**3GPP TSG-RAN WG2 Meeting #116 electronic R2-2xxxxxx**

**Online, November 1-12, 2021**

Agenda Item: xx

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 [AT116][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:

* [AT116][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
    - Flag LSs

## 6.4 SON/MDT support for NR

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; Completed June 20; WID: RP-191776).

Documents in this agenda item will be handled in a break out session

Tdoc Limitation: See tdoc limitation for Agenda Item 6

### 6.4.1 General and stage-2 corrections

Including incoming LSs, TS 37.320 corrections

R2-2111195 TS 37.320 title update Nokia, Nokia Shanghai Bell CR Rel-16 37.320 16.6.0 0112 - F NR\_SON\_MDT-Core

=> CR is agreed.

R2-2109387 LS Reply on QoS Monitoring for URLLC (S5-211350; contact: Intel) SA5 LS in Rel-16 NR\_SON\_MDT-Core To:RAN3 Cc:SA2, RAN2

=> Noted

R2-2110634 Draft Reply LS on QoS Monitoring for URLLC Huawei LS out Rel-16 NR\_SON\_MDT-Core To:RAN3, SA5 Cc:SA2

=> Noted

R2-2110852 On reply LS to RAN3 on MDT Stage 2 and Stage 3 Alignment (reply LS to R3-207222) Ericsson discussion

* **[AT116e][871][SON/MDT] Reply LS on on MDT Stage 2 and Stage 3 Alignment (Ericsson)**

Based on point b in R2-2110852 to figure out the acceptable version on Reply LS

Intended outcome: Approved LS

Deadline: 05:00 UTC, Thursday November 11th

R2-2111567 Reply LS on MDT Stage 2 and Stage 3 Alignment (reply LS to R3-207222)

=> This LS is approved

### 6.4.2 TS 38.314 corrections

### 6.4.3 RRC corrections

R2-2110004 Clarification on RA report without 2 step RA CATT CR Rel-16 38.331 16.6.0 2821 - F NR\_SON\_MDT-Core

=> The change is agreed and will be merged into big CR.

R2-2110078 Correction on RA Resource Reporting Apple, Ericsson discussion Rel-16 NR\_SON\_MDT-Core

R2-2110079 Addition of missing information into RA-InformationCommon-r16 Apple, Ericsson CR Rel-16 38.331 16.6.0 2823 - F NR\_SON\_MDT-Core

=> Only the change “msg1 SCS values of 1.25kHz and 5kHz are missing for preamble with length of 839” is agreed and will be merged into big CR.

R2-2110252 Corrections on the field descriptions of IEs for CEF-report and RLF-report request NEC CR Rel-16 38.331 16.6.0 2826 - F NR\_SON\_MDT-Core

=> CR is not pursued.

R2-2110843 On neighbor cell measurements associated to interFreqTargetInfo Ericsson CR Rel-16 38.331 16.6.0 2853 - F NR\_SON\_MDT-Core

=> CR is not pursued.

R2-2110851 On logging of neighbour PCI measurements based on interFreqTargetInfo Ericsson discussion

=> Noted

R2-2110853 On neighbour CSI-RS measurements in RLF report Ericsson CR Rel-16 38.331 16.6.0 2855 - F NR\_SON\_MDT-Core

=> The change is agreed and will be merged into big CR.

R2-2110858 On Logging MHI report upon transition from RRC\_CONNECTED to any cell selection state Ericsson CR Rel-16 38.331 16.6.0 2856 - F NR\_SON\_MDT-Core

=> Agree the change based on option-2 in principle and check the implementation during this one week period through email #888.

Option-2: Clarify in both conditions, explicitly separating camped normally state and RRC connected mode aspects.

R2-2110887 Corrections to previousPCellID and timeConnFailure handling Ericsson discussion NR\_SON\_MDT-Core

=> RAN2 understanding:

Consider the scenario below:

Step1 UE is in Cell-A

Step2 UE receives a HO command towards Cell-B

Step3 UE successfully attaches to Cell-B

Step4 UE is transitioned to RRC INACTIVE

Step5 UE comes back to connected in Cell-C.

Step6 UE declares RLF in Cell-C.

