**3GPP TSG-RAN WG2 Meeting #112-e *R2-2011105***

**Online, 2–13 November 2020**

**Agenda item: 5.3.1**

**Source: MediaTek**

**Title: Report of [AT112-e][002][NR15] MAC I (MediaTek)**

**Document for: Discussion and Agreement**

# 1 Introduction

This is to summarize the outcome for the following email discussion in RAN2#112-e Meeting [1].

* [AT112-e][002][NR15] MAC I (MediaTek)

 Treat R2-20010621, R2-2010330, R2-2010679, R2-2010680, R2-2009348, R2-2009792, R2-2009793, R2-2010156, R2-2010157, R2-2010165, R2-2010166

 Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

 Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

The rapporteur suggests the following two phases:

* Phase 1: collect companies’ view, by Friday 2020-10-06 12:00 UTC
* Phase 2: rapporteur provide summary report and agreeable CR for review, by Monday 2020-11-09 12:00 UTC

# 2 Contact Information

|  |  |
| --- | --- |
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# 3 Discussion

## 3.1 Activation of CG and DRX Inactivity Timer

[R2-2010621](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010621.zip) Activation of CG and DRX Inactivity Timer Ericsson discussion NR\_newRAT-Core

The discussion paper proposes to add the following note in clause 5.7 of TS 38.321, v 15.10.0:

|  |
| --- |
| NOTE 1: A PDCCH indicating activation of configured grant type 2 is not considered to indicate a new transmission. |

###### Q1: Companies are invited to provide comments below:

|  |  |  |
| --- | --- | --- |
| Company | Agree as is (from which release);Agree with changes;Disagree | Detailed Comments |
| MediaTek | Agree as is (Rel-15) | We support a clarification for this case. Otherwise, there is a risk of DRX unsync due to different implementation beteeen UE and gNB. |
| Huawei, HiSilicon | Disagree | We think the specification is clear and the PDCCH activating a type 2 configured grant indicates a new transmission. |
| Xiaomi | Agree as is (Rel-15) | The NOTE states the intentded UE behaviours. |
| Samsung | Disagree | We share the view with Huawei. The issue was discussed as said in the contribution, and *drx-InactivityTimer* should be started upon reception of CG Type 2 activation. |
| Qualcomm | Agree as is (Rel-15); Can be considered for Rel-16 too | We support Proposal 1 and adding a note in MAC spec to clarify UE ehaviour in this case. In addition, we think the same proposal applies to DL SPS, i.e. a PDCCH indicating activation of DL SPS is not considered to indicate a new transmission. So the proposed note can be extended to the following:“Note 1: A PDCCH indicating activation of configured grant Type 2 or DL SPS is not considered to indicate a new transmission.”If agreed, the same note can be added to Rel-16 MAC spec too. |
| ZTE | Disagree | This is a NBC change for R-15. |
| Lenovo | Disagree | We share Samsung’s view that this issue was discussed and that *drx-InactivityTimer* should be started |
| LG | Agree with change (Rel-15) | In UL, S5.4.2 states conditions for triggering a new transmission or a retransmission. PDCCH indicating CG Type2 activation/deactivation does not fall into any of those conditions, which means it is neither a new transmission nor a retransmission. Thus, PDCCH indicating CG Type2 activation/deactivation should not start drx-InactivityTimer.In DL, S5.3.2.2 states the criteria for new or retransmission. According to it, PDCCH indicating DL SPS activation/deactivation is considered as netierh a new transmission nor a retransmission. Thus, PDCCH indicating DL SPS activation/deactivation does not start drx-inactivityTimer.We this the specification is clear that it is PDCCH indicating activation/deactivation of DL SPS or CG Type 2 is neither a new transmission nor a retransmission. But, considering the diverged understanding from companies, it would be helpful to have a clarification.  Suggestion: NOTE 1: A PDCCH indicating activation/deactivation of SPS or configured grant Type 2 is not considered to indicate a new transmission nor a retransmission. |
| Nokia | Disagree | Agre with Huawei and Samsung the conclusion before was inacitivity timer should be started up Type 2 CG activation. Changing the behaviour at this late stage would be problematic to the NW. |
| OPPO | Agree as is (Rel-15) |  |
| Ericsson | Agree as is (Rel-15, Rel-16) | Would be interesting to hear from UE vendors if they start the timer or not. Regardless what the intention of the specification was from the beginning we have to take current implementations into account.As argued in the paper, if there are multiple UE implementations available, some starting the timer and some don’t, the network has to take the conservative approach and assume the UE does not start the timer. |
| CATT | Disagree | Based on current Rel-15 MAC specification, *drx-InactivityTimer* should be started after a PDCCH indicating activation of CG type2. So our gNB is implemented as this way. If this CR is applied, interoperability problems will happen and it is especially harmful to URLLC services. |
| Vivo | Disagree | When DCI validation PDCCH is received, the UE will stop the corresponding CG timer(s), which implicitly implies that new transmission is about to be performed. In this sense, we think the drx-Inactivity should be (re)started for the upcoming new transmission. Besides, RAN2 have discussed this issue in the RAN2#109e meeting and achieved an agreement as follows, [AT109e][002][NR15] Majority’s view is Alt2 (i.e. PDCCH to indicate DL SPS/UL configured grant activation triggers drx-InactivityTimer (re)start), and one company prefers Alt1; There seems to be supported to have a clarification, Companies can check the internal implementation. Can come back next meeting.Based on the above, we don’t see the need to add the change.  |
| Apple | Disagree | In previous discussion, majoriy view is that the PDCCH indicating the DL SPS and UL CG activation will trigger the start of the DRX inactivity timer. I think we shoul follow the spec interpretation according to majoriy view. If enhancements is needed in R16, we prefer the same UE behvior for both DL SPS activation and UL CG activation.  |
| Intel | Disagree | We also think this issue was discussed and *drx-InactivityTimer* should be started. |
| Sequans | Disagree | We have sympathy for the proposed behaviour, but this was already discussed on RAN2#109-e.Moreover, we think the activation PDCCH actually indicates a new transmission (even if it is by a different way than for usual PDCCH) – so starting the timer is the specified behaviour.Note that there are also conditions “if the PDCCH indicates a DL transmission” and “if the PDCCH indicates a UL transmission” which we believe applies too. If we add the proposed NOTE, since the PDCCH for activation clearly does not indicate a retransmission, and given that transmissions are either new transmissions or retransmissions, we could deduce that the PDCCH for activation does not indicate any transmission at all (but just some “activation”). Consequently we would not apply those conditions, and not monitor for retransmissions. |

