**3GPP TSG-RAN WG2 Meeting #115 electronic R2-2xxxxxx**

**Online, August, 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 [AT115][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:
* [AT115][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

## 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: 5 tdocs. See also tdoc limitation for Agenda Item 6

### 6.4.1 General and stage-2 corrections

Including incoming LSs, TS 37.320 corrections

R2-2106979 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

R2-2108562 Draft Reply LS on QoS Monitoring for URLLC Huawei LS out Rel-16 NR\_SON\_MDT-Core To:RAN3, SA5 Cc:SA2

R2-2108299 On UL delay configuration in LTE Ericsson CR Rel-16 37.320 16.5.0 0110 - F NR\_SON\_MDT-Core

* [AT115e][887][SON/MDT] On UL delay configuration in LTE (Ericsson)

Collect companies’ view on the CR (R2-2108299). If and only if everyone is fine with the change, the outcome of the email discussion is the agreed CR.

 Intended outcome: Agreed CR

 Deadline:11:00 UTC, Thursday August 26th

R2-2108314 [Draft] Reply LS on MDT Stage 2 and Stage 3 alignment Ericsson discussion NR\_SON\_MDT-Core

* [AT115e][822][SON/MDT] Reply LS on MDT Stage 2 and Stage 3 alignment (Ericsson)

Based on R2-2108314 to figure out the acceptable version on Reply LS

 Intended outcome: Approved LS

 Deadline: 05:00 UTC, Friday August 27th

### 6.4.2 TS 38.314 corrections

R2-2108304 On corrections to packet loss rate measurements Ericsson CR Rel-16 38.314 16.3.0 0017 - F NR\_SON\_MDT-Core

* [AT115e][886][SON/MDT] On corrections to packet loss rate measurements (Ericsson)

Collect companies’ view on the CR (R2-2108304). If and only if everyone is fine with the change, the outcome of the email discussion is the agreed CR.

 Intended outcome: Agreed CR

 Deadline:11:00 UTC, Thursday August 26th

### 6.4.3 RRC corrections

R2-2107586 CSI-RS reporting for RA in RLF Apple CR Rel-16 38.331 16.5.0 2730 - F NR\_SON\_MDT-Core

=> The changes are agreed and will be merged into big CR (Ericsson).

R2-2107587 Correction on clearing VarRA-Report Apple CR Rel-16 38.331 16.5.0 2731 - F NR\_SON\_MDT-Core

=> Provide previous agreements for the change.

=> The changes are agreed and will be merged into big CR (Ericsson).

R2-2107819 Corrections on RLF Report Storage in 36.331 CATT, Huawei, HiSilicon CR Rel-16 36.331 16.5.0 4697 - F NR\_SON\_MDT-Core

=> CR is agreed.

R2-2107820 Corrections on RLF Report Storage in 38.331 CATT, Huawei, HiSilicon CR Rel-16 38.331 16.5.0 2741 - F NR\_SON\_MDT-Core

=> CR is not pursued

R2-2107863 Correction on logging for outOfCoverage event Samsung, Ericsson CR Rel-16 38.331 16.5.0 2743 - F NR\_SON\_MDT-Core

=> The changes are agreed and will be merged into big CR (Ericsson).

R2-2108308 On OutOfCoverage related logging Ericsson CR Rel-16 38.331 16.5.0 2765 - F NR\_SON\_MDT-Core

=> The changes are agreed and will be merged into big CR (Ericsson).

R2-2108358 Correction to 38331 on OOC event triggered logged MDT ZTE Corporation, Sanechips CR Rel-16 38.331 16.5.0 2767 - F NR\_SON\_MDT-Core

=> CR is not pursued

R2-2108309 On PDCP queuing delay value measurement Ericsson CR Rel-16 36.331 16.5.0 4711 - F NR\_SON\_MDT-Core

=> CR is agreed.

R2-2108420 Corrections to previousPCellID and timeConnFailure handling Ericsson discussion NR\_SON\_MDT-Core

=> Postponed to next meeting

R2-2108561 Discussion on uplink delay value reporting Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

=> The changes are agreed and will be merged into big CR (Ericsson).

