3GPP TSG-RAN WG3 #114bis-e R3-221002

17 - 26 Jan 2022

Online

**Agenda Item: 9.3.3**

**Source: ZTE - Moderator**

**Title:** **Summary of Offline Discussion on CB: # 10\_ReportIntervalMDT**

**Document for: Approval**

# **Introduction**

**CB: # 10\_ReportIntervalMDT**

**- Include the value 1280ms and 2560ms, or only 2560ms in the set of values for the Collection period in the M4 and M5 IEs to ensure consistency with TS32.422? LS reply to RAN2?**

**- Solve the misalignment issue of M1/M8/M9? And send LS to SA5 to inform this?**

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

**- LS to other groups, if needed**

(ZTE - moderator)

Summary of offline disc [R3-221002](file:///C:\\Users\\z00274494\\Downloads\\Inbox\\R3-221002.zip)

Please Note:

There would be two rounds of email discussion.

The 1st round is to be ended by Thursday (23:59 UTC, 2022-1-20).

The 2nd round is to be ended before the email deadline at second week (13:00 UTC, 2022-1-24).

# **2 For the Chairman’s Notes**

Propose to capture the following:

**Proposal 1: The report interval of M1 configuration in 38.413 and 38.423 should be corrected to align with RAN2.**

**Proposal 2: Send an LS to SA5 to notify about RAN3’s correction and kindly ask SA5 to update their specification to align with RAN2 and RAN3.**

**Proposal 3: There is no misalignment between SA5 and RAN3 on M4/M5 collection period, based on the latest version of specifications. No correction on RAN3 specifications is needed and no reply LS to RAN2 is needed.**

**Proposal 4: Add semantics descriptions to the name list of Bluetooth/WLAN configuration that says, the name list should be present if the Bluetooth/WLAN measurement configuration is set to be Setup. And also notify SA5 about the mandatory presence of name list the LS to SA5.**

**NGAP CR: R3-221091 Agreed**

**XnAP CR: R3-221092 Agreed**

**LS to SA5: R3-221260 Agreed**

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

Based on the first round discussion, the proposals are included as follows:

**Proposal 1: The report interval of M1 configuration in 38.413 and 38.423 should be corrected to align with RAN2.**

**Proposal 2: Send an LS to SA5 to notify about RAN3’s correction and kindly ask SA5 to update their specification to align with RAN2 and RAN3.**

**Proposal 3: There is no misalignment between SA5 and RAN3 on M4/M5 collection period, based on the latest version of specifications. No correction on RAN3 specifications is needed and no reply LS to RAN2 is needed.**

**Proposal 4: Add semantics descriptions to the name list of Bluetooth/WLAN configuration that says, the name list should be present if the Bluetooth/WLAN measurement configuration is set to be Setup. And also notify SA5 about the mandatory presence of name list the LS to SA5.**

Please see the summary after each question to check the conclusion. Further comments are welcome.

We would continue to work on the following items in the second round:

- CRs to 38.413/38.423 on M1, M8, M9. New versions have been uploaded into the folder.

- draft LS to SA5, which is also uploaded into the folder.

**4.1 CRs on 38.413/38.423**

**Q1: Any comments on the CRs to 38.413/38.423?**

|  |  |
| --- | --- |
| Company | Comments |
| Ericsson | The following semantics does not sound correct:  *The value min60 is not available in the specification.*  The value “60” is actually available, but the intention is not to use it. So the previous wording “it is not used” was correct.  Remove shall statements from the semantics. The following could be used  *This IE ~~shall be~~ is present if the Bluetooth Measurement Configuration IE is set to Setup*  *This IE ~~shall be~~ is present if the Bluetooth Measurement Configuration IE is set to Setup* |
| ZTE | Thanks for commenting. We uploaded ‘\_final’ version where I accepted the suggestions above.. |
|  |  |

**4.2 LS to SA5**

**Q1: Any comments on the draft LS to SA5?**

|  |  |
| --- | --- |
| Company | Comments |
| Ericsson | See draft version |
| Nokia | Thanks for the draft LS. A few suggestions are uploaded. |
| **ZTE** | Thanks for comments. A new version based on comments received is uploaded for checking. |

