3GPP TSG-RAN WG2 Meeting #111 electronic R2-2005736

Online, August 17th - 28th, 2020

Agenda Item: 8.6

Source: Session chair (CMCC)

Title: Report from SON/MDT session

Document for: Approval

Recording of voice or video at meetings is not used in 3GPP. This applies also to this e-Meeting. At this e-Meeting, no specific actions are taken to prevent the recording of web conferences. Companies that have concerns related to recordings, if any, may express those by email in the main meeting organizational thread [AT111e][000]

**Organizational:**

1. LSs – contact companies should flag LSs that need presenting. Otherwise we will directly note them
2. Running CRs will be endorsed to be used as baseline and moved to email discussion. Further agreements will be captured on that baseline CR.
3. Only Email discussions and summary discussions will be treated during e-meetings (indicated clearly in the meeting notes)
4. All organization emails and notes will be shared over the following email discussion throughout the two meeting weeks:

* [AT111][800][SON/MDT] Organizational Hu

Scope:

* + - Share plans for the meetings and list of ongoing email discussions for the sessions related to SON/MDT
    - Share meetings notes and agreements for review and endorsement

Only when all the issues in 6.10 are treated, 8.13 will be discussed

## 6.10 SON/MDT support for NR

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; Completed June 20; WID: RP-191776; SR RP-200773). Documents in this agenda item will be handled in a break out session

Email max expectation: 4-5 email threads

### 6.10.1 General and stage 2 corrections

Including incoming LSs, TS 37.320 corrections

LSs：

R2-2006515 limitation of Propagation of immediate MDT configuration in case of Xn inter-RAT HO (R3-204115; contact: LGE) RAN3 LS in Rel-16 NR\_SON\_MDT-Core To:SA5 Cc:RAN2

=> Noted without presentation

R2-2006521 LS on propagation of user consent related information during Xn inter-PLMN handover (R3-204378; contact: Nokia) RAN3 LS in Rel-16 NR\_SON\_MDT-Core To:SA3 Cc:RAN2, SA5

=> Noted without presentation

R2-2006535 Reply LS to LS on removal of Management Based MDT Allowed IE for NR (S5-203410; contact: Ericsson) SA5 LS in Rel-16 5GMDT To:RAN3 Cc:RAN2

=> Noted without presentation

R2-2007427 will be treated online and try to agree the changes for srage 2.

R2-2007427 Summary for 6.10.1 General and stage-2 corrections CMCC discussion Rel-16 NR\_SON\_MDT-Core Late

R2-2007671 Corrections in TS 37.320 Ericsson discussion

=> The changes are agreed and will merged to big 37.320 CR (R2-2008281)

R2-2007750 Corrections on MDT stage-2 descriptions Huawei, HiSilicon CR Rel-16 37.320 16.1.0 0087 - F NR\_SON\_MDT-Core

=> Agree the changes of removing the editor notes and will merged to big 37.320 CR (R2-2008281)

R2-2007780 Mislleneous corrections to 37320 ZTE Corporation, Sanechips CR Rel-16 37.320 16.1.0 0088 - F NR\_SON\_MDT-Core

=> change “in the same cell” to “the last failed cell”

=> with this change, all the changes are agreed and will merged to big 37.320 CR.

R2-2007860 Corrections for TS37.320 CATT CR Rel-16 37.320 16.1.0 0089 - F NR\_SON\_MDT-Core

=> The changes are agreed and will merged to big 37.320 CR (R2-2008281)

R2-2007371 Correction on Accessibility measurements Samsung CR Rel-16 37.320 16.1.0 0086 - F NR\_SON\_MDT-Core

R2-2006816 Drafting Rules for subclause 15 on SON Nokia (Rapporteur) CR Rel-16 38.300 16.2.0 0258 - F NR\_SON\_MDT-Core

=> CR is agreed.

R2-2007781 Correction to 38306 on inter-RAT MRO feature ZTE Corporation, Sanechips CR Rel-16 38.306 16.1.0 0385 - F NR\_SON\_MDT-Core

=> will be discussed in main session

R2-2007512 Impact of SNPN on PLMN check for MDT Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_SON\_MDT-Core

=> Not pursued in R16

Depending on the progress the following email discussion may be arranged

* **[AT111-e][801] Stage 2 corrections (CMCC)**

Scope: all the open issues in 6.10.1(issues in R2-2007371)

Intended outcome: Report (R2-2008283)and Agreeable CRs of 37.320 (R2-2008282)

Step one is to achieve agreements on the open issues and the second step is to build an agreeable CR on the agreements

Deadline of Step 1: Friday 21 03:00 UTC

Deadline of Step 2: Thursday 27 04:00 UTC

Status: will start after the first online session

### 6.10.2 TS 38.314 corrections

R2-2007425 will be treated online if time allowed

R2-2007425 Summary for 6.10.2 TS 38.314 corrections CMCC discussion Rel-16 NR\_SON\_MDT-Core Late

Depending on the progress the following email discussion may be arranged

* **[AT111-e][802] 38.314 corrections (CMCC)**

Scope: all the open issues in 6.10.2

Step one is to achieve agreements on the open issues and the second step is to build a agreeable CR on the agreements.