In the abovementioned scenario, UE should not include cell-A as the previousPCell.

R2-2110855 On User Consent related aspects Ericsson discussion

R2-2110002 Clarification on Location for SCG Failure Report in 38.331 CATT CR Rel-16 38.331 16.6.0 2820 - F NR\_SON\_MDT-Core Withdrawn

R2-2110003 Clarification on Location for SCG Failure Report in 36.331 CATT CR Rel-16 36.331 16.6.0 4728 - F NR\_SON\_MDT-Core Withdrawn

* **[AT116e][888][SON/MDT] Merged 38.331 CR for SON/MDT (Ericsson)**

Merge all the agreed changes into one big CR

Intended outcome: Agreed CR

Start time: 07:00 UTC, Thursday November 11th

Deadline: short email discussion within one week

## 8.13 SON/MDT

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

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

Email max expectation: 6 threads

### 8.13.1 Organizational

R2-2109334 LS on Area scope configuration and Frequency band info in MDT configuration (R3-212824; contact: Huawei) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

* **[AT116e][830][SON/MDT] Reply LS on Area scope configuration and Frequency band info in MDT configuration (Huawei)**

Based on R2-2109334 to figure out the acceptable version on Reply LS

Intended outcome: Approved LS

Deadline: 05:00 UTC, Friday November 5th

R2-2111288 Reply LS on Area scope configuration and Frequency band info in MDT configuration

=> LS is approved.

R2-2109347 MDT M6 calculation for split bearers in MR-DC (R3-214466; contact: Huawei) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

* **[AT116e][831][SON/MDT] Reply LS on M6 calculation for split bearers in MR-DC (Huawei)**

Based on R2-2109347 to figure out the acceptable version on Reply LS

Intended outcome: Approved LS

Deadline: 05:00 UTC, Friday November 5th

R2-2111290 Reply LS on MDT M6 calculation for split bearers in MR-DC

=> LS is approved

R2-2109352 LS on the Beam measurement reports for the MDT measurements (R3-214519; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:SA5, RAN2

* **[AT116e][832][SON/MDT] Reply LS on Beam measurement reports (Ericsson)**

Based on R2-2109352 to figure out feasibility of the proposals mentioned in LS

Intended outcome: Approved LS

Deadline: 05:00 UTC, Friday November 5th

R2-2111506 Report of [AT115e][832][SONMDT] Reply LS on Beam measurement reports Ericsson

=> Noted

R2-2111476 Reply LS on Beam measurement reports for the MDT measurements

=> The LS is approved.

R2-2109335 LS on UP measurements for Successful Handover Report (R3-212935; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

R2-2109352 LS on the Beam measurement reports for the MDT measurements (R3-214519; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:SA5, RAN2

R2-2109336 Reply LS on UE context keeping in the source cell (R3-212944; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

R2-2109343 LS Reply on the details of logging forms reported by the gNB-CU-CP, gNB-CU-UP and gNB-DU under measurement pollution conditions (R3-214429; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:SA5, RAN2

R2-2109388 Reply LS on the details of logging forms reported by the gNB-CU-CP, gNB-CU-UP and gNB-DU under measurement pollution conditions (S5-213499; contact: Ericsson) SA5 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3 Cc:RAN2

R2-2109391 Reply LS on Report Amount for M4, M5, M6, M7 measurements (S5-214523; contact: Nokia) SA5 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3 Cc:RAN2

R2-2111226 Reply LS on the details of logging forms reported by the gNB-CU-CP, gNB-CU-UP and gNB-DU under measurement pollution conditions (S5-215493; contact: Ericsson) SA5 LS in Rel-17 e\_5GMDT To:RAN3 Cc:RAN2

R2-2110846 On beam information in immediate MDT measurement reports (reply LS R3-214519) Ericsson discussion

R2-2110884 LS Reply On user plane masurements for successful handover report Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.2 SON

#### 8.13.2.1 Handover related SON aspects

Including outcome of [Post115-e][899][SON/MDT] Handover related SON aspects (Ericsson)

R2-2110889 [Post115-e][899][SON/MDT] Handover related SON aspects (Ericsson) Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

Agreements:

1 The following method to support for Time D among the following: The “Time D” is represented via the timeConnFailure, which is supposed to start at CHO execution and stop when the HOF/RLF occurs.