**Conclusion**

Among 16 companies, 6 companies agree to have this change from R15, while 10 companies disagree with this change. The opponent companies think that this is already discussed in previous meeting, and the majority view is to start the drx-InactivityTimer upon reception of CG Type 2 activation.

Through phase 2 discussion, it seems UE vendors have different implementation – which means either we agree to restart or agree not not restart the drx-InactivityTimer when UE receives a PDCCH indicating DL SPS or configured grant type 2, there is NBC change to some companies. A possible way forward is to let it (whether to (re)start the drx-InactivityTimer or not) up to UE implementation, and assume that NW can handle either implementation. For example, NW may assume UE does not (re)start the drx-InactitivityTimer, and thus does not schedule the UE after the non-(re)started drx-InactivityTimer expires. As a result, two companies would like to check their implementation, and thus the rapporteur suggest to postpone the CR.

**Proposal 1: CR R2-2010621 is postponed to the next meeting for companies to check their implementation**

**.**

## 3.2 Clarification on LCP restriction for configured grant type 1

[R2-2010330](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010330.zip) Clarification on LCP restriction for configured grant type 1 MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

[R2-2010679](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010679.zip) CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2272 - F NR\_newRAT-Core

[R2-2010680](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010679.zip) CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2273 - A NR\_newRAT-Core

It’s proposed to add clarification for the filed description of “***configuredGrantType1Allowed*** ” for TS 38.331 v15.11.0 as follows:

|  |
| --- |
| *LogicalChannelConfig* field descriptions |
| ***configuredGrantType1Allowed***If present, or if the capability *LCP-restriction* is not supported, UL MAC SDUs from this logical channel can be transmitted on a configured grant type 1. Otherwise, UL MAC SUDs from this logical channel cannot be transmitted on a configured grant type 1. Corresponds to 'configuredGrantType1Allowed' in TS 38.321 [3]. |