R2-2107854 Clarification on CGI-EUTRALogging Samsung Electronics Co., Ltd CR Rel-16 38.331 16.5.0 2742 - F NR\_SON\_MDT-Core

=> CR is not pursued

R2-2107864 Correction on inclusion of the set of availability indicators during RRC reconfiguration Samsung Electronics Co., Ltd CR Rel-16 38.331 16.5.0 2744 - F NR\_SON\_MDT-Core

=> The changes are agreed and will be merged into big CR (Ericsson).

R2-2108321 Correction to RLF reporting QUALCOMM INCORPORATED CR Rel-16 38.331 16.5.0 2766 - F NR\_SON\_MDT-Core

=> The changes are agreed and will be merged into big CR (Ericsson).

R2-2108359 Consideration on event triggered logged MDT ZTE Corporation, Sanechips discussion Rel-16

=> CR is not pursued

R2-2108563 Discussion on the user consent for trace reporting Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

* [AT115e][888][SON/MDT] R16 corrections (Ericsson, Huawei)

Merge all the agreed changes of 38.331 into one big CR

 Intended outcome: Agreed 38.331 CR in R2-2108968

 Deadline:11:00 UTC, Thursday August 26th

## 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

R2-2106932 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

R2-2106946 LS on Report Amount for M4, M5, M6, M7 measurements (R3-212961; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2, SA5

R2-2108310 On reply LS on Report Amount for M4, M5, M6, M7 measurements Ericsson discussion

* [AT115e][890][SON/MDT] Report Amount for M4, M5, M6, M7 measurements (Ericsson)

Step 1: Collect companies’ views on the draft reply LS based on R2-2108310.

Step 2: Update the draft based on companies’ views

Step 3: Upload final version for approval

 Intended outcome: Approved LS in R2-21088966

 Deadline:11:00 UTC, Friday August 20th

R2-2108966 Reply LS on Report Amount for M4, M5, M6, M7 measurements

=> Approved

R2-2106982 LS on using SA5 Performance Measurements and Trace for centralised PCI management (S5-213689; contact: Ericsson) SA5 LS in Rel-17 eSON\_5G To:RAN2

R2-2107715 Using SA5 Performance Measurements and Trace for centralised PCI management vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107716 [Draft] LS reply on using SA5 Performance Measurements and Trace for centralised PCI management vivo LS out Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:SA5

R2-2108311 On reply LS to SA5 On using SA5 performance measurements and MDT for centralised PCI management Ericsson discussion

* [AT115e][891][SON/MDT] Performance Measurements and Trace for centralized PCI management (vivo)

Step 1: Collect companies’ views on the draft reply LS based on R2-2107715, R2-2107716 and R2-2108311.

Step 2: Update the draft based on companies’ views

Step 3: Upload final version for approval

 Intended outcome: Approved LS in R2-2108967

 Deadline:11:00 UTC, Friday August 20th

R2-2108967 Reply LS on using SA5 Performance Measurements and Trace for centralised PCI management

=> Approved

R2-2106944 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

Agreements in 113bis are confirmed as:

1 Include in the RLF-report for CHO the following:

a. Configured CHO execution condition(s) (A3 and/or A5 event configuration, TTT values)

c. Latest radio measurement results of the candidate target cells

Try to reuse existing mechanism as much as possible.

Agreement a. can be revisited if RAN3 has further progress on it.

R2-2106980 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

### 8.13.2 SON

#### 8.13.2.1 Handover related SON aspects

Including the outcome of [Post114-e][850][SON/MDT] Modeling of CHO and DAPS related RLF reports (Ericsson)

Including the outcome of [Post114-e][851][SON/MDT] Procedures and Modeling of successful HO report (Huawei)

R2-2108425 [Post114-e][850][SON/MDT] Modeling of CHO and DAPS related RLF reports (Ericsson) Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

CB on Thursday

* [AT115e][851][SON/MDT] CHO and DAPS related RLF reports (Ericsson)

**Scope:** Focus on the following proposals: P1, 7,8 and 9.

 **Intended outcome**: Report with Agreements in R2-2108961

 **Deadline**: 11:00 UTC, Wednesday August 25th

Proposal 1

Op1: For the Timer D, the TimeConnFailure is re-used with possible updates to indicate that it is started at CHO execution.