* **[AT116e][850][SON/MDT]** Handover related SON aspects again **(Ericsson)**

Scope: focus on proposals 5-14 in R2-2110889.

Intended outcome: Report

Deadline: 05:00 UTC, Wednesday November 10th

R2-2111507 [AT116-e][850][SONMDT] Handover related SON aspects again (Ericsson)

Agreements:

1 Include an indicator in the RLF report indicating whether the last executed HO before the RLF in the target cell was a DAPS HO.

2 The value of the T304 threshold to be provided in the SHR configuration is configured by the target cell.

3 An explicit indicator is added in the RLF report indicating whether the last executed HO before the RLF in the target cell was a CHO HO

=> RAN2 to further discuss whether and how to handle the scenario of SHR and RLF-Report being generated for the same HO.

=> SHR does not include information on whether the UE is handed-over to another cell early after the successful HO.

=> The following triggering conditions for SHR are not pursued in rel-17:

a. T310/T312 in target cell is started after a short time of successful HO

b. The number of preamble attempt in target cell is greater than one threshold

c. If the UP interruption time is above a certain threshold

d. Configured CFRA RACH resource not used and the UE is forced to use the CBRA for HO

R2-2109562 Discussion on SHR enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2109563 Indication on the availability of rlf-Report via failureInformation for DAPS HO failure vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110005 Further Discussion on CHO and DAPS Aspects CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110041 UP measurements of HO interruption time Apple discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110097 Further consideration of SON of HO related aspects OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110104 Further consideration on successful handover report OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110256 Open issues on SHR NEC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110298 SON Enhancements for CHO Lenovo, Motorola Mobility discussion Rel-17

R2-2110299 SON Enhancements for DAPS Handover Lenovo, Motorola Mobility discussion Rel-17

R2-2110300 SON Enhancements for SHR Lenovo, Motorola Mobility discussion Rel-17

R2-2110529 Remaining issues on SON Enhancement for CHO CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110530 Remaining issues on SON Enhancement for DAPS CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110531 Further Discussion on Successful Handover Report CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110635 Discussion on handover related SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110717 Further clarification on SON MRO Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110735 Remaining issues on HO related SON aspects ZTE Corporation, Sanechips discussion Rel-17

R2-2110882 Handover-related SON aspects Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110920 HO related SON changes QUALCOMM Technologies INC. discussion Rel-17

R2-2110936 Discussion on CHO related RLF-Report LG Electronics discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110988 SON Enhancements for CHO and DAPS HO Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110992 SON Enhancements for Successful HO Report Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2111016 Discussion on HO type indicator for CHO and DAPS SHARP Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2111024 Discussion on contents of successful HO report SHARP Corporation discussion NR\_ENDC\_SON\_MDT\_enh-Core

#### 8.13.2.2 2-step RA related SON aspects

Including outcome of [Post115-e][898][SON/MDT] 2-step RA related SON aspects (CATT)

R2-2110006 Report of [Post115-e][898][SON/MDT] 2-step RA related SON aspects CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

Agreements:

1 Including the field msgA-Transmax in RA-InformationCommon IE to indicate RA type switching point in the 2-step RA report.

2 Preamble group optimization for RACH report is not introduced in Rel-17.

3 Introduce MSGA PUSCH resource related information in 2-step RA report and the details within the following information: the payload size transmitted in MSGA for a 2-step RACH attempt. FFS the detail and how to reduce overhead.

R2-2110007 TS38.331 Draft CR for 2-step RA related SON aspects CATT draftCR Rel-17 38.331 16.6.0 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110008 Discussion on Signalling Structure of 2-step RA Report CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110532 Remaining issues on SON Enhancement for 2-step RA CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110636 Discussion on 2 step RA related SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110736 2step RA related enhancements ZTE Corporation, Sanechips discussion Rel-17

R2-2110837 2-Step RA information for SON purposes Ericsson discussion

R2-2110994 SON Enhancements for 2SRA Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

#### 8.13.2.3 Other WID related SON features

Including outcome of [Post115-e][897][SON/MDT] 2 Modeling aspects related to information required by SN/SCG (Huawei)

R2-2110637 [Post115-e][897][SONMDT] Modeling aspects related to information required by SNSCG (Huawei) Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

1) CGI of the Source PSCell: the source PSCell of the last SN change. The source PSCell could be E-UTRA cell or NR cell.