###### Q2: Companies are invited to provide comments below:

|  |  |  |
| --- | --- | --- |
| Company | Agree as is (which CR; from which release);Agree with changes;To capture it in the meeting minutes;Disagree | Detailed Comments |
| MediaTek | Agree as is (Rel-15) | The otherwise behavior (i.e. if the field *configuredGrantType1Allowed* is not present) is not specified in current RRC spec. This may cause an ambiguity whether UE is allowed to use CG type 1:* For the other three LCP restrictions in R15 (i.e., allowedSCS-List, allowedServingCells, maxPUSCH-Duration ), “not configured” means “no restriction”.
* However, the value of *configuredGrantType1Allowed is* ENUMERATED {true} (always true). So, to make this configuration useful (work as an on-off bit), UE should not be allowed to use CG type 1 if *configuredGrantType1Allowed* is not configured

To eliminate the ambiguity, we propose to update the field description for the otherwise behavior. |
| Huawei, HiSilicon | Agree as is (Rel-15) |  |
| Xiaomi | Agree with changes | We think that the UE not supporting the LCP restriction should be allowed to use the CG type-1, and not required to understand the field of configuredGrantType1Allowed. However we think that this should be clearly defined in the MAC specification (e.g. Section “5.4.3.1.2 Selection of logical channels”). |
| Samsung | Agree as is (Rel-15) | It is indeed unclear from the specification, so it is worth to clarify it. For the actual behaviour, the interpretation from MediaTek is sensible. In addition, we think that case 3 in the contribution (i.e. UE does NOT support *lcp-Restriction*, and *configuredGrantType1Allowed* is configured ) seems a wrong configuration, so should not be allowed. |
| Qualcomm | Agree as is (Rel-15);Agree with changes (Rel-16) | We agree with MediaTek’s analysis and think this change is necessary for Rel-15, because otherwise this restriction criterion is useless (by the way, there is a typo in the Rel-15 CR).For Rel-16, because *allowedCG-List* is also introduced, we think some condition needs to be added to its field description too. For example, * If *configuredGrantType1Allowed* is present, only those type-1 CGs included in *allowedCG-List* are allowed for use by the logical channel;

If *configuredGrantType1Allowed* is not present, *allowedCG-List* should not include any type-1 CG. |
| ZTE | Agree as is (Rel-15 and Rel-16) | For R-15, this is indeed an issue which is deserve being addressed.As for Rel-16 according to the Qualcomm’s comments, we think there is no need for us to have such clarification. The current logic of LCH restriction is that UE will determine whether the data from a LCH can be sent for the received UL grant by following the restriction rules one by one. |
| Lenovo | Agree as is (Rel-15) |  |
| LG | Agree with changes (Rel-15) | Case 3 in the paper is a wrong implementation. Otherwise behaviour is to cover the case where *LCP-restriction* is supported but *configuredGrantType1Allowed* is not present. For clarity, it would be better to say in detail instead of 'otherwise'.Suggestion:If present, or if the capability *LCP-restriction* is not supported, UL MAC SDUs from this logical channel can be transmitted on a configured grant type 1. If the capability *LCP-restriction* is supported and *configuredGrantType1Allowed* is not present, UL MAC SDUs from this logical channel cannot be transmitted on a configured grant type 1. Corresponds to 'configuredGrantType1Allowed' in TS 38.321 [3]. |
| Nokia | Agree as is (Rel-15)Agree with change (Rel-16) | Agree with Qualcomm. |
| OPPO | Agree with comments | We agree to add the “otherwise” case to make the behaviour clear.For *LCP-restriction* capability, if we have this change, maybe other restriction parameters, e.g., “allowedCG-List”, “allowedSCS-List” should also be applied? |
| Ericsson | Agree as is (Rel-15), Agree with changes (Rel-16) | In order to have an usable restriction criteria in Rel-15, the change is needed. We propose the following editorial changes:If present, or if *LCP-restriction* TS 38.306 [26] is not supported, UL MAC SDUs from this logical channel can be transmitted on a configured grant type 1. Otherwise, UL MAC SDUs from this logical channel cannot be transmitted on a configured grant type 1. Corresponds to 'configuredGrantType1Allowed' in TS 38.321 [3].For Rel-16, additions similar to what QC indicates is needed as we have the parameter *allowedCG-List*. Another option could be to limit the configuration that the NW only configures at most one of the parameters *allowedCG-List* and *configuredGrantType1Allowed* for a logical channel.An additional improvement is to clarify which LCP restriction parameters a UE supports indicating the UE capability "LCP-restriction". (i.e. it should be the Rel-15 capabilities only.)  |
| CATT | Agree as is (Rel-15) | Agree with MTK. |
| vivo | Agree with changes | Just a minor editorial comments, we think “*LCP-restriction*” is just a field name in 38.331, instead of a real capability. Thus, to make the text more reader-friendly, we propose the following text with revision highlighted: If present, or if the capability bit *LCP-restriction* is not indicated, UL MAC SDUs from this logical channel can be transmitted on a configured grant type 1. Otherwise, UL MAC SUDs from this logical channel cannot be transmitted on a configured grant type 1. Corresponds to 'configuredGrantType1Allowed' in TS 38.321 [3] |
| Apple | Agree with changes | Agree with Qualcomm. |
| Intel | Agree as is (Rel-15) |  |
| Sequans | Agree as is (Rel-15) | For Rel-16, some additional changes may be needed as indicated by other companies. |