Intended outcome: Agreeable CR of 38.314

Deadline of Step 1: Friday 21 03:00 UTC

Deadline of Step 2: Thursday 27 04:00 UTC

Status: will start as the emeeting starts

R2-2007422 Discussion on introduction of per PLMN L2M CMCC discussion Rel-16 NR\_SON\_MDT-Core

R2-2007423 Introduction of per PLMN L2M CMCC CR Rel-16 38.314 16.0.0 0001 - B NR\_SON\_MDT-Core

R2-2007424 Typo correction for Packet Error Rate CMCC CR Rel-16 38.314 16.0.0 0002 - D NR\_SON\_MDT-Core

R2-2007513 Unclarity on L2 measurements applicability to IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_SON\_MDT-Core

R2-2007514 Delay measurement for IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_SON\_MDT-Core

R2-2007669 On M4 measurement related clarification Ericsson discussion

R2-2007670 On EUTRA related L2 measurements for EN-DC Ericsson discussion

R2-2007751 Discussion on average Uu delay measurement for L2M Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

R2-2007752 Discussion on D1 measurement for L2M Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

### 6.10.3 RRC corrections

R2-2007761 will be treated online

R2-2007761 Summary on 6.10.3 RRC Corrections Huawei discussion Rel-16 NR\_SON\_MDT-Core Late

R2-2008281 Summary of [888] RRC corrections Huawei discussion Rel-16 NR\_SON\_MDT-Core

=> Noted

MDT:

R2-2007226 Specification of target frequencies for measurement logging Samsung Telecommunications discussion Rel-16 NR\_SON\_MDT-Core[11]

=> Noted

R2-2007225 Clarification on MDT regarding area configuration and target frequencies Samsung Telecommunications CR Rel-16 38.331 16.1.0 1805 - F NR\_SON\_MDT-Core

=> Not pursued

R2-2006649 Clarifications for MeasResult2NR and MeasResult2EUTRA Relevant IEs CATT CR Rel-16 38.331 16.1.0 1724 - F NR\_SON\_MDT-Core[6]

=> Not pursued

R2-2007384 Moving IE InterFreqTargetList out of IE AreaConfiguration Samsung discussion NR\_SON\_MDT-Core[15]

=> Not pursued

R2-2007777 Correction to 38331 on logged MDT ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1901 - F NR\_SON\_MDT-Core[32]

=> Not pursued

R2-2008001 Correction to measResultNeighCells for logged measurements Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1963 - F NR\_SON\_MDT-Core

=> The changes are agreed and will be merged into one big MDT CR

R2-2008006 Miscellaneous corrections related to logged measurements Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1968 - F NR\_SON\_MDT-Core[42]

=> For 4/, keep the field names as they are, and update the names in the procedural text

=> Update the names in the procedural text and all the other changes are agreed and merged into the big editorial CR.

SON:

R2-2007657 On the need of SCell indication in the RA-report Ericsson discussion[20]

=> Changes are agreed and merged into big SON CR.

R2-2008002 Correction to the upper limit of PLMN identities in VarRLF-Report Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1964 - F NR\_SON\_MDT-Core[38]

=> Changes are agreed and merged into big SON CR.

R2-2007372 Corrections on ConnEstFailReport Samsung CR Rel-16 38.331 16.1.0 1838 - F NR\_SON\_MDT-Core[12]

=> Not pursued

R2-2007385 Avoiding Duplication of Location Info upon SCG Failure Samsung discussion NR\_SON\_MDT-Core[16]

R2-2007668 On the inclusion of reconnectCellId Ericsson discussion[21]

R2-2007779 Inclusion of UL carrier indication in CEF report ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1903 - B NR\_SON\_MDT-Core[34]

R2-2007776 Correction on GNSS location information reporting in MDT ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1900 - F NR\_SON\_MDT-Core[31]

Non-ASN.1

R2-2007386 How to Determine Whether a Cell is Part of the Area Indicated by AreaConfiguration Samsung discussion NR\_SON\_MDT-Core[17]

=> Not pursued

=> Can be discussed in the email discussion on stage2 correction.