2) CGI of the Failed PSCell: the PSCell in which SCG failure is detected or the target PSCell of the failed PScell change. The Failed PSCell could be E-UTRA cell or NR cell.

3) timeSCGFailure: the time elapsed since the last PSCell change initialization until SCG failure.

4) connectionFailureType: radio link failure or SN change failure.

5) random-access related information set by the PSCell

Summary proposal 1: Put RA information (the 5th parameter) in the existing SCG failure message when some conditions are met. FFS for conditions e.g. the UE would not include RA information to the SCG failure message in case of too late handover failure, and the UE only needs to include RA information in case of RA problem/BFR resulted RLF and HOF.

One company has deep concerns on the impact of the first part of proposal-1 (overhead introduced by this field in a mandatory message).

Summary proposal 2: RA-InformationCommon-r16 is used as a baseline to indicate random-access related information set by the PSCell.

Summary proposal 3: For the 1st, 2nd, 3rd and 4th parameter, it is proposed to continue discussing whether they can be implicitly indicated by existing Ies in SCG failure information or new parameters are needed (based on observations for question 2a).

* **[AT116e][820][SON/MDT] Information required by SNSCG (Huawei)**

Focus on summary proposal 1, 2 and 3 in R2-2110637

(1) For summary proposal 1, progress on the conditions which will trigger to log RA information.

(2) progress on summary proposal 3.

(3) just final check and confirm to agree proposal 2.

Intended outcome: Agreements

Deadline: 05:00 UTC, Friday November 5th

Agreements:

1: The UE needs to include RA information in case that failureType is set to randomAccessProblem or beamFailureRecoveryFailure-r16.

2: RA-InformationCommon-r16 is used as a baseline to indicate random-access related information set by the PSCell.

3: The parameter connectionFailureType could reuse the current failureType in SCG failure message. FFS on enhancements.

4 The condition “failureType is set to synchReconfigFailureSCG” for including RA information.

=> FFS: Introduce one bit flag to indicate whether T304 is running or not in SCG failure message.

R2-2110009 Further Analysis on UE RACH Report for SN CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110010 Further Analysis on PSCell MHI Enhancement CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110301 SON Enhancement for NR-U Lenovo, Motorola Mobility discussion Rel-17

R2-2110638 Discussion on other SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110716 Discussion on other SON aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110719 UE grouping impact on MRO Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110737 On other WID related issues ZTE Corporation, Sanechips discussion Rel-17

R2-2110854 On Other WID related SON features Ericsson discussion

R2-2110921 NR-U Related Enhancements QUALCOMM Technologies INC. discussion Rel-17

R2-2110995 SON Enhancements: Others Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.3 MDT

#### 8.13.3.1 Immediate MDT enhancements

Including outcome of [Post115-e][895][SON/MDT] IMM MDT (ZTE)

R2-2110738 Report of [Post115-e][895][SON/MDT] IMM MDT ZTE Corporation, Sanechips report Rel-17

Agreements:

1 For non-duplication and duplication case, a single D1 is calculated.

2 The following method is used for configuring D1 in case of split bearer: only one node can configures D1 to UE, and UE reports D1 to corresponding node where configuration is received;

3 At least for OAM observability, MN and SN can calculate M5 measurement in the DU respectively when split bearer is used.

4 The same as LTE, reporting of immediate MDT results won’t be impact by IDC.

5 No enhancement is needed in RAN2 signalling to support IDC tagging in immediate MDT results**.**

6 MN and SN can calculate M7 measurement in the DU respectively when split bearer is used.

7 From RAN2’s perspective, indication of duplication status is beneficial to be included for M5/M7 measurement in split bearer

* **[AT116e][851][SON/MDT]** IMM MDT again **(ZTE)**

Scope: focus on proposals 5 and 7 in R2-2110738.

