3GPP TSG-RAN WG3 #114-e R3-215873

1-11 Nov 2021

Online

Agenda Item: 17.1

Source: CMCC

Title: Summary of offline discussion on RAN slicing workplan and LSin

Document for: Approval

# Introduction

This contribution provides email discussion for the following,

**CB: # RANSlicing1\_Workplan\_LSin**

**- Check work plan, revise [R3-215690](C:\\Users\\llopes\\OneDrive - Qualcomm\\Documents\\3 RAN3\\RAN3 114\\Inbox\\Drafts\\CB # RANSlicing1_Workplan_LSin\\Inbox\\R3-215690.zip) if needed**

**- Any reply from RAN3 to [R3-215797](C:\\Users\\llopes\\OneDrive - Qualcomm\\Documents\\3 RAN3\\RAN3 114\\Inbox\\Drafts\\CB # RANSlicing1_Workplan_LSin\\Inbox\\R3-215797.zip) is needed?**

(CMCC - moderator)

Summary of offline disc [R3-215873](C:\\Users\\llopes\\OneDrive - Qualcomm\\Documents\\3 RAN3\\RAN3 114\\Inbox\\Drafts\\CB # RANSlicing1_Workplan_LSin\\Inbox\\R3-215873.zip)

# For the Chairman’s Notes

Propose the following:

(For those proposals that may be controversial, we could discuss online.)

**Proposal 1: Note the work plan and capture the table of RAN3 BLCR moderator below in the Chairman’s Notes.**

|  |  |
| --- | --- |
| TS No. | BLCR moderator |
| 38.300 | Nokia |
| 38.413 | Huawei |
| 38.423 | Samsung |
| 38.473 | ZTE |
| 38.463 | Ericsson |
| 37.340 | CATT |

**Proposal 2: Postpone/Follow the decision on slice group granularity to the next RAN3 meeting.**

**Proposal 3: Draft an LS providing observations on slice group granularity from RAN3’s perspective.**

# Discussion

The following contributions are captured in this section,

|  |  |  |
| --- | --- | --- |
| [R3-215690](file:///D:\会议硬盘\TSGR3_114-e\Docs\R3-215690.zip) | Updated work plan for RAN slicing (CMCC, ZTE) | Work Plan |
| [R3-215797](C:\\Users\\llopes\\OneDrive - Qualcomm\\Documents\\3 RAN3\\RAN3 114\\Inbox\\Drafts\\CB # RANSlicing1_Workplan_LSin\\Inbox\\R3-215797.zip) | Reply LS on Slice list and priority information for cell reselection (SA2) | LS in  Move to 17.1 |

## Updated work plan

Regarding the updated work plan in R3-215690 [1], please provide comments in the following table, if any,

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

In addition, after the coordination with companies, the list of RAN3 BLCR moderators is proposed as follows,

|  |  |
| --- | --- |
| TS No. | BLCR moderator |
| 38.300 | Nokia |
| 38.413 | Huawei |
| 38.423 | Samsung |
| 38.473 | ZTE |
| 38.463 | Ericsson |
| 37.340 | CATT |

Please check, and comment below if any. The list is planning to be captured in the Work Plan after the final check during the online session.

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

Moderator’s summary:

We assume all companies are fine since no comments received regarding the work plan and the table of RAN3 BLCR moderators. So we propose the following:

Proposal 1: Note the work plan and capture the table of RAN3 BLCR moderator below in the Chairman Notes,

|  |  |
| --- | --- |
| TS No. | BLCR moderator |
| 38.300 | Nokia |
| 38.413 | Huawei |
| 38.423 | Samsung |
| 38.473 | ZTE |
| 38.463 | Ericsson |
| 37.340 | CATT |

## LS in

Before this meeting, an LS in R3-215797 [2] has been received from SA2 on slice list and priority information for cell reselection. The LS is actually a reply LS to RAN2 which answers questions originally raised by RAN2 regarding the slice group for cell reselection, but in the reply LS some additional questions are also asked from SA2 to RAN3:

**SA2 question to RAN2 and RAN3:**

1. SA2 would like to understand from RAN2 perspective, whether it is possible that a network slice can be associated to none, one or more slice groups?
2. Does RAN2 intend to use the slice groups only for cell reselection or also for slice based RACH and if for both would RAN2 require different type of slice groups or is one type of slice group enough?
3. What are the granularities of the slice groups for cell reselection, i.e. per TA or PLMN?
4. With regards to the logic of network slice priority for cell reselection; SA2 wonder if the UE NAS prioritization should consider network slice registration status (i.e. selecting among registered network slices from the Allowed NSSAI or also not yet registered network slices?

Our understanding is that Q1/Q2/Q4 are RAN2 related, and Q3 could potentially be in the remit of RAN3.

