3GPP TSG-RAN WG2 Meeting#112-e Draft\_R2-2010786

Online, 2nd - 13th November 2020

Agenda Item: 8.12.2.2

Source: Huawei

Title: Summary of [AT112-e][113][REDCAP] Identification and access restrictions (Huawei)

Document for: Discussion and Decision

# Introduction

This document is for the following offline discussion on RedCap:

* [AT112-e][113][REDCAP] Identification and access restrictions (Huawei)

Scope: Continue the discussion on remaining proposals from [R2-2009936](file:///C:\Data\3GPP\Extracts\R2-2009936%20Summary%20of%20email%20discussion%20%5b914%5d.docx)

Intended outcome: summary of the offline discussion with e.g.:

* + - List of proposals for agreement (if any)
    - List of proposals that require online discussions

Initial deadline (for companies' feedback): Monday 2020-11-10 23:00 UTC

Initial deadline (for rapporteur's summary in R2-2010786): Tuesday 2020-11-10 05:00 UTC

Proposals marked "for agreement" in R2-2010786 not challenged until Tuesday 2020-11-10 17:00 UTC will be declared as agreed by the session chair and can be considered for inclusion in the TP for the TR. For the rest there is a (little) chance to continue online in the final CB session on Friday 2020-11-13.

Status: Ongoing

# Discussion

During the online session, proposal 1 and proposal 2 of email summary [1] have been discussed and the following agreements were made:

Agreements:

1. Whether it is needed to identify RedCap UEs during Msg3 from RAN2 perspective or not depends on the following two aspects:

- Whether Msg4/5 special handing for RedCap UE is needed, pending RAN1

- Whether there is a need to reject part of RedCap UEs in addition to cell barring and UAC mechanism

According to the scope of this offline discussion, the rest of proposals in email summary [1] will be further discussed.

## UE identification

Regarding identifying RedCap UE in Msg5, the following summary was made in [1]：

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| Summary:  21 companies provided inputs. 17 companies think it is not needed from RAN2 perspective to identify RedCap UEs during Msg5. 1 company thinks MSG5 could be a good way compared to capability based solution since it can reduce signalling overhead and also can let the network handle it faster, 4 companies think this could be a possible optimization.  Rapporteur’s suggestion:  **Proposal 3: It is not needed from RAN2 perspective to identify RedCap UEs during Msg5.** |

According to above summary, there is majority view that identifying RedCap UEs in Msg5 is not needed from RAN2 perspective.

**Companies who do not agree with above proposal 3 are invited to provide their concerns.**

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| ***Company name*** | ***Concerns if any*** |
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Regarding identifying RedCap UE in MsgA for 2-step RACH, the following summary was made in [1]：

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| Summary:  21 companies provided inputs. All companies indicated that it should be the same as Q1 and Q2.  Rapporteur’s suggestion:  **Proposal 4: From RAN2 perspective, the need to identify RedCap UEs during MsgA is the same as the need to identify RedCap UEs during Msg1 or Msg3.** |

According to above summary, all companies indicated the same arguments as for identifying RedCap UE in Msg1/3 for 4-step RACH.

**Companies who do not agree with above proposal 4 are invited to provide their concerns.**

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| ***Company name*** | ***Concerns if any*** |
| Apple | We prefer to say “**From RAN2 perspective, the need to identify RedCap UEs during MsgA is the same as the need to identify RedCap UEs during Msg1** “  Msg3 is not critical if the gNB would know based on Msg1. |
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Regarding preference on UE identification from RAN2 perspective, the following summary was made in [1]:

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| Summary:  21 companies provided inputs. 7 companies indicated Msg3/A is preferred from RAN2 perspective. Other companies indicated for Msg1/Msg3 solutions, we should wait for RAN1. No clear conclusion can be made on solutions preference.  Rapporteur’s suggestion:  **Proposal 5: Capture options Msg1/A and Msg3/A in the TR with the following clarification:**   * **From RAN2 perspective, it is not needed to identify RedCap UEs during Msg1.** * **The final decision of solution selection is pending on RAN1 output.** |

According to above summary, companies have different views on when to identify RedCap UEs. Thus it was proposed to capture options Msg1/A and Msg3/A in the TR. The final decision can be made later based on RAN1 input or further RAN2 discussion.

