3GPP TSG-RAN WG3 #113-e R3-214161

Online, 16 – 26 Aug, 2021

Agenda Item: 9.3.4.1

Source: ZTE(moderator)

Title: Summary of Offline Discussion on CB: # 32\_SONMDTCorrections

Document for: Approval

# Introduction

This contribution is to kick off the following discussion.

|  |
| --- |
| **CB: # 32\_SONMDTCorrections**  **- Align value range for report Interval IE of MDT with RAN2?**  **- Correct the level of DL-scheduling-PDCCH-CCE-usage and UL-scheduling-PDCCH-CCE-usage?**  **- Add SON Information Request and SON Information Reply IEs in Inter-system SON Information IE?**  (ZTE - moderator)  Summary of offline disc in [R3-214161](file:///C:\Users\cmcc\Downloads\Inbox\R3-214161.zip) |

This CB will be divided into two rounds:

**Round 1: Check details and revise as needed**

**Round 2: Converge on agreeable CRs**

The deadline for Round 1 is Friday, August 20th, EOB.

The deadline for Round 2 is Tuesday, August 24th, 12:00 UTC.

# For the Chairman’s Notes

**[To be added]**

# Discussion(Round 1)

### Misalignment value range for report interval IE of MDT

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| --- | --- | --- |
| [R3-213802](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213802.zip) | Misalignment value range for reportInterval IE of MDT for NGAP (ZTE,Lenovo, Motorola Mobility,China Unicom,China Telecom) | CR0644r, TS 38.413 v16.6.0, Rel-16, Cat. F |
| [R3-213803](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213803.zip) | Misalignment value range for reportInterval IE of MDT for XnAP (ZTE,Lenovo, Motorola Mobility,China Unicom,China Telecom) | CR0651r, TS 38.423 v16.6.0, Rel-16, Cat. F |

**Reason for change:**

*M1 Configuration* IE is designed for MDT M1 measurement collection and was introduced in Rel-16. The IE contains a Report Interval sub IE for M1 Periodic Reporting. The value range of the IE includes ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60. And in semantics description, it states that the IE refer to TS38.331.

However, in TS 38.331,the value range of ReportInterval can be found below:

ReportInterval ::= ENUMERATED {ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, ms20480, ms40960,

min1,min6, min12, min30 }

It can be seen the misalignment exist for value range in Uu and NGAP/XnAP.

**Summary of change:**

In both NGAP and XnAP:

* Introduce two values (i.e. ms20480, ms40960) for *Report Interval* IE in *M1 Configuration* IE.
* Add a note in semantics description that value min60 is not used in the specification.

**Question: Do you agree with the corrections? Do you propose changes?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comments |
| Ericsson |  | The correction is related to the discussion we already had and that generated an LS to RAN2 in R3-207222. In that discussion we argued whether the report interval for M4 and M5 should be aligned between Stage 2 and Stage 3 (in RAN2 and RAN3). We would like to wait for that discussion to converge before addressing this correction. |
| China Telecom | Y | We think the changes in the above CRs are necessary. |
| Huawei |  | We would like to wait for the reply from SA5 and RAN2. |
| Nokia |  | We would like to wait for the reply from SA5 and RAN2. |
| CMCC |  | Changes are fine. We can wait for RAN2 as per the explanation from Ericsson |
| Samsung |  | Changes are fine. We can wait the confirmation from RAN2 |

### Correction of RESOURCE STATUS UPDATE message

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| --- | --- | --- |
| [R3-213918](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213918.zip) | Correction of RESOURCE STATUS UPDATE (Samsung, Ericsson, Nokia, Nokia Shanghai Bell, ZTE, CATT, Huawei, CMCC) | CR0659r, TS 38.423 v16.6.0, Rel-16, Cat. F |

**Reason for change:**

There is an error in the definition of the IE *Radio Resource Status* in RESOURCE STATUS UPDATE message.

