3GPP TSG-RAN WG2 #110e Tdoc R2-2006232

Electronic meeting, June 1st – 12th 2020

Agenda Item: 6.0.3

Source: Ericsson (Rapporteur)

Title: Outcome of [AT110-e][062][NR16] MAC updates

Document for: Discussion, Decision

# 1 Introduction

This document pertains to the following e-mail discussion:

* [AT110-e][062][NR16] MAC updates (Ericsson)

Scope: Treat R2-2005328, R2-2005501, R2-2005502, R2-2005562. Multi-WI MAC corrections.

Wanted Outcome: Agreed CR

Deadline for first round: June 5, 0900 UTC

~~Deadline for second round: June 11, 0700 UTC~~

Deadline for second round: June 10, 0700 UTC

During the first round the intention is to decide which CRs to pursue for the second round. The second round will be used for updating and merging the CRs which continue from the first round.

The rapporteur invites companies to provide input well in advance of the deadline in order for a productive discussion to take place.

# 2 First round of discussion

## 2.1 Discussion

[R2-2005501](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005501.zip) 38321 CR Clarification on eLCID LG Electronics Inc., MediaTek CR Rel-16 38.321 16.0.0 0752 - F TEI16

Companies are invited to state their opinion on the CR above (R2-2005501).

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| **Company** | **Opinion** |
| LG | Support the CR.  This CR is produced based on the outcome of the e-mail discussion at the last meeting [AT109bis-e][060][NR16] MAC eLCID and RACH stopping. |
| Ericsson | Support the CR. |
| ASUSTeK | Support. |
| MediaTek | Support. |
| OPPO | Support |
| Fujitsu | We are fine. |
| CATT | Support |
| Qualcomm | Support |
| Nokia, Nokia Shanghai Bell | Support. |

[R2-2005562](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005562.zip) Handling of unexpected eLCID values. ASUSTeK discussion Rel-16 38.321

Companies are invited to state their opinion on the CR above (R2-2005562).

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| **Company** | **Opinion** |
| LG | Support the CR. |
| Ericsson | Not sure this is stricly needed. Suppose this depends on if we consider eLCID an LCID or not. Perhaps this can be a general clarificaiton in the specification? |
| ASUSTeK | Support the CR. Since LCID and eLCID are specified separately in the specification, the change is needed. |
| MediaTek | Support the CR. |
| OPPO | Agree the intention of the discussion paper. We tend to have one sentence to clarify LCID including eLCID instead of adding it in every sentence with LCID. |
| Fujitsu | We are fine. The generalization have impact on pure LCID description e.g. “ The LCID field size is 6 bits“, which needs to be avoided. |
| CATT | Support. |
| Qualcomm | We share the same view as OPPO |
| Nokia, Nokia Shanghai Bell | Support. |

[R2-2005328](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005328.zip) Alignment of SR clause Ericsson, Samsung CR Rel-16 38.321 16.0.0 0732 1 F NR\_unlic-Core, NR\_eMIMO-Core R2-2003833

Companies are invited to state their opinion on the CR above (R2-2005328).

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| **Company** | **Opinion** |
| LG | Agree with the intention.  We need more time to check the actual changes. |
| Ericsson | Support the CR. It may need updating after the discussions on BFR in MIMO WI have settled down. |
| ASUSTeK | Generally agree with the CR, but whehter to stop sr-prohibittimer when a truncated BFR MAC CE is under discussion in MIMO offline, and updates may be needed afterwards. |
| MediaTek | Support the CR, and share same view with Ericsson. |
| OPPO | Would it be good to also align the text for BSR with the updated ones? |
| CATT | This needs to be discuss in MIMO WI.  Seems the procedure after change is not what has been agreed. Needs further checking. |
| Qualcomm | We are fine with the proposed changes. |
| Nokia, Nokia Shanghai Bell | Support the intention, we need to check the actual text after the agreements in eMIMO session. |

[R2-2005502](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005502.zip) Stopping ongoing Random Access procedure LG Electronics Inc. discussion Rel-16 TEI16

Companies are invited to state their opinion on the TP in the contribution above (R2-2005502).