**Conclusion**

All companies support the change.

For R-15 CR, 3 companies propose editorial comments, and 2 companies wonder whether we should apply the same change considering UE capability "LCP-restriction" to other LCP restriction parameters as well.

For R-16 CR, 4 companies suggest to have clarification for the field description of allowedCG-List, and one company think it is not needed.

Through phase 2 discussion, the rapporteurt suggests that the CR only cover the field description of configuredGrantType1Allowed. This is because companies may need time to double check whether and how we capture UE capability "LCP-restriction" into the field description of each LCP parameters for R15 and R16 spec, which is out of scope of this CR, and may not be able to converge easily in this meeting.

**Proposal 2: RAN2 confirms that if configuredGrantType1Allowed is configured for a logical channel, or if the capability LCP-restriction as specified in TS 38.306 [26] is not supported, UL MAC SDUs from this logical channel can be transmitted on a configured grant type 1. Otherwise, UL MAC SDUs from this logical channel cannot be transmitted on a configured grant type 1.**

**Proposal 3: CR R2-2010679 is updated to fix a typo (i.e. SUDs), CR R2-2010680 is updated by adding clarification to specify UE behavior in field description of a allowedCG-List given that configuredGrantType1Allowed is configured or not configured.**

## 3.3 Clarification on configuredGrantTimer

[R2-2009348](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2009348.zip) Clarification on configuredGrantTimer Nokia, Nokia Shanghai Bell, Ericsson, LG CR Rel-15 38.321 15.10.0 0926 - F NR\_newRAT-Core

It’s proposed to add the following clarification in clause 5.4.2.1 HARQ Entity of TS 38.321 v15.10.0:

|  |
| --- |
| When *configuredGrantTimer* is started or restarted by a PUSCH transmission, it shall be started at the beginning of the first symbol of the PUSCH transmission. |

###### Q3: Companies are invited to provide comments below:

|  |  |  |
| --- | --- | --- |
| Company | Agree as is (from which release);Agree with changes;Disagree | Detailed Comments |
| MediaTek | Agree as is (Rel-15) | It makes sense to clarify the detailed timing to start the configruredGrantTimer. |
| Huawei, HiSilicon | Agree as is (Rel-15) |  |
| Xiaomi | Agree as is (Rel-15) |  |
| Samsung | Agree as is (Rel-15) | - |
| Qualcomm | Agree as is (Rel-15) | Good to clarify the timing, which currently is missing in the Rel-15 spec. |
| zte | Agree as is (Rel-15) |  |
| Lenovo | Agree as is (Rel-15) |  |
| LG | Agree as is (Rel-15) |  |
| Nokia | Agreee as is (Rel-15) |  |
| OPPO | Agreee as is (Rel-15) |  |
| Ericsson | Agree as is (Rel-15) |  |
| CATT | Agree as is (Rel-15) | We share the same view with MTK and it has been captured in Rel-16 now. |
| vivo | Agree as is (Rel-15) | It clarifies the intended UE behaviors. |
| Apple | Agree as is (Rel-15) |  |
| Intel | Agree as is (Rel-15) |  |
| Sequans | Agree as is (Rel-15) |  |

**Conclusion**

All companies support this change.