R2-2007757 Correction on the release of obtainCommonLocation Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1895 - F NR\_SON\_MDT-Core[26]

=> The changes are agreed in principle and should be checked though email discussion[888].

R2-2008000 Correction on the field description of CGI-InfoEUTRALogging Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1962 - F NR\_SON\_MDT-Core[36]

=> changes are agreed and will be merged into big MDT CR.

R2-2006650 Add TA Information in CEF Report when T319 Expire CATT CR Rel-16 38.331 16.1.0 1725 - F NR\_SON\_MDT-Core

=> changes are agreed and will be merged into big MDT CR

R2-2008005 Miscellaneous corrections related to connection establishment/resume failure information Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1967 - F NR\_SON\_MDT-Core [41]

=> The third change is agreed and merged into big editorial CR.

=> The second change should be discussed in the email discussion [888].

=> The first change is not agreed.

R2-2007511 Correction to RLF cause determination for backhaul failure Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1854 - F NR\_SON\_MDT-Core

=> Should be handled in other session

R2-2007778 Correction to 38331 on RA report ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1902 - F NR\_SON\_MDT-Core

=> The first change will be further discussed in email [888]

=> The last change is not agreed

=> The second and third changes are agreed and will merged into big SON CR.

R2-2007753 Discussion on user consent Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

=> postponed

R2-2006644 Correction about Including Re-connection Cell ID in RLF Report CATT CR Rel-16 36.331 16.1.1 4351 - F NR\_SON\_MDT-Core

R2-2006645 Correction about Including Re-connection Cell ID in RLF Report CATT CR Rel-16 38.331 16.1.0 1723 - F NR\_SON\_MDT-Core

R2-2006646 Correction on RLF Report for Inter-RAT MRO NR CATT CR Rel-16 36.306 16.1.0 1778 - F NR\_SON\_MDT-Core

R2-2006647 Correction on RLF Report for Inter-RAT MRO EUTRA CATT CR Rel-16 38.306 16.1.0 0365 - F NR\_SON\_MDT-Core

R2-2006648 Clarification on RLF Report for Inter-RAT MRO CATT CR Rel-16 36.331 16.1.1 4352 - F NR\_SON\_MDT-Core

R2-2007214 Correction on cross-RAT RLF report Google Inc. CR Rel-16 38.331 16.1.0 1801 - F NR\_SON\_MDT-Core

R2-2007224 Clarification on MDT regarding reporting of WLAN and BT information Samsung Telecommunications CR Rel-16 38.331 16.1.0 1804 - F NR\_SON\_MDT-Core

R2-2007373 Correction on RA-Report Samsung CR Rel-16 38.331 16.1.0 1839 - F NR\_SON\_MDT-Core

R2-2007382 Logging PLMN Info in VarConnEstFailReport Samsung discussion NR\_SON\_MDT-Core

R2-2007510 Correction on RA-Report release Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1853 - F NR\_SON\_MDT-Core

R2-2007754 Editorial corrections on MDT and SON in NR Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1892 - D NR\_SON\_MDT-Core

R2-2007755 Correction on MDT and SON configurations for MR-DC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1893 - F NR\_SON\_MDT-Core

R2-2007756 Correction on logged MDT Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1894 - F NR\_SON\_MDT-Core

R2-2007758 Correction on Inter-RAT SON for 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1896 - F NR\_SON\_MDT-Core

R2-2007759 Correction on Inter-RAT SON for 36.331 Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4408 - F NR\_SON\_MDT-Core

R2-2007760 Correction on clearing VarRLF-Report regarding T316 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1897 - F NR\_SON\_MDT-Core

R2-2007954 Correction to RLF content setting in VarRLF-Report Quectel draftCR Rel-16 38.331 16.1.0 D NR\_SON\_MDT-Core

R2-2008003 Corrections to measResultLastServCell for RLF and HO failure Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1965 - F NR\_SON\_MDT-Core

R2-2008004 Corrections to mobility history information Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1966 - F NR\_SON\_MDT-Core

Depending on the progress the following email discussion may be arranged

* **[AT111-e][888] RRC corrections (Huawei, Ericsson)**

Scope: all the open issues and not treated issues in 6.10.3

Step one is to achieve agreements to address the issues. Step 2 is to provide agreeable CRs and reviewing the CRs.

Intended outcome: Agreeable CR packages (3-4). All the NBC CRs should be explicitly marked. 38.331 CR for editorial changes is R2-2008284 provided by Huawei. 38.331 CR for MDT is R2-2008285 provided by Huawei. 38.331 CR for SON is R2-2008286 provided by Ericsson. If needed 36.331 CR is R2-2008287 provided by Ericsson.