The current definition of the IE *Radio Resource Status* in RESOURCE STATUS UPDATE is as following:

9.2.2.50 Radio Resource Status

|  |  |  |  |
| --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference |
| CHOICE *Radio Resource Status Type* | M |  |  |
| … |  |  |  |
| >*gNB* |  |  |  |
| >>**SSB Area Radio Resource Status List** |  | *1* |  |
| >>>**SSB Area Radio Resource Status Item** |  | *1..<maxnoofSSBAreas>* |  |
| >>>>SSB Index | M |  | INTEGER (0..63) |
| … |  |  |  |
| >>DL scheduling PDCCH CCE usage | O |  | INTEGER (0..100) |
| >>UL scheduling PDCCH CCE usage | O |  | INTEGER (0..100) |

But UL/DL scheduling PDCCH CCE usage should be per SSB, and it had been agreed in R3-206955 in RAN3#110-e, as following. We don’t know why the correction is not reflected in the latest TS38.423.

|  |  |  |  |
| --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference |
| CHOICE *Radio Resource Status Type* | M |  |  |
| … |  |  |  |
| >*gNB* |  |  |  |
| >>**SSB Area Radio Resource Status List** |  | *1* |  |
| >>>**SSB Area Radio Resource Status Item** |  | *1..<maxnoofSSBAreas>* |  |
| >>>>SSB Index | M |  | INTEGER (0..63) |
| … |  |  |  |
| >>>>DL scheduling PDCCH CCE usage | O |  | INTEGER (0..100) |
| >>>>UL scheduling PDCCH CCE usage | O |  | INTEGER (0..100) |

**Summary of change:**

Correct the level of DL-scheduling-PDCCH-CCE-usage and UL-scheduling-PDCCH-CCE-usage.

This is a BC change.

**Question: Do you agree with the corrections? Do you propose changes?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comments |
| Ericsson | Yes |  |
| China Telecom | Yes |  |
| Huawei | Yes |  |
| Nokia | Yes |  |
| CMCC | Yes |  |
| Samsung | Yes |  |

### Correction of inter system SON configuration transfer

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| --- | --- | --- |
| [R3-213518](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213518.zip) | Correction of inter system SON configuration Transfer (NTT DOCOMO INC.) | CR0607r1, TS 38.413 v16.6.0, Rel-16, Cat. F |

**Reason for change:**

In TS 23.501 subclause 5.17.7, the configuration transfer between NG-RAN and E-UTRAN to enable the transfer of the RAN TNL address information between the gNB and eNB via MME and AMF is supported. While the related signaling is not supported in latest TS 38.413 spec yet.

**Summary of change:**

Add SON Information Request and SON Information Reply IEs in Inter-system SON Information IE.

**Question: Do you agree with the corrections? Do you propose changes?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comments |
| Ericsson |  | We would like to understand the scenario a little better first. Is the intention that of establishing an EN-DC X2 between an eNB and a gNB that can also work ad en-gNB? |
| Huawei | N | There is no interface between gNB and eNB. We wonder if the scenario is rather pointing at a solution to get TNL for EN-DC, i.e. between eNB and en-gNB where the en-gNB is also operating as gNB?  See agreed CR in **R3-191124** where the reason for change is:  *The current version of this specification does not support X2 TNL address discovery for EN-DC via inter-system signalling. The scenario not supported is that where the detected NR cell broadcasts a 5GS TAI (i.e. supports connection to 5GC), but can also support EN-DC operation. A solution involves inter-system signalling from the initiating eNB towards the NG-RAN node, requesting transport layer information. The response can be used in E-UTRAN to set up an X2 towards an en-gNB (same NR cell).*  Summary of change is:  *A new IE (EN-DC SON Configuration Transfer) is added to both UPLINK RAN CONFIGURATION TRANSFER and DOWNLINK RAN CONFIGURATION TRANSFER messages. The new IE is either received or sent via inter-system signalling from/to E-UTRAN. The IE is defined as an octet string, with contents defined as in TS 36.413.* |
| NTTDOCOMO | Y | Agree the inter-system signaling for TNL address discovery for EN-DC is already in place.  While for NE-DC, especially the eNB connected EPC could be upgraded to serve as SN (ng-eNB) in NE-DC, so it could play role of both eNB and ng-eNB. In such case, if gNB wants to get TNL address from eNB connected EPC for NE-DC connection, it requests Xn TNL address using UPLINK RAN CONFIGURATION TRANSFER with inter-system SON configuration included, and vice versa for request from eNB.  In addition, the reason to include X2 TNL address in inter-system SON configuration is that in case gNB serve both SA and NSA (en-gNB), when it requests Xn TNL address from eNB for NE-DC connection, it can also send its X2 TNL address to eNB at the same time i.e. there is no need for eNB to send request for X2 TNL address to the same gNB for EN-DC connection again. |
| Nokia |  | Thanks for above specification status and scenario clarifications. We don't exclude this could be useful for collocated cases, maybe to be discussed for Rel-17. |
| CMCC |  | Thanks Docomo for the clarification, we understand it is propose mainly for collocated case, one question, in this case, isn’t the eNB served as ng-eNB could use the NG interface which is intra-system to get the TNL address?  [DOCOMO]  Thanks to CMCC for further clarification. For ng-eNB which is connected to 5GC, we agree intra-system signaling can work. While for eNB connected to EPC which is upgraded as ng-eNB to serve as SN in NE-DC, in such case, since there is only S1 interface for the eNB, inter-system signaling is needed. |
| Samsung |  | We need to understand more on the scenario. Once an eNB is upgraded as ng-eNB, it will have interface with 5GC. Even if the ng-eNB is served as SN. NG can be used for TNL address transmission (non-UE associated signaling). Ng-eNB serving as SN in NE-DC is for some UEs. |

