CB: #7_MultiUSIM_113e - Version 0.0.2

RAN3

1 Introduction

CB: # 7_MultiUSIM

- Busy indication, wait for RAN2's analysis and final decision? Express a preference to avoid selecting a NAS-based solution which establishes the RRC connection?

- Leaving indication, RAN3 does nothing for now and waits for further information/decision from RAN2/SA2?

- Reply LS to SA2?

(HW - moderator)

[NWM] Summary of offline disc in R3-214139

2 For the Chairman's Notes

- RAN3 do nothing during this meeting, and there is no need to send a LS out to RAN2
- The current NAS-based busy indication solution has no impact to RAN3 specification. Other impact to RAN3 can be FFS.

3 Discussion

3.1 NAS-based busy indication

3.1.1 RAN3 impact on NAS based busy indication solution

In [1], an LS on NAS-based busy indication is agreed and sent to RAN3 from SA2. In the LS, it can be observed that SA2 expressed that 13 companies have the concern described hereafter whereas 12 companies do not share this concern. The main issues are listed as follows.

Table 1:

- The UE resumes from RRC-Inactive when sending the Paging Reject in NAS level. - The RAN is unaware of the content of the NAS message and forwards the NAS message to AMF. The RAN node starts scheduling the DL data or signalling within its buffers for the UE. - Depending upon UE implementation, the UE may discard any received packet or NAS PDU, which would lead to use of Uu resources for these discarded packets or NAS PDUs. - This may continue until the UE is released. - RAN receives the N2 release request from the AMF and then releases the UE to CM-IDLE/RRC-IDLE.

In [2], a detailed analysis has been given to the related concern, and the company in [2] concludes that the concerns raised by some companies of SA2 is not a big issue. In [7], similar opinions were shown. Then in [4], however, some concerns were raised including loss of packets, change of paradigm, etc. Finally, a response paper is submitted in [9] and it suggest to leave the SA2 concern on Uu latency to RAN2.

SA2 LS also mentioned that the UE will move to Idle as an outcome of NAS-based busy indication procedure. From moderator's view, this is more related to RAN3 compared to the concerns mentioned before. With the suggested solution, NG-RAN node will receive the N2 context release command from AMF. In [2], [6], [7] and [9], a similar understanding is shared that if the NAS-based busy indication solution shown in [1] is finally decided by RAN2/SA2, it has no RAN3 impact.

Additionally, [2], [6] and [9] all propose RAN3 does nothing for now and waits for further information/decision from RAN2/SA2.

Question 1: Do companies agree that if the NAS-based busy indication solution is decided, there would be no RAN3 impact?

Feedback Form 1: Question 1

1 – HUAWEI TECHNOLOGIES Co. Ltd. Yes.This is a legacy solution which is supported and has no RAN3 impact.
2 – CATT Yes. No RAN3 impact
3 – RadiSys Agree. No RAN3 impact
4 – Ericsson LM Correct. RAN3 is not impacted.
5 – Intel Technology India Pvt Ltd Yes, unless RAN2 does something for concerns raised, no impact to RAN3.
6 – Samsung R&D Institute UK Agree. No RAN3 impact.

Question 2: Do companies agree that the SA2 concern on other aspects, e.g. potential waste of Uu resources, Uu latency, etc, can be left to RAN2 to discuss, and RAN3 does nothing for now and waits for further information/decision from RAN2/SA2 ?If not, please state the related RAN3 issues.

Feedback Form 2: Question 2

1 – HUAWEI TECHNOLOGIES Co. Ltd. Yes. We think the other concerns mentioned by SA2 is not a big issue, and should be left to RAN2 to discuss. For now, RAN3 does nothing but wait for further information/decision.
2 – CATT Yes. RAN3 does nothing for now and waits for further information/decision from RAN2/SA2
3 – RadiSys Agree. RAN3 needs to wait for RAN2 for further information.
4 – Ericsson LM At least from RAN3 aspect, the issues, if any at all, are small issues.
5 – Intel Technology India Pvt Ltd Yes, unless RAN2 does something for concerns raised, no need to do anything in RAN3 at this moment.
6 – Samsung R&D Institute UK Agree. Be left to RAN2

3.1.2 LS Out

In [3], [5] and [8], LSs are provided to send to SA2 as response. Specifically, [3] thinks the concern raised is not a big deal, and RAN3 should wait for RAN2's analysis for further analyzing potential RAN3 impact, [5] confirms the solution has no RAN3 specification impact. [8] hopes to express that RAN3 shares same concerns as SA2 and we should avoid NAS-based solution. In the response paper [9], it is suggested not to send the reply LS in this RAN3 meeting.

In moderator's view, we can first decide is it necessary to send a LS out. If a LS is needed and we can luckily reach a consensus regarding the above questions, we can further decide agree which draft as the LS out.

Question 3: Do companies think it is necessary to send a LS out to SA2 during this meeting?

Feedback Form 3: Question 3

1 – HUAWEI TECHNOLOGIES Co. Ltd. No. Maybe not necessary. Although drafts are prepared, the LS [1] seems more related to RAN2.
2 – CATT No.
3 – RadiSys Not needed

4 – Ericsson LM If send, we can feedback our view on the issues and solutions. Or we leave this to RAN2.
5 – Intel Technology India Pvt Ltd No need to reply LS. Let RAN2 discuss and handle.
6 – Samsung R&D Institute UK Not needed

3.2 Network switching and leaving indication

In [6], the leaving indication problem is mentioned, and it is proposed that RAN3 does nothing for now and waits for further information/decision from RAN2/SA2. Current RAN2 and SA2 agreements for AS/NAS based leaving indication have no RAN3 impact.

Question 4: Do companies agree the above proposal?

Feedback Form 4: Question 4

1 – HUAWEI TECHNOLOGIES Co. Ltd. Yes, RAN3 does nothing for now. We can analyze the impact when further information/decision is given
2 – CATT Yes
3 – RadiSys Agree
4 – Ericsson LM Nothing to do for now.
5 – Intel Technology India Pvt Ltd Yes, nothing to do for now.
6 – Samsung R&D Institute UK Nothing to do for now in RAN3.

4 References

1. R3-213129 Reply LS on NAS-based busy indication (SA2) LS in
2. R3-213679 Further discussion on NAS-based busy indication (Huawei) discussion

3. R3-213680 [DRAFT] Reply LS on NAS-based busy indication (Huawei) LS out
4. R3-213430 Issues related to NAS-based Busy Indication (Nokia, Nokia Shanghai Bell) discussion
5. R3-213431 Response LS on NAS-based Busy Indication (Nokia, Nokia Shanghai Bell) LS out
6. R3-213650 Busy indication and leaving indication (Qualcomm Incorporated) discussion
7. R3-213772 Discussion on NAS-based busy indication (Ericsson) discussion
8. R3-213773 [DRAFT] Reply LS on NAS-based busy indication (Ericsson) LS out
9. R3-214132 Response to R3-213430, R3-213650, R3-213679, R3-213772 (ZTE) response