3GPP TSG-RAN WG2 #119bis-e R2-221xxxx

Online, 10th – 19th Oct, 2022

Agenda Item: 8.1.2

Source: ZTE Corporation

Title: Report of [AT119bis-e][NCR] NCR open issues (ZTE)

Document for: Discussion, Decision

# Introduction

This document is the report of the following offline discussion:

* Side control information signaling options (i.e. RRC vs. OAM)
* RRC states of NCR-MT
* Support of SRBs/DRBs
* NCR-Fwd ON/OFF
* SI impacts
* RRM functions

* [AT119bis-e][701][NCR] NCR open issues (ZTE)

Scope: see above.

Intended outcome: Report.

Deadline: TBD

# Contact Information

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| Company | Name | Email address |
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# Discussion

This document is to collect company views on the NCR open issues

## Side control information signalling options

According to the TR, there are 3 options for the NCR-MT to obtain the necessary configuration for receiving the L1/L2 signaling of the side control information.

- Option 1: The necessary configuration is from RRC.

- Option 2: The necessary configuration is from OAM or hard-coded.

- Option 3: The necessary configuration is partially configured by RRC and partially configured by OAM or hard-coded.

**Q1: Which option do companies prefer to configure NCR-MT for receiving L1/L2 signalling of side control information?**

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| --- | --- | --- |
| Company | Option 1 (RRC);  Option 2 (OAM);  Option 3(RRC+OAM) | Comments |
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## RRC states of NCR-MT

Companies are invited to show your views on which RRC state(s) can be supported by NCR-MT.

* RRC\_CONNECTED;
* RRC\_IDLE;
* RRC\_INACTIVE

**Q2: Which RRC state(s) can be supported by NCR-MT?**

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| --- | --- | --- | --- | --- |
| Company | applicable RRC states  (answer Yes/No/FFS) | | | Comments |
| RRC\_  CONNECTED | RRC\_  IDLE | RRC\_  INACTIVE |
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## Support of SRBs/DRBs

Whether NCR-MT supports SRBs (i.e. SRB0/1/2) and DRB?

To facilitate the discussion, rapporteur has provided some information from other WG:

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| *#RAN3 online agreement made on Thursday 10-13:*  **The NCR-OAM connectivity requirement should be supported, further details can be discussed.**  Nok: This OAM requirement has no impact in RAN3 |

So RAN3 just agreed to support NCR-OAM connectivity, as proposed by some companies, one possible way for transmitting OAM traffic from NCR-MT to gNB (or vice versa) is to establish a DRB, similar to IAB.

**Q3: Whether SRBs and DRB are supported by NCR-MT?**

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| --- | --- | --- | --- | --- | --- |
| Company | Support of SRB/DRB  (answer Yes/No/FFS) | | | | Comments |
| SRB0 | SRB1 | SRB2 | DRB |
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## NCR-Fwd ON/OFF

Several companies propose to discuss the linkage between NCR-Fwd ON/OFF and the RRC state of NCR-MT, rapporteur has summarized them into following options:

* Option 1: When NCR-Fwd is ON, NCR-MT can be in any RRC states (e.g. RRC\_CONNECTED or RRC\_IDLE/INACTIVE);
* Option 2: When NCR-Fwd is ON, NCR-MT must be in RRC\_CONNECTED state; when NCR-MT is in RRC\_IDLE/INACTIVE states, NCR-Fwd must be “OFF”;
* Option 3: When NCR-Fwd is ON, NCR-MT must be in RRC\_CONNECTED state; when NCR-MT is in RRC\_IDLE state, NCR-Fwd must be “OFF”; when NCR-MT is in RRC\_INACTIVE state, NCR-Fwd can be “ON” or “OFF”;
* Option 4: Up to RAN1, considering RAN1 is discussing the fallback mechanism for NCR.

**Q4: Which option is preferred for the linkage between NCR-Fwd ON/OFF and the RRC state of NCR-MT?**

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| Company | Preferred Option | Comments |
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## SI impacts

For legacy SIB configuration, companies are invited to check the following proposals:

* Proposal 1: NCR-MT should ignore cellBarred indication;
* Proposal 2: NCR-MT should ignore Unified Access Control (UAC) configuration;
* Proposal 3: NCR-MT should ignore cellReservedForOperatorUse, cellReservedForFutureUse，cellReservedForOtherUse and intraFreqReselection indications.

**Q5: Which proposal(s) do you support?**

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| --- | --- | --- |
| Company | Supported proposals  (P1, P2, P3) | Comments |
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## RRM functions

For the following RRC functions, which one(s) should be or can be supported by NCR-MT?

* C1: RRM measurements in RRC\_IDLE/INACTIVE;
* C2: RRM measurements in RRC\_CONNECTED;
* C3: Cell (re)selection;
* C4: Handover;
* C5: RLM;
* C6: BFD, BFR

Note: based on the progress in RAN4, most companies suggest to wait for RAN2 input.

**Q5: Which RRM functions should be or can be supported by NCR-MT?**

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| Company | Supported RRM functions  (answer Yes/No/FFS) | | | | | | Comments |
| C1 | C2 | C3 | C4 | C5 | C6 |
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# Conclusion

Based on companies’ input, proposals are listed as follows.

**TBD**