### Correction on LTE UE RLF report

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| --- | --- | --- |
| [R3-213899](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213899.zip) | Correction on LTE UE RLF report (China Telecom Corporation Ltd.) | Discussion |
| [R3-213900](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213900.zip) | R16 CR to Correction on LTE UE RLF Report (China Telecom,CATT) | CR0657r, TS 38.423 v16.6.0, Rel-16, Cat. F |

**Reason for change:**

For LTE UE RLF Report, there are two parts in UEInformationResponse message which are RLF-Report-r9 IE and RLF-Report-v9e0 IE. It is propose to include RLF-Report-v9e0 IE in LTE UE RLF Report.

**Summary of change:**

RLF-Report-v9e0 IE is included in LTE UE RLF Report.

**NOTE**: In addition to the CR[6], a new discussion paper is given in [5] to clarify the scenario.

**Question: Do you agree with the corrections? Do you propose changes?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comments |
| Ericsson | N | MRO in LTE is a well established feature and we think that these changes are late and not essential |
| China Telecom | Y | 1) This CR is for NR not for LTE….  2) This CR does not introduce any new function for MRO, just correction…the range of *ARFCN-ValueEUTRA* is not enough to cover all bands defined in TS36.101. This is the reason why *RLF-Report-v9e0* is needed*.* Thusthe *RLF-Report-v9e0* can be regarded as an assistant information to indicate the extension value for the measurement results listed in *RLF-Report-r9.*  3) In addition, this IE had been included in TS36.423. Since LTE RLF report was agreed to be introduced in TS38.423, why we ignore obvious problems? |
| Huawei | N | This is include in LTE RRC but not in NR RRC. If this is important, it should probably be added there first. Current CR is NBC. If this change is wanted, we should have a BC solution. |
| Nokia | N | Agree with E/// and HW that this correction may not be needed. We also observe the NBC approach which should be avoided. |

# Conclusion, Recommendations [if needed]

If needed

# References

1. [R3-213](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213413.zip)802 Misalignment value range for reportInterval IE of MDT for NGAP (ZTE,Lenovo, Motorola Mobility,China Unicom,China Telecom)
2. [R3-213](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213414.zip)803 Misalignment value range for reportInterval IE of MDT for XnAP (ZTE,Lenovo, Motorola Mobility,China Unicom,China Telecom)
3. [R3-213](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213415.zip)918 Correction of RESOURCE STATUS UPDATE (Samsung, Ericsson, Nokia, Nokia Shanghai Bell, ZTE, CATT, Huawei, CMCC)
4. [R3-213](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213434.zip)518 Correction of inter system SON configuration Transfer (NTT DOCOMO INC.)
5. [R3-2138](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213749.zip)99 Correction on LTE UE RLF report (China Telecom Corporation Ltd.)
6. [R3-2139](file:///D:\会议硬盘\TSGR3_113-e\Docs\R3-213750.zip)00 R16 CR to Correction on LTE UE RLF Report (China Telecom,CATT)