Intended outcome: Report

Deadline: 05:00 UTC, Wednesday November 10th

R2-2111568 Report of [AT116-e][851][SON/MDT] IMM MDT again (ZTE)

=> Enhancement on M5 measurement is not pursued in this release.

=> Enhancement on M7 measurement is not pursued in this release.

R2-2109564 Discussions on RAN3 LS on immediate MDT vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110639 Discussion on M6 calculation for split bearers in MR-DC (RAN3 LS R2-2109347) Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110640 Discussion on immediate MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110718 M5 Measurement for DC Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110739 Consideration on immediate MDT enhancements ZTE Corporation, Sanechips discussion Rel-17

R2-2110848 On Immediate MDT Enhancements Ericsson discussion

#### 8.13.3.2 Logged MDT enhancements

Including outcome of [Post115-e][896][SON/MDT] Logged MDT (Nokia)

Also need to trear issue of  Signalling based MDT overriding avoidance

R2-2110714 Report on [Post115-e][896][SON/MDT] Logged MDT (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

=> Frequency-specific and RAT-specific coverage hole indication in logged MDT are not pursued in Rel-17.

Agreements:

1 Extended LoggedMeasurementConfiguration with AreaConfig and/or InterFreqTargetInfo, implies the Logged MDT reports are provided according to legacy MDT performance measurements.

2 LoggedMeasurementConfiguration is extended with a flag to indicate if an early measurement/idle mode configuration has relevance for logged measurement purposes.

3 Multiple CEF reports is introduced to solve the problem about UL/DL coverage imbalance. FFS whether UE capability is applied. FFS how to limit the overhead during running CR.

Votes for support

“DL signal state during UL outage” (4)

“multiple CEF reports” (5)

R2-2110011 Discussion on Logged MDT Enhancement CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110042 Remaining issues for logged MDT Apple discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110098 Enhancements for logged MDT regarding RAT-specific coverage hole OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110533 Further consideration on UL-DL coverage mismatch CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110641 Discussion on logged MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2110715 Logged MDT and other enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2107508

R2-2110740 CEF report enhancements ZTE Corporation, Sanechips discussion Rel-17

R2-2110850 On logged MDT related enhancements Ericsson discussion

R2-2110923 Logged measurement Enhancements QUALCOMM Technologies INC. discussion Rel-17

R2-2110999 SON Enhancements for SI Request Optimization Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2111168 Discussion on Logged MDT issues Samsung Electronics Co., Ltd discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.4 L2 Measurements

R2-2111196 Introduction of enhanced PRB Usage for MIMO China Unicom discussion Rel-17

=> Noted

R2-2110959 Introducion of PRB usage based on statistical MIMO layer CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2110242

=> Noted

Agreements:

1 Alpha in PRB Usage for MIMO is changed to float value 1.00~100.00

2 Introduce a new PRB usage matrix with Alpha autonomously adjusted based on statistical data of MIMO layer, the variable value can be called β.

* **[AT116e][886][SON/MDT] PRB usage based on MIMO layer (CMCC)**

Scope: Based on the method and definition of new measurement for PRB usage in both R2-2110959 and R2-2111196, produce 38.314 CR

Intended outcome: agreeable CRs.

Deadline: 05:00 UTC, Monday November 8th

R2-2111534 38.314 CR to PRB Usage for MIMO CMCC CR Rel-17 38.314 16.4.0 0019 - B NR\_ENDC\_SON\_MDT\_enh-Core

=> CR is agreed in principle

=> Will be merged into big R17 38.314 CR when available.

R2-2110642 Discussion on L2M Huawei, CMCC, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2108567

=> Introduce packet “reliability” measurement for D1, i.e. reuse the LTE metric.

* **[AT116e][852][SON/MDT]**  Packet “reliability” measurement for D1 **(Huawei)**

Scope: progress the detail including the definition and also requirements through email.