**Proposal 4:** [**R2-2009348**](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2009348.zip) **is agreed.**

## 3.4 Clarification on configured grant (re-)initialization

[R2-2009792](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2009792.zip) Clarification on configured grant (re-)initialization Nokia, Nokia Shanghai Bell CR Rel-15 38.321 15.10.0 0941 - F NR\_newRAT-Core

[R2-2009793](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2009793.zip) Clarification on configured grant (re-)initialization Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0942 - A NR\_newRAT-Core

Moved from 6.1.3

Summary of change:

* Clarify in section 5.8 that the configured downlink assignments or uplink grants are configured for a BWP of a Serving Cell.
* Configured downlink assignment and uplink grant related actions are removed from section 5.9.

###### Q4: Companies are invited to provide comments below:

|  |  |  |
| --- | --- | --- |
| Company | Agree as is (from which release);Agree with changes;Disagree | Detailed Comments |
| MediaTek | Agree the first changeDisagree with the second change | We think the first change is correct. For the second change, we think the description in current spec is useful from clarity perspective and thus can be kept as it is.  |
| Huawei, HiSilicon | Disagree | The current specification text clear, and in different sections for SCells and BWPs, the UE behaviors are specified from Cells or BWPs perspective. We don’t see an improvement with the changes. |
| Xiaomi | No strong view | The current specification seems not wrong even without the proposed changes. |
| Samsung | Agree the changes in subclause 5.8 (from Rel-15);No strong view on the changes in subclause 5.8 | We are fine to have the proposed changes in subclaue 5.8 from Rel-15.For the changes in subclause 5.9, from our recollection, the same issue was discussed long ago (more than two years, I think), and then RAN2 decided to leave the text as in the current structure. In that sense, we are a bit hesistant to make these changes (assuming no room for misinterpretation), but are fine to have these changes (only) if majority wants. |
| Qualcomm | Agree with changes (both R15 and R16) | We agree the text in the two sections indeed duplicate and it is not desirable to have duplicated text. Therefore, we are fine with the changes to section 5.9 as is. However, We think a better wording for the first changes to section 5.8.1 and 5.8.2 can be “…(SPS) can be configured by RRC in a dedicated BWP for a serving cell”, because not every BWP can be configured with SPS and it is optional whether a dedicated BWP is configured with SPS. |
| ZTE | No strong view | We think this is not a critical issue. |
| Lenovo | Agree the first change (from Rel-15) |  |
| LG | Agree as is | Good to remove redundancy. |
| Nokia | Agree as is (Rel-15 and Rel-16) |  |
| OPPO | Agree as is |   |
| Ericsson | Agree | We think Qualcomm has a good point on duplicated text. |
| CATT | Disagree | We reckon that the current description is clear enough and no further clarification is needed. |
| vivo | Agree with changes | We noticed that the CR includes two kinds of expression styles, those are “for a BWP of a Serving Cell” and “for a Serving Cell per BWP”. We prefer to use the former one uniformly in the whole CR. For the second change, we prefer the legacy text since it is clear enough and provides more feasibility for protocol development. We also noticed that there is another duplication issue in the 2Step RA procedure (e.g. repeat indication of power control parameters to PHY). It might be hard to realize code cleanliness in the spec. So we can just leave it as it was. |
| Apple | Agree the first changeDisagree with the second change (5.9) | We agree with MediaTek and Samsung. For the change in sub-clause 5.9 we think that it is cleaner to keep the current text for clarity. UE implementation can ensure there is no duplication. |
| Intel | Agree as is (Rel-15) | We think it is good to remove duplicated part. We are also OK to follow majority view regarding 2nd change (clause 5.9). |
| Sequans | Agree with changes | We agree to remove duplicated text.Wording can be finetuned. |

**Conclusion**

For the first change, 12 companies support, 2 companies disagree, and 2 companies have no stong opinion. For the second change, 7 companies support, 4 companies disagree, and 3 companies have no strong optinion. The rapporteur think the first change has the majority support and is agreeable.