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

**3.1 M1 report interval**

|  |
| --- |
| **32.422 (v16.8.0):**  The parameter can have the following values in NR (detailed definition is in 3GPP TS 38.331 [43]):  - 120 ms (0),  - 240 ms (1),  - 480 ms (2),  - 640 ms (3),  - 1024 ms (4),  - 2048 ms (5),  - 5120 ms (6),  - 10240 ms (7),  - 1 min=60000 ms (8),  - 6 min=360000 ms (9),  - 12 min=720000 ms (10),  - 30 min=1800000 ms (11).  **38.413/38.423 (v16.8.0):**  ENUMERATED (ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60)  **38.331 (v16.7.0)**  ENUMERATED {ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, ms20480, ms40960,  min1,min6, min12, min30 } |

This is a left issue from RAN3#114. At last meeting, the misalignment issue on the report interval of M1 configuration between RAN3 and RAN2 has been discussed. The conclusion[1] reached at last meeting by companies is captured below:

RAN3 is aware that the report interval of M1 configuration over NGAP and XnAP is misaligned with 38.331, and this issue should be fixed. But the correction of M1 misalignment should also take the stage2 and stage3 alignment into account, pending the RAN2 reply.

The misalignment issues of M1, M4/M5 can be discussed together at next meeting, in order to fix the misalignment issues throughout specifications.

Note that RAN3 has received the reply LS[2] by now, hopefully we can handle the misalignment issue at this meeting. The reply LS from RAN2 is captured here:

|  |
| --- |
| RAN2 discussed the misalignment between RAN3’s stage-3 specification and SA5’s stage-2 specification and agreed on the following:   * RAN2 does not introduce new measurement periodicities for those measurements that are obtained from the UE |

As discussed in [3], the ASN.1 of 38.331 has been frozen and not supposed to be changed any more, the reply LS from RAN2 also proving that they would not prefer to bring any changes. Although this reply LS is for other measurements, it can somehow be applied to M1 measurement because it reflects the view of RAN2 in general.

So, focusing on the basic principle that RAN2 specification should not be changed, RAN3 has to make corrections on NGAP and XnAP, in order to align with RAN2. As also discussed in previous meetings, the stage2 and stage3 alignment should be taken into account as well. After the RAN3 alignment with RAN2, the stage2 specification (32.422 of SA5) would still be misaligned with RAN2/RAN3. So it would be better to send an LS to SA5 to notify them about the correction in RAN3, and kindly ask them to further update their stage 2 specification.

**Proposal 1: The report interval of M1 configuration in 38.413 and 38.423 should be corrected to align with RAN2.**

**Proposal 2: Send an LS to SA5 to notify about RAN3’s correction and kindly ask SA5 to update their specification to align with RAN2 and RAN3.**

**Q1: Do you think the above two proposals can be agreed?**

The draft CRs have been provided into the draft folder, based on the contributions [4][5], with a few further revision. Companies are also welcome to provide their comments here.

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| CATT | Yes |  |
| Huawei | Yes for proposal 1 | Not sure if we need a LS to SA5. Contribution can be submitted toSA5 directly to fix the misalignment. |
| Ericsson | Yes | We can correct RAN3 specs and send an LS to SA5 notifying the change so that SA5 also aligns their specs and we put an end (to the best extend) to Stage 2/Stage 3 misalignment for M1. |
| CMCC | Yes | It is an obvious way forward |
| Samsung | Yes |  |
| ZTE | Yes | We prefer to send an LS to SA5 to kindly ask them to update their specification, to show our respect to their opinions, noticing that they have mentioned stage 2 and stage3 specifications should be aligned in previous LS to RAN3 (although that is not related to M1 configuration). Besides, the requirement from us about mandatory configuring name list for M8/M9 should also be mentioned. Hence, it is suggested that an LS capturing all the changes in RAN3 should be sent to SA5. |

**Moderator’s Summary:**

Almost all companies commented agree to accept the correction in RAN3 and send an LS to inform SA5 about our corrections.

Only one company is not sure about whether an LS to SA5 is needed.

Considering that the stage 2 and stage 3 alignment has been discussed for more than one meetings, and SA5 has also shows their opinion on stage 2 and stage 3 alignment in previous LS to RAN3 (although not related to M1), Moderator would prefer to send an LS to SA5 from our side, to show RAN3’s awareness of the stage2-stage3 alignment issue.