Intended outcome: Report

Deadline: 05:00 UTC, Wednesday November 10th

R2-2111300 Report of email discussion [AT116e][852][SON/MDT] Packet “reliability” measurement for D1 (Huawei)

Agreements

1 The new delay measurement can be called excess packet delay for NR.

2 FFS: the definition of the measurement of excess packet delay for NR is:

- it represents the ratio of packets in UL per DRB exceeding the configured delay threshold among the UL PDCP SDUs received. The delay for each packet is calculated from packet arrival at PDCP upper SAP until the UL grant to transmit the packet is available, which has included the delay the UE gets resources granted (from sending SR/RACH to get the first grant)

3 The network can collect the measurement excess packet delay for NR from the UE.

4 LTE excess packet delay reporting can be used as a baseline, and details can be further discussed.

R2-2110242 Introducion of PRB usage based on statistical MIMO layer CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core Revised

R2-2110741 L2 measurements enhancements ZTE Corporation, Sanechips discussion Rel-17

R2-2110849 On layer-2 measurements Ericsson discussion

R2-2111202 38.314 CR to introduce the enhanced PRB Usage for MIMO China Unicom CR Rel-17 38.314 16.4.0 0018 - B NR\_ENDC\_SON\_MDT\_enh-Core

* **[POST116e][887][SON/MDT]**  Running 38.331 for introducing R17 SON **(Ericsson )**

Scope: building the whole running CR for SON features

Intended outcome: running CR

Deadline: long

* **[POST116e][887.5][SON/MDT]**  Leftover issues on SON  **(Ericsson )**

Scope: Continue the discussion on the left issues in R2-2111507. Any other critical issues should also be included.

Intended outcome: report

Deadline: long

* **[POST116e][889][SON/MDT]**  Running 38.331 for introducing R17 MDT **(Huawei)**

Scope: building the whole running CR for MDT features

Intended outcome: running CR

Deadline: long

* **[POST116e][879][SON/MDT]**  Running R17 38.314 **(CMCC)**

Scope:

building the whole running CR, including the agreed changes and agreemetns from this meeting.

Including the definition of the measurement of excess packet delay for NR

Intended outcome: running CR

Deadline: long

* **[POST116e][897][SON/MDT]**  Running R17 37.320 **(CMCC, Nokia)**

Scope: building the whole running CR

Intended outcome: running CR

Deadline: long

Summary of the conclusions:

Approved LSs:

R2-2111567 Reply LS on MDT Stage 2 and Stage 3 Alignment (reply LS to R3-207222)

=> This LS is approved

R2-2111288 Reply LS on Area scope configuration and Frequency band info in MDT configuration

=> LS is approved.

R2-2111290 Reply LS on MDT M6 calculation for split bearers in MR-DC

=> LS is approved

R2-2111476 Reply LS on Beam measurement reports for the MDT measurements

=> The LS is approved.

Agreed CRs:

R2-2111195 TS 37.320 title update Nokia, Nokia Shanghai Bell CR Rel-16 37.320 16.6.0 0112 - F NR\_SON\_MDT-Core

=> CR is agreed.

Email discussions after the meeting:

Short:

* **[AT116e][888][SON/MDT] Merged 38.331 CR for SON/MDT (Ericsson)**

Merge all the agreed changes into one big CR

Intended outcome: Agreed CR

Start time: 07:00 UTC, Thursday November 11th

Deadline: short email discussion within one week

Long:

* **[POST116e][887][SON/MDT]**  Running 38.331 for introducing R17 SON **(Ericsson )**

Scope: building the whole running CR for SON features

Intended outcome: running CR

Deadline: long

* **[POST116e][887.5][SON/MDT]**  Leftover issues on SON  **(Ericsson )**

Scope: Continue the discussion on the left issues in R2-2111507. Any other critical issues should also be included.

Intended outcome: report

Deadline: long

* **[POST116e][889][SON/MDT]**  Running 38.331 for introducing R17 MDT **(Huawei)**

Scope: building the whole running CR for MDT features

Intended outcome: running CR

Deadline: long

* **[POST116e][879][SON/MDT]**  Running R17 38.314 **(CMCC)**

Scope:

building the whole running CR, including the agreed changes and agreemetns from this meeting.

Including the definition of the measurement of excess packet delay for NR

Intended outcome: running CR

Deadline: long

* **[POST116e][897][SON/MDT]**  Running R17 37.320 **(CMCC, Nokia)**

Scope: building the whole running CR

Intended outcome: running CR

Deadline: long