**Proposal 5: The first change in** [**R2-2009792**](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2009792.zip) **and R2-2009793 is supported. Nokia provides updated CR for the first change.**

## 3.5 Clarification of timer value zero interpretation in MAC

[R2-2010165](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010165.zip) Clarification of timer value zero interpretation in MAC Ericsson, Samsung CR Rel-15 38.321 15.10.0 0968 - F NR\_newRAT-Core

[R2-2010166](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010166.zip) Clarification of timer value zero interpretation in MAC Ericsson, Samsung CR Rel-16 38.321 16.2.1 0969 - A NR\_newRAT-Core

It’s proposed to clarify in clause 3.1 of TS 38.321 v15.10.0 that a timer value of zero means the timer shall be started and immediately expire.

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| --- |
| NOTE: A timer is running once it is started, until it is stopped or until it expires; otherwise it is not running. A timer can be started if it is not running or restarted if it is running. A Timer is always started or restarted from its initial value. The duration of a timer is not updated until it is stopped or expires (e.g. due to BWP switching). When the MAC entity applies zero value for a timer, the timer shall be started and immediately expire unless explicitly stated otherwise. |

###### Q5: Companies are invited to provide comments below:

|  |  |  |
| --- | --- | --- |
| Company | Agree as is (from which release);Agree with changes;Disagree | Detailed Comments |
| MediaTek | Agree as is (Rel-15) | We are fine with the change which avoids the risk of wrong timer implementation. |
| Huawei, HiSilicon | Disagree | We think the change is not needed. Even without any clarification, the timer with zero value should be implemented like this according to the existing text. The same case has been already existing since LTE, and there is no case for any misunderstanding. |
| Xiaomi | Agree as is (Rel-15) |  |
| Samsung | Agree as is (Rel-15) | - |
| Qualcomm | Agree as is (Rel-15; Rel-16) |  |
| ZTE | Agree as is (Rel-15) |  |
| Lenovo | Disagree | We don’t see a need for this change. In our understanding the specified handling of timer value of zero in 38.331, 7.1.2 applies to all timers including MAC related timers. |
| LG | Agree as is (Rel-15) |  |
| Nokia | Disagree | Not needed. Clear from the existing text – it already says: “A Timer is always started or restarted from its initial value”. |
| OPPO | Agree as is (Rel-15) |  |
| Ericsson | Agree as is (Rel-15; Rel-16) |  |
| CATT | Disagree | The timer value zero doesn’t exist in MAC specification at all. It is strange to specify it in section 3.1 “Definitions” of 38.321. If we think sth is not clear in RRC, it should be clarified in RRC specification. |
| Vivo | Agree as is (Rel-15) |  |
| Apple | Agree as is (Rel-15) | We think that sections 7.1.2 and 7.1.1 in 38.331 are applicable to RRC timers only. Section 7.1.1 (in 38.331) is also marked as 'informative', hence it cannot be used for the normative MAC timer handling. TS 38.321 is the right place to declare the intended operation of timers in MAC. In our understanding, timer value 0 should be treated as immediately expired; this is also consistent with the definition of RRC timers.  |
| Intel | Agree as is (Rel-15) |  |
| Sequans | Agree but | There is the same text in LTE specification, adding this part only in NR would be misleading for LTE. If it needs clarification in NR, it also needs clarification in LTE. |

**Conclusion**

12 companies support this change, while 4 companies think this is not needed. One company think the samel clarification should be added for LTE spec as well. With the majority support and without any functional change, the rapporteur suggests to agree this CR.