A draft LS has been uploaded into the folder. Companies are welcome to provide any comments.

The candidate proposals to be captured into the chairmen notes:

**Proposal 1: The report interval of M1 configuration in 38.413 and 38.423 should be corrected to align with RAN2.**

**Proposal 2: Send an LS to SA5 to notify about RAN3’s correction and kindly ask SA5 to update their specification to align with RAN2 and RAN3.**

**3.2 M4/M5 collection period**

|  |
| --- |
| **32.422 (v16.8.0):**  The parameter is an enumerated type with the following values:  - 1024 ms (0),  - 2048 ms (2),  - 5120 ms (4),  - 10240 ms (5)  - 1 min (6).  **36.413/36.423 (v16.8.0):**  ENUMERATED (ms1024, ms2048, ms5120, ms10240, min1, …) |

[6] ~ [9] proposed to add new values in 36.413/36.423 for M4/M5 collection period, in order to align with 32.422 stage 2 specification. But Moderator noticed that, the two values (ms1280, ms2560) have been removed from 32.422 since v16.7.0. So there is no misalignment between SA5 and RAN3 on M4/M5 collection period, based on the latest version of Rel-16 specifications.

**Proposal 3: There is no misalignment between SA5 and RAN3 on M4/M5 collection period, based on the latest version of specifications. No correction on RAN3 specifications is needed and no reply LS to RAN2 is needed.**

**Q2: Do you agree with the above proposal?**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| CATT | Yes |  |
| Huawei | Yes | In principle, if misalignment exits between stage 2 and stage 3, stage 3. Should take the priority. Therefore, we don’t think the need to update stage 3 to align with stage 2…  And RAN2 provides the negative feedback either |
| Ericsson | Yes | It is correct that SA5 has updated their specs. Thanks to the moderator for spotting this.  As a side comment, note that Stage 2 in this case determines the values communicated by OAM to RAN. If stage 2 and stage 3 are not aligned, OAM and RAN arenot able to configure the right measurements parameters. Of course, if the understanding is that MDT should work in a single vendor way and that things can be fixed in a proprietary way, then we do not need to align Stage 2 and Stage 3. |
| CMCC | Yes | Agree |
| Samsung | Yes |  |
| ZTE | Yes |  |

**Moderator’s Summary:**

All the companies commented agree with the above proposal.

Candidate proposal to be captured into chairmen notes:

**Proposal 3: There is no misalignment between SA5 and RAN3 on M4/M5 collection period, based on the latest version of specifications. No correction on RAN3 specifications is needed and no reply LS to RAN2 is needed.**

**3.3 M8/M9 name list**

The name list of Bluetooth/WLAN measurement configuration is used to indicate which specific measurement is needed to be collected from UE. [3] noted some potential issue on current specifications relate to the configuration and reporting of M8/M9 measurements. To be specific, in 38.413/38.423, the range of Bluetooth/WLAN Measurement Configuration Name List is “0..1”, which means the OAM can enable M9/M9 measurements without providing the corresponding name list information. However, take into the ASN.1 structure in 38.331, the reporting of Bluetooth/WLAN measurement at UE side should be activated by receiving at least one name list item.

|  |
| --- |
| **TS 38.331 ASN.1:**  PeriodicalReportConfigInterRAT ::= SEQUENCE {  reportInterval ReportInterval,  reportAmount ENUMERATED {r1, r2, r4, r8, r16, r32, r64, infinity},  reportQuantity MeasReportQuantity,  maxReportCells INTEGER (1..maxCellReport),  …,  [[  reportQuantityUTRA-FDD-r16 MeasReportQuantityUTRA-FDD-r16 OPTIONAL -- Need R  ]],  [[  includeCommonLocationInfo-r16 ENUMERATED {true} OPTIONAL, -- Need R  includeBT-Meas-r16 SetupRelease {BT-NameList-r16} OPTIONAL, -- Need M  includeWLAN-Meas-r16 SetupRelease {WLAN-NameList-r16} OPTIONAL, -- Need M  includeSensor-Meas-r16 SetupRelease {Sensor-NameList-r16} OPTIONAL -- Need M  ]]  }  *--omit un-relevant part*  *BT-NameList* information element  -- ASN1START  -- TAG-BTNAMELIST-START  BT-NameList-r16 ::= SEQUENCE (SIZE (1..maxBT-Name-r16)) OF BT-Name-r16  BT-Name-r16 ::= OCTET STRING (SIZE (1..248))  -- TAG-BTNAMELIST-STOP  *WLAN-NameList* information element  -- ASN1START  -- TAG-WLANNAMELIST-START  WLAN-NameList-r16 ::= SEQUENCE (SIZE (1..maxWLAN-Name-r16)) OF WLAN-Name-r16  WLAN-Name-r16 ::= OCTET STRING (SIZE (1..32))  -- ASN1STOP  -- TAG-WLANNAMELIST-STOP |