**Companies who do not agree with above proposal 5 are invited to provide their concerns.**

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| ***Company name*** | ***Concerns if any*** |
| Apple | We prefer to defer this area until RAN1 concludes. We still have time to update the TR and this can be done once RAN2 discusses this topic after RAN1 conclusion. |
| vivo | We agree the first sub-bullet, as it can reflect some RAN2 preference.  For the second sub-bullet, we agree with Apple to defer this until RAN1 conclusion, as some RAN1 progress could be expected after this meeting. We can have some further discussion based on RAN1 decision. |
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Regarding whether to send LS about UE identification to RAN1, the following summary was made in [1]:

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| Summary:  21 companies provided inputs. 5 companies agree to send a LS to RAN1 and 13 companies don’t agree to send a LS to RAN1 as RAN1 is aware and already discussing. 2 companies have no strong view.  Rapporteur’s suggestion:  **Proposal 6: Do not send a LS on RedCap UE identification to RAN1 and wait for more RAN1 process.** |

According to above summary, more companies prefer not to send LS to RAN1 for the time being.

**Companies who do not agree with above proposal 6 are invited to provide their concerns.**

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## Access restrictions

### UAC

UAC enhancements for RedCap UEs were discussed in email discussion [1] and the following summary was made:

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| Summary:  21 companies provided inputs. 18 companies generally agree to send a LS to SA1, among them, 5 companies think it is better to wait for more progress e.g. on the number of RedCap UE Types, other thinks RAN2 could just inform SA1 of our motivation and ask for immediate concern. 5 companies think it is too early to send a LS.  Rapporteur’s suggestion:  **Proposal 7: Send a LS to SA1 including the following contents:**   * **RAN2 motivation for UAC enhancement for RedCap UEs** * **Ask SA1 whether they see any issue** |

According to above summary, most companies generally agree to send a LS to SA1.

**Companies who do not agree to send the LS in proposal 7 are invited to provide their concerns.**

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| ***Company name*** | ***Concerns if any*** |
| vivo | We are OK to send an LS to SA/CT, but not sure about the time point. We assume there may be no response from SA before SI completion, as we have only one meeting rest. Maybe, we could have more discussion in RAN2 in SI phase. |
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### Indication in system information

For the details of indication about whether the RedCap UEs are allowed to camp on the cell and intraFreqReselection for RedCap UEs, the following summary was made in [1]:

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| Summary for the indication about whether the RedCap UEs are allowed to camp on the cell:  21 companies provided inputs. 19 companies think it is too early to decide. 2 companies prefer an explicit indication.  Rapporteur’s suggestion:  **Proposal 8: Postpone the discussion on the camping indicator for RedCap UEs to the WI phase.**  Summary for intraFreqReselection for RedCap UEs:  21 companies provided inputs. 19 companies agree to postpone this issue to the WI phase.  Rapporteur’s suggestion:  **Proposal 9: Postpone the discussion on *intraFreqReselection* indicator for RedCap UEs to the WI phase.** |

According to above summary, most companies think it is too early to decide the details of the indications in system information. Thus it was proposed to postpone corresponding discussion to the WI phase.

**Companies who do not agree with proposal 8 and/or proposal 9 are invited to provide their concerns.**

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| ***Company name*** | ***Proposal*** | ***Concerns if any*** |
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# Conclusion

This offline discussion focused on the rest proposals about UE identification and access restrictions for RedCap UEs in email discussion [1].

TBD

# References

1. R2-2009936, “Summary of email discussion 914 on UE identification and access restrictions”, Huawei, RAN2#112-e, Online, 2nd - 13th November 2020

# Contact delegates

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