3GPP TSG-RAN WG3 #116-e R3-223720

10 - 19 May 2022

Online

**Agenda Item: 9.3.9**

**Source: ZTE - Moderator**

**Title:** **Summary of Offline Discussion on CB: # 8\_MDTReportAmount**

**Document for: Approval**

# **Introduction**

**CB: # 8\_MDTReportAmount**

**- Whether the report amount of M4, M5 and M7 should be extended**

**- Whether there is a need to introduce the report amount for E-UTRAN**

**- Capture agreements and provide the CRs if agreeable**

(ZTE - moderator)

Summary of offline disc [R3-223720](https://ericsson-my.sharepoint.com/personal/angelo_centonza_ericsson_com/Documents/Local%20Documents/3GPP_ETSI/RAN3/RAN3-116e/EmailDiscussions/CB%20%23%208_MDTReportAmount/Inbox/R3-223720.zip)

Please Note:

There would be two rounds of email discussion.

The 1st round is to be ended by Thursday of first week (23:59 UTC, 2022-5-12).

The 2nd round is to be ended 3 hours before the email deadline at second week (9:00 UTC, 2022-5-17).

# **2 For the Chairman’s Notes**

Propose to capture the following:

# **4 Discussion (2nd round)**

The summary of the first round email discussion:

**The value range of M6 can be kept as it is in the current specification.**

**Send an LS to check with SA5 about whether to extend the report amount for M4/M5/M7 and whether to introduce report amount for M4/M5/M6/M7 for E-UTRAN as an LTE correction in Rel-17.**

R3-223197 and R3-223198 are taken as baseline if the answer from SA5 is positive.

**Please leave your comment here if any.**

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| --- | --- |
| Company | Concern |
| Ericsson | We do not see the point of asking SA5 whether there is a need to extend the report amount values for M4/M5/M7 because such need has neither been identified in RAN3 nor in SA5. This topic can be left as contribution driven in SA5.  We could limit the LS to ask SA5 whether there is any objection or feasibility showstopper in extending the report amount enhancements to E-UTRAN. |
| Huawei | Similar understanding as Ericsson. |
| ZTE | We don’t understand why Ericsson and Huawei think there is no need to ask SA5 about the extension of report amount. The two issues we discussed are both left issues from RAN3#114-e,  **It is FFS whether Report Amount IE value ranges different from the M1 Report Amount should be supported**  **It is FFS whether the introduction of the Report Amount is beneficial also for E-UTRAN**  And at this meeting, for both issues, it turned out that the support and objection are half and half:   * Extension of report amount for M4/M5/M7: 3 Yes, 3 No, 1 Nuetral * Introduction of report amount in E-UTRAN: 4 Yes, 4 No   The situation is we cannot achieve consensus on both issues at RAN3, it is reasonable and fair enough we send an LS to check with SA5 about both of the issues. If we only ask about the second question, it would seem like we have make agreements about not extending report amount of M4, M5, M7 in RAN3, which is not a fact. |

**A draft LS to SA5 has been provided in the 2nd round sub-folder. You can upload your revisions or provide comments here:**

|  |  |
| --- | --- |
| Company | Concern |
| Ericsson | Limit the LS to ask SA5 whether there is any objection or feasibility showstopper in extending the report amount enhancements to E-UTRAN. |
| ZTE | We prefer to ask both of the issues we discussed. |
|  |  |

**If you have any other questions or concern, please list in the table below. Of course you can also let us know via email reflector.**

|  |  |
| --- | --- |
| Company | Concern |
| Huawei | Since it’s just a mirror change to LTE, we would like to minute in chair minutes that R3-223197 and R3-223198 are taken as baseline if the answer from SA5 is positive. |
| ZTE | Reply to Huawei: Ok, will mention it in the summary. |
|  |  |

# **3 Discussion (1st round)**

At RAN3#114-e , the issue about Report Amount for M4, M5, M6, M7 was discussed and the following notes were captured:

**The introduction of the Report Amount for MDT Measurements in the NG-RAN starting from Rel17**

**It is proposed to maintain the “infinity” value in the value range of the Report Amount IE**

**Criticality 'ignore' is used for the added Report Amount IEs**

**WA: the value range used for the newly added Report Amount IE is the same as for the M1 measurement.**

**It is FFS whether Report Amount IE value ranges different from the M1 Report Amount should be supported**

**It is FFS whether the introduction of the Report Amount is beneficial also for E-UTRAN**

This CB further discusses the left issues listed above.

3.1 Value Range

In [1], there is some discussion on the report amount for M4/M5/M6/M7.