Op2: Timer D is computed by the network using timer C and legacy timeConnFailure.

Op3: Introduce a new Timer for Timer D “Time elapsed between CHO execution until the first HOF/RLF”.

Proposal 7 For the case of RLF in source cell after DAPS fallback, the RLF report includes the legacy timeConnFailure, that represents in this case the time between DAPS HO execution and RLF in source cell after fallback.

Proposal 8 For the case of RLF in source cell after DAPS fallback, include in the RLF report an indication that a “DAPS fallback” occurred before the RLF.

Proposal 9 For the case of RLF in target cell after successful DAPS HO, the RLF-Report includes an handover type indicator indicating that the last handover before the RLF was a DAPS HO.

=> P1, 7, 8 and 9 CB on Thursday next week.

R2-2108961 [AT115e][851][SON/MDT] CHO and DAPS related RLF reports (Ericsson)

Agreements:

1 In case the RLF occurs in source cell after fallback, the timeConnSourceFailure is used to represent the time elapsed between the DAPS HO execution and the RLF in the source.

FFS in the next meeting:

Proposal 1 RAN2 to select one of the following two options to represent Time D:

a. Option 1: The “Time D” is equal to the timeConnFailure, which is supposed to start at CHO execution and stop when the HOF/RLF occurs.

b. Option 2: The timeConnFailure is supposed to start at reception of the CHO configuration and stop when the HOF/RLF occurs. The “Time D” is equal to the difference between timeConnFailure and “Time C”

Proposal 3 Include a DAPS HO indicator in the RLF-Report, in case the RLF occurs in the target cell after a DAPS HO.

Agreements:

1 The following signalling model for the RLF-Report of CHO:

 Use separate IEs within the existing RLF-report to represent the second failure, and the first failure can be represented by reusing as much as possible existing IEs

2 For the case of HOF while performing DAPS HO followed by a fallback to the source cell, following signalling is applied: The detailed handover failure related information are included in the RLF-Report and this RLF report can be fetched like any other RLF report.

Agreement:

The following type of CHO-related parameters are included in the RLF-Report for CHO for the moment:

 Time between fullfilment of triggering conditions

 the first satisfied event or condition

Agreements:

1 To apply the agreements related to the NR CHO RLF-Report to the LTE CHO RLF-Report. However, RAN2 should keep focusing on NR progress first.

2 The legacy timeConnFailure can be reused to represent in the RLF report the scenario of DAPS HOF or RLF in target cell (after DAPS HO).

3 For the case of RLF in source cell while performing DAPS HO (i.e. before fallback), the follow time information is included in the RLF-Report:

a. timeConnSourceFailure: The time elapsed since DAPS HO execution until RLF occurs in source cell while performing DAPS HO before the fallback

4 The RLF report is used to log the failure related measurement in these scenarios:

 a. Failure at the source (RLF) while performing access to DAPS target cell and failing to access the target (HOF)

 b. Failure at the target cell (HOF) and failing to perform fallback (RLF at source)

R2-2108564 Report of [Post114-e][851][SONMDT] Procedures and Modeling of successful HO report (Huawei) Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

Proposals for discussion:

**Proposal 1: For the threshold of T304, the source cell configures the value, and whether co-ordination between source and target on T304 configuration is to be decided (if so, co-ordination between RAN2 and RAN3 is needed).**

**Proposal 2: It is proposed to discuss the need of including the ra-InformationCommon of RA report (on top of existing RA report mechanism) in SHR.**

**Proposal 3: It is proposed to discuss another successful HO case that T310/T312 in target cell is started after a short time of successful HO, e.g. early HO.**

**Proposal 4: It is proposed to discuss whether the SHR can include the actual values of elapsed T310/T312/T304.**

**Proposal 5: It is proposed to discuss how to deal with scenarios in which the UE generates both an RLF report and an SHR for the same HO.**

CB on Thursday

* [AT115e][852][SON/MDT] Procedures and Modeling of successful HO (Huawei)

**Scope:** Focus on the agreeable proposals in R2-2108564

 **Intended outcome**: Report with Agreements in R2-2108962

 **Deadline**: 11:00 UTC, Wednesday August 25th

R2-2109141 Report of [AT115e][852][SONMDT] Procedures and Modeling of successful HO (Huawei)

Agreements:

1: Define separate thresholds for T310/T312/T304, and the percentage values are 40%, 60%, 80%. The percentage is to indicate the ratio of the threshold value (unit: ms) over the signalled T310/T312/T304 value (unit: ms).