Accordingly, if the OAM never provide the name list for the Bluetooth/WLAN measurement, UE would never receive the name over Uu which is used to activate the reporting of Bluetooth/WLAN measurement. So it can be concluded that the current specifications cannot avoid the following case:

The OAM may enable the Bluetooth/WLAN measurement configuration but never include any name list information, then the UE would never start the reporting of Bluetooth/WLAN measurement.

To prevent the case described above, [4][5] proposed that OAM should always include the name list information in the Bluetooth/WLAN measurement configuration, as long as the corresponding measurement is set to Setup. With this kind of correction, the name list would always be sent to Uu as long as the Bluetooth/WLAN measurement is setup by OAM. So that the potential issue pointed above can be avoided.

**Q3: Do you think the correction on M8/M9 proposed in [4][5] can be accepted?**

Any other comments on the corrections can also be provided here.

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| CATT | Yes | This modify can avoid Bluetooth/WLAN measurement configuration failure due to lacking of name list. |
| Huawei | Yes. |  |
| Ericsson | Yes, but | RAN3 can agree to a change to their specifications but an LS to SA5 should be sent in order to notify SA5 of the mandatory presence of the name list, so that SA5 includes a similar correction in their specifications |
| CMCC | Yes | After internal check, the correction is needed. CMCC is fine to co-source the CR |
| Samsung | Yes | Just noticed, the LTE has the same problem. Maybe 36.413 and 36.423 need the similar change. Maybe can task rapporteurs to make the alignment if the correction on M8/M9 is agreed for NR. |
| ZTE | Yes | Agree with Ericsson that an LS to SA5 is needed to capture our requirement for the name list of M8/M9, along with our corrections for M1.  Agree with Samsung that 36.413/423 rapporteurs can be tasked to make corresponding corrections for LTE M8/M9, to align with NR. |

**Moderator’s Summary:**

All the companies commented agree with correction for M8/M9 name list in [4][5]. One company mentioned the mandatory presence of name list should also be notified to SA5 in the LS, which the moderator also thinks reasonable.

Candidate proposal to be captured into chairmen notes:

**Proposal 4: Add semantics descriptions to the name list of Bluetooth/WLAN configuration, that says the name list should be present if the Bluetooth/WLAN measurement configuration is set to be Setup. And also notify SA5 about the mandatory presence of name list the LS to SA5.**

# **4 Conclusion, Recommendations**

See section 2.

# **5 References**

1. R3-215830, Summary of Offline Discussion on CB # 27\_ReportIntervalMDT
2. R3-220109, Reply LS on MDT Stage 2 and Stage 3 Alignment (reply LS to R3-207222) (RAN2)

[3] R3-220901, Discussion on value range misalignment for M1, M8 and M9 configuration (ZTE, CATT, China Telecom, China Unicom, Huawei, Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell, Samsung)

[4] R3-220902, Value range misalignment for M1, M8 and M9 measurement configuration (ZTE, CATT, China Telecom, China Unicom, Huawei, Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell, Samsung)

[5] R3-220903, Value range misalignment for M1, M8 and M9 measurement configuration (ZTE, CATT, China Telecom, China Unicom, Huawei, Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell, Samsung)

[6] R3-220737, Discussion on synching the collection period values to SA5 specifications (CATT)

[7] R3-220738, 36.413 CR for synching the collection period values to SA5 specifications (CATT)

[8] R3-220305, Synching the Collection Period values to those specified in TS32.422 (Ericsson)

[9] R3-220306, Synching the Collection Period values to those specified in TS32.422 (Ericsson)