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| **Company** | **Opinion** |
| LG | Support the TP in R2-2005502.  At least, it is asked for RAN2 to take some exercise to simplify the text on the UE optional behavior. |
| Ericsson | Do not support the TP as it is right now.  We think it is important that the exceptional cases where a UE may cancel an ongoing random access procedure are clearly specified. Cancelled random access procedures need not be easy to detect and therefore it is important to have a limited set of cases in the UE to work from.  However, if the text is perceived as complex and difficult to maintain we are open to discuss clarifications and restructuring but not simplifications as proposed above. |
| ASUSTeK | We share the same view with Ericsson. |
| MediaTek | We are open to discuss this issue (spec text simplication), and we agree with Ericsson that we may need to enumerate the use cases in which an ongoing RACH procedure can be cancelled. |
| OPPO | We agree the intention to simply, but think it would be good to keep all the exceptional contions clearly specified. |
| Fujitsu | We are “in principle“ fine i.e. RAN2 needs to wait for the email discussion [103] on eMIMO, which is also discussing text update for 5.4.4. |
| CATT | Need MAC rapporteur work with the rapporteurs of 2s, NR-U, eMIMO to simplify the description. Current CR is not so precise. |
| Qualcomm | We can agree in principle the proposed change. Agree with CATT that the current text can use improvement. |
| Nokia, Nokia Shanghai Bell | We don’t support the TP as is.  Agree with Ericsson. |

## 2.2 Conclusion

Conclusions from the rapporteur:

[R2-2005501](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005501.zip)    38321 CR Clarification on eLCID   LG Electronics Inc., MediaTek    CR        Rel-16   38.321  16.0.0   0752   -           F          TEI16

**There is support to continue with this CR.**

[R2-2005562](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005562.zip)    Handling of unexpected eLCID values.      ASUSTeK         discussion        Rel-16   38.321

**There is support to continue with this CR.**

[R2-2005328](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005328.zip)    Alignment of SR clause     Ericsson, Samsung       CR        Rel-16   38.321  16.0.0   0732     1          F   NR\_unlic-Core, NR\_eMIMO-Core            R2-2003833

**There is support to continue with this CR, but the outcome of the MIMO WI has to be taken into account.**

[R2-2005502](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005502.zip)    Stopping ongoing Random Access procedure        LG Electronics Inc.        discussion        Rel-16   TEI16

**There is support with the intention of the CR, to improve the specification quality, but there is very limited support to make the clarifications as proposed by the CR. Several companies mention the value to have the exceptions clearly specified.**

**Rapporteur proposes to continue discussion on how to improve the specification quality but maintaining the clearly specified exceptions.**

# 3 Second round of discussion

The rapporteur has merged the CRs and text proposals to one CR available in the drafts folder. The rapporteur suggests the second round of discussion to focus on the changes in clause 5.4.4 corresponding to R2-2005328 and R2-2005502.

Deadline for second round: June 10, 0700 UTC

## 3.1 Discussion

### 3.1.1 R2-2005328 (Cancellation of pending SR)

The rapporteur notes that the eMIMO discussion 103 has not yet concluded. The current proposal is most in line with annexure 1 of that discussion (at the time of writing), but the rapporteur further notes that the main aspect of R2-2005328 is to rewrite the paragraph such that it gets a more "algorithmic" and a more readable and maintainable structure, similar to the existing text on cancellation of pending SRs due to consistent LBT failure. The intention of the rapporteur is not to introduce any functional changes beyond those agreed in e-mail discussion 103.

Companies are invited to comment on this intention or any other related matter.