**Question 1: Do you think it is necessary to provide feedback regarding Q1, Q2 and Q4? If yes, what information should be provided?**

|  |  |
| --- | --- |
| Company | Comment |
| CMCC | No. SA2 has clearly indicated that Q1 and Q2 should be answered by RAN2, and if needed RAN3 could follow the final agreement from RAN2 regarding these two questions. Q4 asks the behavior at the UE side, which is also outside the scope of RAN3. |
| Huawei | No. Agree with CMCC. |
| Ericsson | The discussions in Q1, Q2 and Q4 are for RAN2 to answer unless the RAN2 discussion reveals any topic for RAN3 to analyse. |
| Nokia | No. Agree with CMCC. |
| Samsung | No. Agree with CMCC |
| ZTE | No. Agree with CMCC |
| LGE | No. Agree with CMCC |

Moderator’s summary:

No need to provide answers to Q1/2/4 from RAN3 perspective.

**Question 2: Do you think if RAN3 could provide feedback to Q3 in the LS? If yes, what granularity do you prefer, per TA or PLMN? Please also provide reasons for your preference.**

|  |  |
| --- | --- |
| Company | Comment |
| CMCC | Yes. SA2 asks RAN2 AND RAN3 to provide feedback, and the only related Q to RAN3 is Q3 in our understanding, so we need to provide some feedback regarding Q3.  And we prefer per TA granularity, since it is not flexible to adopt per PLMN configuration, especially for a slice group which is only used in a limited area scope. Configuring per PLMN slice scope may mean that we need to assign a unique slice scope ID throughout the whole network, but such slice scope ID is actually only used within a limited area, which results in a lengthy slice scope ID and introduces unnecessary extra overhead over interfaces.  In addition, our understanding is that the original intention to introduce slice group ID is to not broadcast the specific supported slice by a cell; however, also considering the case when the slice group is only used within a limited area scope, if a unique slice scope ID is assigned throughout the whole network, it is much easier for an illegal device to detect that the slice supported within such area is different from ones supported by cells providing basic coverage. So it would be safer to configure per TA slice group from perspective of security. |
| Qualcomm | While we don’t have an issue with CMCC’s considerations, we do note that there was no discussion paper on this LS going into the meeting, and the WG has not discussed slice group, so not sure that it is safe to reply now. Anyway, open to discussion. |
| Huawei | Currently RAN2 in parallel is discussing the slice group granularity based on the SA2 reply LS, where CMCC’s above views can be considered. For RAN3, there is no need to discuss for this meeting, and pending RAN2 to decide. |
| Ericsson | We can accept the approach from CMCC (per TA granularity). However, we should probably wait for progress in RAN2 before discussing and deciding on this topic in RAN3. |
| Nokia | We are OK with CMCC for flexibility for the operator if RAN2 enables it.  Regarding the granularity, it depends from which angle you look at it.  From UE perspective, if RAN2 enables per TA it still allows the flexibility for the network operator to choose between PLMN granularity or TA granularity i.e. UE may receive definition of Group for a TA in the MRU which is the different from one TA to another (if network implements TA granularity) or the same (if network implements PLMN granularity). |
| Samsung | We also prefer per TA granularity, but RAN3 hadn’t discussed slice group before, maybe we can wait until the understanding is clear in RAN2/SA2. |
| ZTE | Prefer to discuss this at next meeting. |
| LGE | We also prefer to discuss this at next meeting |

Moderator’s summary:

The majority prefers to discuss and decide at the next meeting; however, all companies seem to acknowledge the observations provided by one operator that per TA granularity provides flexibility for operators. Consequently, although there’s no need to make decisions by RAN3 at this meeting, it would be beneficial to provide some observations made by RAN3, and possibly inform RAN2/SA2 to make the final decision. Note that the next SA2 meeting is Nov. 15-19, and our observation would be a helpful input for their discussion. So we propose the following:

**Proposal 2: Postpone/Follow the decision on slice group granularity to the next RAN3 meeting.**

**Proposal 3: Draft an LS providing observations on slice group granularity from RAN3’s perspective.**

## Others

Please provide comments in the following table, in case there’s any other issue which is not mentioned but is suggested to be discussed in this CB,

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

# Conclusion, Recommendations

# Refs

|  |  |  |
| --- | --- | --- |
| [1] | [R3-215690](file:///D:\会议硬盘\TSGR3_114-e\Docs\R3-215690.zip) | Updated work plan for RAN slicing (CMCC, ZTE) |
| [2] | [R3-215797](C:\\Users\\llopes\\OneDrive - Qualcomm\\Documents\\3 RAN3\\RAN3 114\\Inbox\\Drafts\\CB # RANSlicing1_Workplan_LSin\\Inbox\\R3-215797.zip) | Reply LS on Slice list and priority information for cell reselection (SA2) |