**Proposal 6: CR R2-2010165 and R2-2010166 are agreed.**

## 3.6 Recommended bit rate query handling at MAC Reset

[R2-2010156](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010156.zip) Recommended bit rate query handling at MAC Reset Ericsson CR Rel-16 38.321 16.2.1 0964 - F NR\_newRAT-Core

[R2-2010157](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Docs/R2-2010157.zip) Recommended bit rate query handling at MAC Reset Ericsson CR Rel-15 38.321 15.10.0 0965 - F NR\_newRAT-Core

It’s proposed to include the cancellation of a triggered Recommended bit rate query in the list of UE actions at MAC reset.

|  |
| --- |
| 5.12 MAC ResetIf a reset of the MAC entity is requested by upper layers, the MAC entity shall:1> …1. cancel, if any, triggered Recommended bit rate query procedure;

1> … |

###### Q6: Companies are invited to provide comments below:

|  |  |  |
| --- | --- | --- |
| Company | Agree as is (from which release);Agree with changes;Disagree | Detailed Comments |
| MediaTek | Agree as is (Rel-15) | The change makes sense – UE should cancel triggered procedures upon MAC reset. |
| Huawei, HiSilicon | Disagree | There is no need to reset the procedure, and actually, the procedure can be continued, which is up to UE implementation. For example, the the Recommended bit rate query has been triggered by upper layers, the procedure is not need to be reset during MAC reset, and the Recommended bit rate query can continue to be in triggered status, and wait for resource to transmit after MAC reset. Note that it is the same case in LTE since long time ago, and there is no such stop procedure and it works well., |
| Xiaomi | Agree as is (Rel-15) |  |
| Samsung | Agree with changes (Rel-15) | We think, in general, all the triggered procedures should be canceled upon MAC reset.Perhaps, RAN2 can capture all these at once, instead of listing all the procedures (also for the future maintenance), e.g.:1> cancel, if any, all the triggered procedure(s) defined in MAC (e.g. SR, BSR, PHR, etc.);  |
| Qualcomm | Agree as is (Rel-15; Rel-16) |  |
| ZTE | Disagree | Share the same view with HW |
| Lenovo | Agree with changes (Rel-15, Rel-16) | OK with the proposed change. However we would have some comments on the cover sheet for the Rel-16 CR. For example ME box should be ticked and category should be CAT A. |
| LG | Agree as is (Rel-15) | Open to discuss Samsung’s suggestion. |
| Nokia | Agree as is (Rel-15; Rel-16) |  |
| OPPO | Agree as is (Rel-15) |  |
| Ericsson | Agree as is (Rel-15, Rel-16) |  |
| CATT | Agree as is (Rel-15) | It is consistent to other MAC procedures. |
| vivo | Agree as is (Rel-15) |  |
| Apple | Agree as is (Rel-15) |  |
| Intel | Agree as is (Rel-15) |  |
| Sequans | Agree as is (Rel-15) |  |

14 comapanies support the change, while 2 companies think cancelling this procedure upon MAC reset is not necessary and can be up to UE implementation. One company think the coversheet of R-16 CR should be updated.

The MAC rapporteur think RAN2 can capture all triggered procedure defined in MAC to be cancelled upon MAC reset. Rapporteur thinks the suggestion is nice, but since it is out of scope of this email discussion, we can leave it to later discussion.

In phase 2 discussion, one company suggests to have more time to check their own implementation. Without strong concern from other companies, the two CRs are postponed.

**Proposal 7 : CR R2-2010156 and R2-2010157 are postponed to the next meeting for companies to check their implementation**

# 4 Conclusion

**Proposal 1: CR R2-2010621 is postponed to the next meeting for companies to check their implementation**

**Proposal 2: RAN2 confirms that if configuredGrantType1Allowed is configured for a logical channel, or if the capability LCP-restriction as specified in TS 38.306 [26] is not supported, UL MAC SDUs from this logical channel can be transmitted on a configured grant type 1. Otherwise, UL MAC SDUs from this logical channel cannot be transmitted on a configured grant type 1.**

**Proposal 3: CR R2-2010679 is updated to fix a typo (i.e. SUDs), CR R2-2010680 is updated by adding clarification to specify UE behavior in field description of a allowedCG-List given that configuredGrantType1Allowed is configured or not configured.**

**Proposal 4: CR R2-2009348 is agreed.**

**Proposal 5: The first change in R2-2009792 and R2-2009793 is supported. Nokia provides updated CR for the first change.**

**Proposal 6: CR R2-2010165 and R2-2010166 are agreed.**

**Proposal 7 : CR R2-2010156 and R2-2010157 are postponed to the next meeting for companies to check their implementation**

# 5 References

[1] RAN2 112-e Chairman Notes 2020-11-02 0800 UTC.docx