ For SON, specification of the inter-node information exchange, including possible enhancements to S1/NG, X2/Xn, and F1/E1 interfaces [RAN3]
- ◆ For MDT, enhancement of logged and immediate MDT [RAN2,RAN3]
- ◆ For MDT, enhancement of reporting e.g. RLF and accessibility measurements, SDT reporting [RAN2, RAN3]
- ◆ To cover the above aspects from the following use cases for SON/MDT enhancements:
  - IRAT HO voice fallback
  - Rel-16 leftover features :
    - NR V2X,IAB, etc
  - Rel-17 leftover features:
    - MBS, NR sidelink Relay, SDT, NTN
  - Rel-18 new features:
    - LTM, Further enhancement on SL relay, NES, XR, etc
  - other purposes:
    - Predictive QoS input by 5GAA

# Summary

- ◆ SON/MDT functions have been specified and enhanced in every release from Rel-16.
- ◆ There are still a lot of aspects to be enhanced for the following use cases:
  - IRAT HO voice fallback
  - Rel-16 leftover features (NR V2X,IAB, etc)
  - Rel-17 leftover features (MBS, NR sidelink Relay, SDT, NTN)
  - Rel-18 new features (LTM, Further enhancement on SL relay)
  - other purposes (Predictive QoS input by 5GAA)
- ◆ It is proposed to introduce corresponding SON/MDT enhancements in Rel-19.

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