For M6, it is collected over RRC and the reporting amount should better align with the report amount of M1, which is reasonable enough.

For M4/M5/M7, which are not related to RRM, the report amount are not necessarily to be the same as M1, the report amount of which is considered based on UE but not for Network entity. It is not necessary to align the report amount between NG-RAN node and UE. For example, M4 is data volume measurement and only enough measurement report quantity is of statistical significance.In addition, as we know, M4/M5/M7 are enforced in the network and NG-RAN node does not need to worry about power saving. Larger report amount is feasible and beneficial for analysis.

There are two proposals in [1]:

**Proposal 1: The value range of M6 can be kept as it is in the current specification.**

**Proposal 2: The value range of M4, M5 and M7 should be extended to ENUMERATED (1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, infinity, ...).**

**Q1: Do you agree with proposal 1, i.e., the value range of M6 should be the same as M1?**

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| --- | --- | --- |
| Company | Yes/No | Comments |
| Ericsson | Yes |  |
| Huawei | yes | OK to proposal 1. |
| CATT | Yes |  |
| Deutsche Telekom | Yes |  |
| ZTE | Yes |  |
| Samsung | Yes |  |
| Nokia | yes |  |

Moderator’s summary:

All the companies say yes.

**Q2: Do you agree that the value range of M4, M5 and M7 should be extended? If yes, do you think the recommended value range in proposal 2 can be accepted?**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| Ericsson | No | We do not see the need to extend the report amount for M4, M5 and M7. We see it as an advantage to have the same report amount values for all measurements, which ensures consistency of the number of measurements to be reported. For larger report amounts there is the value “infinity”. |
| Huawei | No | For other measurements, they will be linked with M1 in OAM in the end. So its better to align the report amount with M1 as well.  It does not introduce too much benefits but only implementation complex in OAM if we extend the report amount for m4, 5, and 7. |
| CATT | Yes | M4, M5, M7 is collected by NG-RAN node, so it seems no strict restriction in energy, introduce more value range can give a fine-granularity measurement and is beneficial for analysis. |
| Deutsche Telekom | Neutral | We agree with the argument by proponents of [1] that energy restrictions should not be the limiting factor for those 3 measurements. On the other hand, there is a strong increase proposed in the number of reports up to the value of 2048. Can this be covered by the already existing value of “infinity”? |
| ZTE | Yes | We think the report amount of M4, M5 and M7 should be extended to larger values, which would make the configuration more flexible, instead of just using ‘infinity’ to cover all the larger values as mentioned by Ericsson.  As we have explained in our paper[1], M4, M5 and M7 are exactly different kind of measurement from M6 —— one if collected from UE, one is from RAN, it is totally reasonable to have larger report amount for these three measurements to help with the analysis.  For the concern from Deutsche Telekom that 2048 might be too large, we are open to remove one or two values suggested in our paper, e.g. 1024, 2048.  Anyway, the report amount is configured by OAM, and in the previous LS, SA5 has never mention that the report amount of these measurements should be exactly the same with M1. So maybe at least we should check with SA5 about their opinion, if we cannot reach consensus at this meeting. |
| Samsung | Yes | We see it is benefit to extend the report amount. In order to give the better reference to the OAM. Open to discuss how large is the extension. |
| Nokia | No | At this stage, 'infinity' should provide sufficient flexibility. |

**Moderator’s summary:**

Yes: 3/7

No: 3/7

Nuetral:1/7

No consensus. Better check with SA5.

3.2 E-UTRAN

Regarding whether report amount should be introduced for E-UTRAN, [1] states that there is no such a need. [2] proposes that report amount should be introduced for E-UTRAN in Rel-17, which is beneficial.

In the previous LS from SA5 in [3], it stated the benefits to introduce the report amount:

|  |
| --- |
| *SA5 confirms that reportAmount is beneficial to configure for MDT measurements M4, M5, M6 and M7.*  *In the OAM there is the possibility to delete an existing Trace Job (traceJob) in order to stop the measurement reporting. However, this will stop all measurements configured in this Trace Job (e.g. not only M4, but also M2, M3, M6, M7 as well as trace). Additionally, initializing the deletion of a Trace Job means additional effort and signalling. These issues can be avoided by configuring a number of measurement reports aka reportAmount per MDT measurement.*  *When the RAN chooses any allowed value for the reportAmount for MDT measurements M4, M5, M6 and M7, the OAM does not know how many reports to expect.* |

[2] hold the view that the above mentioned benefits are applicable for both NG-RAN and E-UTRAN. Therefore, it is proposed:

**Proposal 3: To introduce the Report Amount for M4, M5, M6, M7 measurements for E-UTRAN as a LTE correction in Rel-17.**

**Q3: Whether the introduction of the Report Amount is beneficial also for E-UTRAN?**

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| --- | --- | --- |
| Company | Yes/No | Comments |
| Ericsson | Yes | As confirmed by SA5 and as agreed in RAN3 (for NG-RAN), it is beneficial to introduce the report amount in MDT measurements. It is obvious to us that such benefit extends to LTE as well. |
| Huawei | Yes | Same comments as Ericsson |
| CATT | Should be check with SA5. | As we discussed before, LTE has been commercial for more than ten years, the negative influence seems very little, and the previous LS from SA5 in [3] is only for  Release: Rel-17  Work Item: NR\_ENDC\_SON\_MDT\_enh-Core  It implies that the replies from SA5 are made in the scope of rel-17.  But as a compromise, we can send LS to SA5 for confirming the value range of M4/5/7 and whether introduce Report Amount is needed for E-UTRAN. |
| Deutsche Telekom | Yes | We share the same view as Ericsson and Huawei. |
| Vodafone | Yes |  |
| ZTE |  | Share the view with CATT |
| Samsung |  | Agree with CATT. Could check with SA5. |
| Nokia |  | Agree that this can be checked with SA5. |

**Moderator’s summary:**

**Yes: 4/8**

**Check with SA5: 4/8**

**Q4: Do you agree with proposal 3 listed above, which says the report amount for M4, M5, M6, M7 measurements for E-UTRAN should be introduced in Rel-17?**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| Ericsson | Yes |  |
| Huawei | yes |  |
| CATT | NO |  |
| Deutsche Telekom | Yes |  |
| Vodafone | Yes |  |
| ZTE | No | We don’t see much necessity. |
| Samsung | No |  |
| Nokia | No |  |

**Moderator’s Summary:**

Yes: 4/8

No: 4/8

No consensus. Better check with SA5.

**Pls note:**

**All the submitted CRs would be handled in the 2nd round, if we can achieve some agreements in the 1st round.**

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| [R3-223657](file:///D:\\会议硬盘\\TSGR3_116-e\\Docs\\R3-223657.zip) | CR for 38.413 on MDT report amount (ZTE, China Telecom, Samsung, CATT) | CR0847r, TS 38.413 v17.0.0, Rel-17, Cat. F |
| [R3-223658](file:///D:\\会议硬盘\\TSGR3_116-e\\Docs\\R3-223658.zip) | CR for 38.423 on MDT report amount (ZTE, China Telecom, Samsung, CATT) | CR0843r, TS 38.423 v17.0.0, Rel-17, Cat. F |
| [R3-223659](file:///D:\\会议硬盘\\TSGR3_116-e\\Docs\\R3-223659.zip) | CR for 38.473 on MDT report amount (ZTE, China Telecom, Samsung, CATT) | CR0959r, TS 38.473 v17.0.0, Rel-17, Cat. F |
| [R3-223660](file:///D:\\会议硬盘\\TSGR3_116-e\\Docs\\R3-223660.zip) | CR for 37.483 on MDT report amount (ZTE, China Telecom, Samsung, CATT) | CR0021r, TS 37.483 v17.0.0, Rel-17, Cat. F |
| [R3-223197](file:///D:\\会议硬盘\\TSGR3_116-e\\Docs\\R3-223197.zip) | Introducing Report Amount for M4, M5, M6, M7 measurements for E-UTRAN (Huawei, Deutsche Telekom, Orange) | CR1876r, TS 36.413 v17.0.0, Rel-17, Cat. F  Move to 9.3.9 |
| [R3-223198](file:///D:\\会议硬盘\\TSGR3_116-e\\Docs\\R3-223198.zip) | Introducing Report Amount for M4, M5, M6, M7 measurements for E-UTRAN (Huawei, Deutsche Telekom, Orange) | CR1688r, TS 36.423 v17.0.0, Rel-17, Cat. F  Move to 9.3.9 |

**If you have any other questions or concern, please list in the table below. Of course you can also let us know via email reflector.**

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| Company | Concern |
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# **4 Conclusion, Recommendations**

See section 2.

# **5 References**

1. R3-223656 Discussion on Report Amount for MDT M4, M5, M6, M7 measurements (ZTE, China Telecom, Samsung, CATT)
2. R3-223196 Introducing Report Amount for M4, M5, M6, M7 measurements for E-UTRAN (Huawei, Deutsche Telekom, Orange)
3. S5-214523, Reply LS on Report Amount for M4, M5, M6, M7 measurements.