1a: For threshold for T312, the percentage value also includes 20%.

2: For the thresholds of T310/T312 in the source cell, the source cell configures the values. FFS source cell or target cell can configure the threshold for T304.

3: Introduce a UE capability indication for SHR.

4: The UE may discard the SHR, i.e. release the UE variable VarSuccHO-Report, 48 hours after the SHR is stored.

R2-2106942 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

R2-2108419 LS Reply On user plane masurements for successful handover report Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

=> UP measurements for Successful Handover Report will be introduced as RAN3 required. FFS the details.

R2-2107393 Further consideration of SON of HO related aspects OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107510 Further clarification on SON MRO Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2105476

R2-2107717 Discussion on CHO, DAPS and SHR enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107777 Open issues on SHR NEC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107821 Further Discussions on CHO and DAPS Aspects CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107849 Considerations on reporting successive failures in DAPS handover LG Electronics Inc. discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107883 SON Enhancements for CHO Lenovo, Motorola Mobility discussion Rel-17

R2-2107884 SON Enhancements for DAPS Handover Lenovo, Motorola Mobility discussion Rel-17

R2-2107885 SON Enhancements for SHR Lenovo, Motorola Mobility discussion Rel-17

R2-2107886 SON Enhancement for NR-U Lenovo, Motorola Mobility discussion Rel-17

R2-2108352 Consideration on CHO and DAPS related SON aspects ZTE Corporation, Sanechips discussion Rel-17

R2-2108353 Consideration on remianing issues on SHR ZTE Corporation, Sanechips discussion Rel-17

R2-2108417 Handover-related SON aspects Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108430 Discussion on handover related SON aspects Huawei, HiSilicon discussion Rel-17

R2-2108539 Remaining issues on SON Enhancement for CHO CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108540 Remaining issues on SON Enhancement for DAPS CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108541 Further Discussion on Successful Handover Report CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108570 Signalling model for CHO-related RLF report LG Electronics Polska discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108631 SON Enhancements for CHO and DAPS HO Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108766 Consideration on successful HO report Sharp discussion NR\_ENDC\_SON\_MDT\_enh-Core R2-2106136

R2-2108783 SON enhancement for DAPS Sharp discussion NR\_ENDC\_SON\_MDT\_enh-Core

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

R2-2108840 [Pre115-e][802][SON/MDT] Summary on agenda item 8.13.2.2 2-step RA related SON aspects OPPO

CB on Thursday

* [AT115e][821][SON/MDT] 2-Step RA related SON (OPPO)

**Scope:** Focus on the the proposal 1, 2, 3 and 4 in R2-2108840

 **Intended outcome**: Report with Agreements in R2-2108963

 **Deadline**: 11:00 UTC, Wednesday August 25th

R2-2108963 Report of [AT115e][821][SON/MDT] 2-Step RA related SON (OPPO)

=> RAN2 to agreement that the RACH type is not needed to be included in the RACH report.

Agreemtent

1 Measured RSRP of DL pathloss reference obtained just before performing RACH procedure to be logged in 2-step RACH report is of per RACH procedure granularity.

Proposals requiring further discussions:

Proposal 2: FFS which option should be made for RACH type switch indication in the RACH report:

 Option 1: including an explicit switch indication in the IE related to the last/first RA attempt before/after the 2-step to 4-step RA switch.

 Option 2: including the parameter MsgA-Transmax in each RA-InformationCommon IE.

Proposal 4: RAN2 to discuss the necessity of including the MSGA PUSCH resource related information in 2-step RA Report. FFS further details of the contents to be included in the RACH report.

=> Continue with remaining open issues on 2-step RACH (i.e., Proposals not concluded in R2-2108840) and also discussions on ASN.1 changes.

R2-2107392 Discussion on 2-step RACH reporting OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107507 Remaining Issues and New Aspects in 2-step NR UE Report Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2105477

R2-2107640 On 2-step RACH SON Apple discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107718 Discussion on remaining issues of 2-step RACH report vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107822 The Remaining Issues of RACH Report for 2-step RACH CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108354 2step RA related enhancements ZTE Corporation, Sanechips discussion Rel-17

R2-2108418 2-Step RA information for SON purposes Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108431 Discussion on 2 step RA related SON aspects Huawei, HiSilicon discussion Rel-17

R2-2108542 SON Enhancement for 2-step RA CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108642 SON Enhancements for 2SRA Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108780 RA report for 2-step RA Sharp discussion NR\_ENDC\_SON\_MDT\_enh-Core R2-2106133

#### 8.13.2.3 Other WID related SON features

Including the outcome of [Post114-e][852][SON/MDT] Modeling aspects related to information required by SN/SCG (CATT)

R2-2107825 Report of [Post114-e][852][SON\_MDT] Modeling aspects related to information required by SN/SCG CATT report Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

Based on the discussion, we first have a set of proposals for RAN2 agreements:

RA Report to the SN

Proposal 1 UE reports the SN RACH report to the MN, and then MN sends the SN RACH report to the SN.

Proposal 2 RAN2 to discuss and reply LS to R2-2008723.

SN Related MHI Information

Proposal 3 RAN2 to confirm that the PSCell transition is part of MHI.

Proposal 5 PSCell MHI is reported only to PCell.

Proposal 6 UEInformationResponse message is used to convey the PSCell MHI to the MN.

Proposal 7 If PSCell MHI is reported to the SN, DL/ULInformationTransferMRDC message can be used.

Report and Content of SCG Failure Information

Proposal 9 RAN2 confirms that the 5 information requested by RAN3 LS ‎ R3-211332 ‎ are needed, and how to report them to the network could be further discussed.

Proposal 10 Reuse existing SCG failure messages to transfer the SCG failure information for PSCell ‎failure analysis requested by RAN3.‎

Proposal 11 If reuse existing SCG failure messages, add new fields for the first 3 information (i.e., ‎CGI of the Source PSCell, CGI of the Failed PSCell, and timeSCGFailure) requested in RAN3 LS R3-211332.

Proposal 12 If reuse existing SCG failure messages, reuse existing field of failureType for the 4th information (i.e., ‎connectionFailureType‎) requested in RAN3 LS R3-211332 ‎.

Proposal 14 If a separate message other than existing SCG failure messages is used, new fields are needed for all the 5 information suggested by RAN3 LS R3-211332‎.

Proposal 15 Check with RAN3 first about whether EN-DC and NG-EN-DC scenarios are in the consideration of RAN3 LS R3-211332 for the SCG failure recording for the purpose of PSCell failure analysis.

* [AT115e][871][SON/MDT] Modeling aspects related to information required by SN/SCG (CATT)

**Scope:** Focus on the set of proposals for RAN2 agreements in R2-2107825

 **Intended outcome**: Report with Agreements in R2108964

 **Deadline**: 11:00 UTC, Wednesday August 25th

R2-2108964 Report of [AT115e][871][SON/MDT] Modeling aspects related to information required by SN/SCG (CATT)

Agreements

RA Report to the SN

1 UE reports the SN RACH report to the MN, and then MN sends the SN RACH report to SN.

SN Related MHI Information

2 RAN2 to confirm that the PSCell transition is part of MHI.

3 PSCell MHI is reported only to PCell.

4 UEInformationResponse message is used to convey the PSCell MHI to the MN.

5 Take Option 1 ‎(PSCell MHI nested within the PCell MHI) as baseline.

Report and Content of SCG Failure Information

6 RAN2 confirms that the 5 information requested by RAN3 LS ‎ R3-211332 ‎ are needed, and how to report them to the network could be further discussed.

**FFS:**

**Proposal 10 Reuse existing SCG failure messages to transfer the SCG failure information for PSCell ‎failure analysis requested by RAN3.‎**

**Proposal 11 If reuse existing SCG failure messages, add new fields for the first 3 information (i.e., ‎CGI of the Source PSCell, CGI of the Failed PSCell, and timeSCGFailure) requested in RAN3 LS R3-211332.**

**Proposal 12 If reuse existing SCG failure messages, reuse existing field of failureType for the 4th information (i.e., ‎connectionFailureType‎) requested in RAN3 LS R3-211332 ‎.**

**Proposal 15 Check with RAN3 first about whether EN-DC and NG-EN-DC scenarios are in the consideration of RAN3 LS R3-211332 for the SCG failure recording for the purpose of PSCell failure analysis.**

=> Draft LS to inform RAN3 our progress on the agreements (reply to LS R2-2008723) (CATT).

R2-2107509 Discussion on other SON aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107511 Reporting Enhancements for SON in unlicensed access Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107512 MPE impact on MRO Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107823 Further Analysis on Solution of UE RACH Report for SN CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107824 Further Considerations on Other SON features CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108307 On other WID related SON features Ericsson discussion

R2-2108334 NR-U Related Enhancements QUALCOMM INCORPORATED discussion Rel-17

R2-2108355 On other WID related issues ZTE Corporation, Sanechips discussion Rel-17

R2-2108432 Discussion on other WID related SON features Huawei, HiSilicon discussion Rel-17

R2-2108643 SON Enhancements for Successful HO Report Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108648 SON Enhancements: Others Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.3 MDT

#### 8.13.3.1 Immediate MDT enhancements

R2-2109021 Summary on agenda item 8.13.3.1 Immediate MDT Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

For M6 measurements: (related to [2], CATT, [3], Ericsson and [7], Huawei, HiSilicon)

Proposal 1: For D1 measurements for split bearer (i.e. MN terminated split bearer, SN terminated split bearer), try to find a compromise solution, and if there are no consensuses on any solutions, RAN2 is to decide on one understanding from the following two:

- Understanding 1: D1 measurements are not used for this scenario, i.e. the network will not configure D1 measurements for the UE for this scenario

- Understanding 2: D1 measurements are allowed for this scenario and how it works can be clarified

Proposal 1 In MN terminated split bearer and SN terminated split scenarios, both the MN CU-CP and the SN CU-CP can configure the D1 measurement to the UE.

Proposal 2 In MN terminated split bearer and/or SN terminated split scenarios, if the UE receives the D1 measurement configuration from the MN CU-CP then the UE reports D1 measurement values associated to packets sent over MCG to MN CU-CP.

Proposal 3 In MN terminated split bearer and/or SN terminated split scenarios, if the UE receives the D1 measurement configuration from the SN CU-CP then the UE reports D1 measurement values associated to packets sent over SCG to SN CU-CP.

R2-2107719 On RAN3 LS on MDT issues vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107826 Further Considerations on Immediate MDT Enhancements CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108302 On Immediate MDT Enhancements Ericsson discussion

R2-2108349 On accurate M5 and M7 measurements QUALCOMM INCORPORATED discussion Rel-17

R2-2108356 Consideration on immediate MDT aspects ZTE Corporation, Sanechips discussion Rel-17

R2-2108565 Discussion on immediate MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

#### 8.13.3.2 Logged MDT enhancements

R2-2109016 Summary on agenda item 8.13.3.2 Logged MDT enhancements CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

CB on Thursday

* [AT115e][872][SON/MDT] Logged MDT enhancements (Ericsson)

**Scope**: Focus on the set of proposals which are highlighted as such for discussions and potential agreements in this meeting in R2-2109016

 **Intended outcome**: Report with Agreements in R2-2108965

 **Deadline**:11:00 UTC, Wednesday August 25th

R2-2108965 Report of [Offline-872][SONMDT] Logged MDT enhancements (Ericsson)

Agreements:

1 The UE includes the beam identifiers used to acquire the SI message(s) in the on-demand SI procedure related report. FFS: How to capture this information

2 Extend RA report for both successful and failure on-demand SI request. FFS: Whether successful one-demand SI request related scenario is included or not is postponed to RAN2#116 meeting.

3 Signaling based logged MDT override protection is applicable in the following scenarios:

1) Signaling based Logged MDT is configured, but no results are available e.g. so far nothing stored, or all previously stored results retrieved

2) Signaling based Logged MDT configuration is stopped (i.e. the expiry of T330), but UE still has un-retrieved results that would be discarded upon accepting a new configuration

4 Include an indicator to indicate the signaling based logged MDT configuration availability in RRCSetupComplete / RRCConnectionSetupComplete and RRCResumeComplete / RRCConnectionResumeComplete.

 FFS: Implicit (flag indicating T330 is running or not) vs explicit indication

5 UE includes an indication regarding whether the T330 timer is running or not in RRCSetupComplete / RRCConnectionSetupComplete and RRCResumeComplete / RRCConnectionResumeComplete.

Proposal 1 The scenario of logging of measurements associated to on-demand SI request upon on-demand positioning SI/SIB request and upon on-demand SI request in connected mode are not pursued in Rel-17.

Proposal 2 The scenario of logging of measurements associated to successful on-demand SI request procedure is postponed to the next RAN2 meeting.

Proposal 4 The following measurements aer not included in the on-demand SI related report.

1. The number of times each SIB was intended to be requested by the UE

2. Failure type (failure at RA procedure or failure at acquiring SI messages)

3. The time between consecutive SI requests

4. The location information at the time of performing the SI request

5. An indicator to indicate if the SI request was performed over NUL or SUL

Proposal 5 Decision on inclusion of an indicator in the on-demand SI request related report indicating whether the on-demand SI request was successful or not is postponed to next RAN2 meeting.

Proposal 8 The following scenarios associated to Signaling based logged MDT override protection are postponed to RAN2#116 meeting:

1) Signaling based logged MDT is configured in LTE (NR), the UE comes to connected in NR (LTE)

2) Signaling based logged MDT is configured, the UE comes to connected in a PLMN that is not in the plmn-IdentityList.

Proposal 11 Rel-16 RAN2 specifications are unchanged with respect to RAN3’s question on the presence of interFreqTargetList within AreaConfiguration.

Proposal 12 RAN2 works on the introduction of AreaConfiguration-r17 (including areaConfig-r16 and interFreqTargetList-r16 inside it with both fields being optional) in Rel-17.

Proposal 13 RAN2 confirms that frequency band list configuration is not supported in interFreqTargetList configuration.

Proposal 14 RAN2 postpones the discussions on the following to RAN2#116 meeting:

1) Clarifications related to early measurements logging in logged MDT report

2) Frequency-specific and RAT-specific coverage hole indication in logged MDT report and its associated configuration

3) Enhancements associated to CEF report and RLF report for UL/DL coverage imbalance issues

Proposal 15 RAN2 to further discuss whether MDT for logging slice availability is considered in Rel-17.

R2-2107394 logged MDT enhancement regarding RAT-specific coverage hole OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107395 Futher consideration of MDT configuration priority OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107508 Logged MDT in EN-DC and other enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2105478

R2-2107720 On-demand SI request enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2107827 Considerations on MDT Enhancements for On-demand SI CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108306 On logged MDT related enhancements Ericsson discussion

R2-2108331 Logged measurement Enhancements QUALCOMM INCORPORATED discussion Rel-17

R2-2108357 Consideration on on-demand SI request information report ZTE Corporation, Sanechips discussion Rel-17

R2-2108505 MDT for Slice unavailability CMCC, Ericsson, Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108543 Further consideration on UL-DL coverage mismatch CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108566 Discussion on logged MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108568 Discussion on Area scope configuration and Frequency band info in MDT configuration based on RAN3 LS R3-212824 Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108650 SON Enhancements for SI Request Optimization Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108739 Discussion on Logged MDT issues Samsung Electronics Co., Ltd discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.4 L2 Measurements

R2-2107455 Discussion on the UE DL PDCP packet average delay measurement China Telecommunication discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2108305 On layer-2 measurements Ericsson discussion

R2-2108567 Discussion on L2M Huawei, CMCC, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2104009