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| **Company** | **Opinion** |
| LG | We agree with the intention. Now looking at the CR, we think it would be much better to change the structure of BSR related text as well similar to LBT failure or BFR (i.e. bulletized form). |
| MAC rapporteur (Samsung) | I have now realized that RAN2 have two MAC CRs for eMIMO and NR-U, which update subclause 5.4.4, so to have additional changes (merely for improving the text) from this thread would result (unnecessary) CR clashes when implementing the CRs by Juha and myself after RAN plenary. As the proposed changes in this thread can be done after having all the functional changes from each WI, it would be indeed great if RAN2 postpone the following two CRs to the next meeting. Sorry for my late input, but this would be indeed helpful to RAN2 secretary and specification rapporteur. |

### 3.1.2 R2-2005502 (Cancellation of Random Access procedure)

There is a draft proposal from the rapporteur in the draft CR to replace the existing paragraph. The rapporteur notes the following for the pending SR for BFR on SCell:

1. Unlike the SR for BSR there is no text for transmission regardless of LBT failure.

2. Unlike the SR for BSR there is no text about not using a grant for MSGA payload transmission.

The rapporteur assumes the reason for this omission is a simple oversight from the Rel-16 work items (2-step RA, NR-U, and MIMO) and that the actions for the two SR types should be aligned.

The rapporteur asks the following questions and invites company inputs.

**Q1: Should the case for pending SR for BFR on SCell be aligned to the case for pending SR for BSR in that the MAC PDU is transmitted regardless of LBT failure indication from lower layers?**

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| **Company** | **Opinion** |
| Ericsson | Yes |
| LG | Yes |

**Q2: Should the case for pending SR for BFR on SCell be aligned to the case for pending SR for BSR in that the transmission of the MAC PDU must be done using an uplink grant which is not determined as specified in clause 5.1.2a for the transmission of the MSGA payload (in addition to the existing case about not using UL grants provided by Random Access Response)?**

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| **Company** | **Opinion** |
| Ericsson | Yes |
| LG | Yes |

The rapporteur notes that in the NR-U work the definition when an LBT procedure is performed for a transmission has changed, which prompts the removal of all “regardless of LBT failure indication from lower layers”. Thus, we should not add any more as the questions above suggest. Please disregard the above questions. Furthermore, the input from the MAC rapporteur applies to this CR too.

### 3.1.3 R2-2005501 and R2-2005562

Rapporteur thinks these CRs are quite simple and can be implemented as is. Companies are invited to comment if they disagree or have suggestions for minor related corrections, improvements, or similar.

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| **Company** | **Opinion** |
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## 3.2 Conclusion

The rapporteur proposes the following way forward:

[R2-2005562](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_110-e\Docs\R2-2005562.zip) Handling of unexpected eLCID values. ASUSTeK discussion Rel-16 38.321

**[062] The contribution is noted and its TP is merged with R2-2005501.**

[R2-2005501](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2005501.zip) 38321 CR Clarification on eLCID LG Electronics Inc., MediaTek CR Rel-16 38.321 16.0.0 0752 - F TEI16

**[062] The CR is revised to include the TP from R2-2005562. Revised in R2-2006231.**

[R2-2006231](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_110-e/Docs/R2-2006231.zip) Clarification on eLCID LG Electronics Inc., MediaTek CR Rel-16 38.321 16.0.0 0752 1 F TEI16

**[062] The CR is agreed.**

[R2-2005502](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_110-e\Docs\R2-2005502.zip) Stopping ongoing Random Access procedure LG Electronics Inc. discussion Rel-16 TEI16

**[062] The contribution is noted.**

[R2-2005328](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_110-e\Docs\R2-2005328.zip) Alignment of SR clause Ericsson, Samsung CR Rel-16 38.321 16.0.0 0732 1 F NR\_unlic-Core, NR\_eMIMO-Core R2-2003833

**[062] There is support to restructure the paragraph on cancellation of pending SR and the paragraph on cancellation of the Random Access procedure in clause 5.4.4.**

**[062] The CR is postponed for next meeting.**