Deadline of Step 1: Tuesday 25 03:00 UTC

Deadline of Step 2: Thursday 27 04:00 UTC

Status: will start as the emeeting starts

## 8.13 SON/MDT

(NR\_ENDC\_SON\_MDT\_enh-Core; leading WG: RAN3; REL-17; WID: RP-201281)

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus on scope clarification, identify the detailed use cases, and the associated measurment collections. Can also discuss other organizational aspects.

### 8.13.1 Organizational

R2-2007996 Work plan for enhancement of data collection for SON\_MDT in NR and EN-DC WI CMCC, Ericsson discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core revised to R2-2008116

R2-2008116 Work plan for enhancement of data collection for SON\_MDT in NR and EN-DC WI CMCC, Ericsson discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

=>NOTED

### 8.13.2 SON, RAN2 scope and requirements

R2-2008288 SON Summary Ericsson discussion Late

**=> RAN2 to consider the SON aspects of CHO and SON aspects of 2-step RA as part of the WI.**

**=> RAN2 to consider the SON aspects of DAPS HO as part of the WI.**

=> The following scenarios are considered:

1) Successful CHO and HO (i.e. no failure happens). FFS consideration in RAN2/3

2) Unsuccessful CHO due to late CHO execution.

3) Unsuccessful CHO after CHO execution.

4) Successful or Unsuccessful CHO after unsuccessful CHO or handover failure.

Note: other scenarios are not ruled out…

=> RAN2 should study what CHO failure information can be stored in RLF report.

=> RAN 2 to discuss the method for distinguishing between different handover types in RLF report. FFS the details, e.g., explicitly way or not.

=> RAN2 to agree studying the RLF report and/or FailureInformation message contents in the DAPS failure scenarios.

=> New logged content for 2-step RA is introduced in:

1. RA report
2. RLF report
3. CEF report

=> Study the necessity of introducing new method for more precise identification of the DL coverage quality during the UL coverage outage.

R2-2007516 Rel-17 SON enhancements scope Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

=> Noted

R2-2006651 Clarification for SON Scope and Use Cases CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2006678 Discussion on rel-17 Radio Link Failure Report NTT DOCOMO INC. discussion Rel-17

R2-2006746 Mobility support in SON/MDT for Rel17 Intel Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007071 Open Issues in SON QUALCOMM Incorporated discussion Rel-17

R2-2007155 Enhancements and scope of R17 SON OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007196 SON for Rel-16 mobility enhancement NEC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007301 Discussion on SON enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007392 Optimization for Rel-16 Features Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007435 SON Consideration for R16 Mobility Enhancement CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007464 MRO for Inter-RAT handover Lenovo, Motorola Mobility discussion Rel-17

R2-2007465 MRO for CHO and DAPS Handover Lenovo, Motorola Mobility discussion Rel-17

R2-2007661 SON Scope and Requirements for Rel.17 Ericsson discussion

R2-2007662 SON Summary Ericsson discussion Late

R2-2007769 Discussion for RAN2 SON scope and requirements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007782 Consideration on SON enhancements ZTE Corporation, Sanechips discussion Rel-17

### 8.13.3 MDT Scope and requirements

R2-2007771 Summary on 8.13.3 MDT Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core Late

=> The coexistence issue between IDC and MDT feature is identified and the legacy mechanism defined in LTE spec is the baseline. FFS on potential enhancements.

=> Study the support of logged and Immediate MDT in MR-DC scenario. For M5/M6/M7, it is proposed to apply them for EN-DC/MR-DC cases with different bear types. FFS on details.

R2-2006652 Clarification for MDT Scope and Use Cases CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2006747 Scope of MDT for Rel17 Intel Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core Withdrawn

R2-2007070 Open Issues in MDT QUALCOMM Europe Inc. - Spain discussion Rel-17 Late

R2-2007072 Open Issues in MDT Qualcomm Incorporated discussion Rel-17

R2-2007156 Enhancements and scope of R17 MDT OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007300 Discussion on MDT enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007434 MDT Enhancement for 2-step RA CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007515 Rel-17 MDT enhancements scope Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007667 MDT scope and requirements Ericsson discussion

R2-2007770 Discussion for MDT Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007783 Consideration on MDT enhancements ZTE Corporation, Sanechips discussion Rel-17

R2-2007233 R17 MDT scope for MR-DC and early measurments Samsung Telecommunications discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

Email discussions after the meeting: