3GPP TSG-RAN WG2 #109bis-e R2-20xxxxx

Electronic Meeting, April 20th – 30th 2020

Agenda Item: 6.0.1

Source: Ericsson

Title: [AT109bis-e][065][NR RIL] DiscMail1

Document for: Discussion, Decision

# 1 Introduction

This document is to kick off the following email discussion:

* [AT109bis-e][065][NR RIL] DiscMail1 (Ericsson)

Scope: Discussion and implementation of review issues.

Wanted outcome: a) Agreed RIL Status update in the email discussion report b) Agreed ASN.1/procedure text proposal included in the email discussion report.
After email discussion report is agreed, the TPs will be included in the ASN.1 Review file, for the continued ASN.1 review.

Deadline: **Email discussion Stop at EOM, April 30 (short extension 1 week could be considered if needed).**

In particular, the following issues are addressed in this document:

|  |  |  |
| --- | --- | --- |
| **RIL #** | **Issue** | **Feature** |
| Z502 | Correction to field description of BH-LogicalChannelIdentity | IAB |
| Z502 | Correction to field description of BH-LogicalChannelIdentity | IAB |
| Z020 | Correction to field description of ChannelAccessPriority | NR-U |
| S017 | Moving usePreBSR-r16 field within BSR-Config IE | IAB |
| S019 | Correction to the need code of usePreBSR-r16 | IAB |
| S056 | Change lbt-FailureRecoveryConfig-r16 to setupRelease structure | NR-U |
| S057 | Correction to the need code of schedulingRequestID-LBT-SCell-r16 | NR-U |
| O404 | Correction to field description of lch-BasedPrioritization-r16 | IIOT |
| Z280 | Correction to field description of schedulingRequestID-BFR-SCell | MIMO |

# 2 Discussion

Companies are requested to add their comments for each of the treated CRs of this email discussion in the boxes below (one for each CR to be treated).

## 2.1 RIL #Z502 and #Z503

The issue #Z02 and #Z03 are described as follows:

|  |
| --- |
| *BH-LogicalChannelIdentity* field descriptions |
| ***bh-LogicalChannelIdentity***ID used commonly for the MAC logical channel and for the BH RLC channel. |
| ***bh-LogicalChannelIdentityExt***ID used commonly for the MAC logical channel and for the BH RLC channel. |

**[RIL]**: Z502 **[Delegate]**: ZTE(LinChen) **[WI]**: IAB **[Class]**: 2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: *bh-RLC-ChannelID-r16* IE in *BH-RLC-ChannelConfig* is used to indicate the BH RLC channel. *bh-LogicalChannelIdentity IE* is used only for the MAC logical channel.

**[Proposed Change]**: “and for the BH RLC channel” should be removed.

**[Comments]**:

**[RIL]**: Z503 **[Delegate]**: ZTE(LinChen) **[WI]**: IAB **[Class]**: 2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: *bh-RLC-ChannelID-r16* IE in *BH-RLC-ChannelConfig* is used to indicate the BH RLC channel. *bh-LogicalChannelIdentityExt IE* is used only for the MAC logical channel.

**[Proposed Change]**: “and for the BH RLC channel” should be deleted.

**[Comments]**:

According to the issues raised in both #Z502 and #Z503, do companies agree that the fields descriptions of BH-LogicalChannelIdentity needs to be updated according to the proposed changes in the RILs?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | Yes | We think this change is reasonable. |
| Huawei | Agree with intention, but. | We prefer to change the filed descriptionID used commonly for the MAC logical channel corresponding to ~~and for~~ the BH RLC channel.BTW, we’d better discuss this in the RRC email discussion of IAB session, where more IAB guy can check this. |
| MediaTek | Yes |  |
| Qualcomm | Yes |  |
|  |  |  |
|  |  |  |

## 2.3 RIL #Z020

The issue in RIL #Z020 is summarized as follows:

|  |
| --- |
| ***channellAccessPriority***Indicates the Channel Access Priority Class (CAPC), as specified in TS 38.300 [2] and TS 38.321 [3], to be used on transmission using configured grants on shared spectrum. The network configures this field only for SRB2 and DRBs. |

**[RIL]**: Z020 **[Delegate]**: Z(EV) **[WI]**:NR-U **[Class]**:2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: For the field description, 38.321 is referenced, but CAPAC seems not mentioned within this spec. Also, the CAPAC signalled will be applicable for the case when UL grant indicates LBT type 1 in DCI 0\_0. This needs to be clarified.

**[Proposed Change]**: Modify field description as follows

Indicates the Channel Access Priority Class (CAPC), as specified in TS 38.300 [2] ~~and TS 38.321 [3],~~ to be used on transmission using configured grants and UL dynamic grants where CAPC is not indicated in DCI for shared spectrum access. The network configures this field only for SRB2 and DRBs.

**[Comments]**:

According to the issue raised in #Z020, do companies agree that the fields descriptions of ChannelAccessPriority needs to be updated according to the proposed changes in the RILs?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | Partially Yes | We agree to remove “and TS 38.321 [3]”Besides, MSGA should be taken into accout, so we propose the following change:Indicates the Channel Access Priority Class (CAPC), as specified in TS 38.300 [2], to be used on transmission using configured grants, grants from MSGA and UL dynamic grants where CAPC is not indicated in DCI for shared spectrum access. The network configures this field only for SRB2 and DRBs. |
| Huawei | Yes | We have confirm that DCI format 0-0 does not have the CAPC indication.  |
| MediaTek | Yes | Ok with the changes and the addition from Oppo |
| Qualcomm | Partially Yes | Agree on removing the reference but will suggest as follows:Indicates the Channel Access Priority Class (CAPC), as specified in TS 38.300 [2] ~~and TS 38.321 [3],~~ to be used for msgA, uplink transmissions using configured grants or UL dynamic grants where CAPC is not indicated in DCI. The network configures this field only for SRB2 and DRBs for operation with shared spectrum channel access. |
|  |  |  |
|  |  |  |

## 2.4 RIL #S017

The issue in RIL #S017 is summarized as follows:

MAC-CellGroupConfig ::= SEQUENCE {

 drx-Config SetupRelease { DRX-Config } OPTIONAL, -- Need M

 schedulingRequestConfig SchedulingRequestConfig OPTIONAL, -- Need M

 bsr-Config BSR-Config OPTIONAL, -- Need M

 tag-Config TAG-Config OPTIONAL, -- Need M

 phr-Config SetupRelease { PHR-Config } OPTIONAL, -- Need M

 skipUplinkTxDynamic BOOLEAN,

 ...,

 [[

 csi-Mask BOOLEAN OPTIONAL, -- Need M

 dataInactivityTimer SetupRelease { DataInactivityTimer } OPTIONAL -- Cond MCG-Only

 ]],

 [[

 usePreBSR-r16 ENUMERATED {true} OPTIONAL, -- Need M

 lbt-FailureRecoveryConfig-r16 LBT-FailureRecoveryConfig-r16 OPTIONAL, -- Need M

 schedulingRequestID-LBT-SCell-r16 SchedulingRequestId OPTIONAL, -- Need M

 lch-BasedPrioritization-r16 ENUMERATED {enabled} OPTIONAL, -- Need R

 schedulingRequestID-BFR-SCell-r16 SchedulingRequestId OPTIONAL -- Need R

 ]]

}

**[RIL]**: S017 **[Delegate]**: Samsung (Milos) **[WI]**: IAB **[Class]**: 2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: usePreBSR (used to configure use of Pre-emptive BSR for IAB nodes) is currently part of MAC-CellGroupConfig

**[Proposed Change]**: in our view, it should instead be part of bsr-Config (as an optional element), instead of standalone like here

**[Comments]**:

According to the issue raised in #S017, do companies agree to move the field use-PreBSR within the BSR-Config IE?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | No strong view | No issue if put usePreBSR-r16 under MAC-CellGroupConfig. Besides, it seems the parameters configured in bsr-config are applied to legacy BSR. Thus no preference to have the change. |
| Huawei | No | Since in IAB WI, we have agreed in MAC that pre-BSR is not part/kind of BSR, so we’d better to separate the IE for pre-BSR and legacy BSR-Config. |
| MediaTek | No | Agree with Huawei |
| Qualcomm | No | Similar view as Huawei. Better not to convolve this with legacy BSR |
|  |  |  |
|  |  |  |

## 2.5 RIL #S019

The issue in RIL #S019 is summarized as follows:

MAC-CellGroupConfig ::= SEQUENCE {

 drx-Config SetupRelease { DRX-Config } OPTIONAL, -- Need M

 schedulingRequestConfig SchedulingRequestConfig OPTIONAL, -- Need M

 bsr-Config BSR-Config OPTIONAL, -- Need M

 tag-Config TAG-Config OPTIONAL, -- Need M

 phr-Config SetupRelease { PHR-Config } OPTIONAL, -- Need M

 skipUplinkTxDynamic BOOLEAN,

 ...,

 [[

 csi-Mask BOOLEAN OPTIONAL, -- Need M

 dataInactivityTimer SetupRelease { DataInactivityTimer } OPTIONAL -- Cond MCG-Only

 ]],

 [[

 usePreBSR-r16 ENUMERATED {true} OPTIONAL, -- Need M

 lbt-FailureRecoveryConfig-r16 LBT-FailureRecoveryConfig-r16 OPTIONAL, -- Need M

 schedulingRequestID-LBT-SCell-r16 SchedulingRequestId OPTIONAL, -- Need M

 lch-BasedPrioritization-r16 ENUMERATED {enabled} OPTIONAL, -- Need R

 schedulingRequestID-BFR-SCell-r16 SchedulingRequestId OPTIONAL -- Need R

 ]]

}

**[RIL]**: S019 **[Delegate]**: Samsung (Milos) **[WI]**: IAB **[Class]**: 2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: ‘Need M’ is not the suitable choice.

**[Proposed Change]**: It should be 'Need R' or 'boolean with Need M' so that the configuration can be released. 'boolean with Need M' is preferable, to enable delta signaling (and thus reduce signaling overhead).

**[Comments]**:

According to the issue raised in #S019, do companies agree to change the need code of use-PreBSR?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | Yes | We prefer to use Need R which is aligned with other ENUMERATED with single value. It would be good to also change the “true” to “enabled” |
| Huawei | No | This already been endorsed in the WI specific CR R2-2004125 (use Need R). We’d better not agree the redundant change. |
| MediaTek |  | Agree with HW that this is already fixed |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.6 RIL #S056

The issue in RIL #S056 can be summarized as follows:

MAC-CellGroupConfig ::= SEQUENCE {

 drx-Config SetupRelease { DRX-Config } OPTIONAL, -- Need M

 schedulingRequestConfig SchedulingRequestConfig OPTIONAL, -- Need M

 bsr-Config BSR-Config OPTIONAL, -- Need M

 tag-Config TAG-Config OPTIONAL, -- Need M

 phr-Config SetupRelease { PHR-Config } OPTIONAL, -- Need M

 skipUplinkTxDynamic BOOLEAN,

 ...,

 [[

 csi-Mask BOOLEAN OPTIONAL, -- Need M

 dataInactivityTimer SetupRelease { DataInactivityTimer } OPTIONAL -- Cond MCG-Only

 ]],

 [[

 usePreBSR-r16 ENUMERATED {true} OPTIONAL, -- Need M

 lbt-FailureRecoveryConfig-r16 LBT-FailureRecoveryConfig-r16 OPTIONAL, -- Need M

 schedulingRequestID-LBT-SCell-r16 SchedulingRequestId OPTIONAL, -- Need M

 lch-BasedPrioritization-r16 ENUMERATED {enabled} OPTIONAL, -- Need R

 schedulingRequestID-BFR-SCell-r16 SchedulingRequestId OPTIONAL -- Need R

 ]]

}

**[RIL]**: S056 **[Delegate]**: Samsung (Jaehyuk) **[WI]**: NR-U **[Class]**: 2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: SetupRelease with Need M should be used so that the configuration can be released.

**[Proposed Change]**: Change it to SetupRelease with Need M.

**[Comments]**:

According to the issue raised in #S056, do companies agree to change the structure of lbt-FailureRecoveryConfig-r16 to setupRelease?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | Yes |  |
| Huawei | Yes | Should have the functionality that the lbt recovery configuration is released while the other configuration is not affected.  |
| MediaTek | Yes |  |
| Qualcomm | Yes | It is acceptable |
|  |  |  |
|  |  |  |

## 2.7 RIL #S057

The issue described in RIL #S057 can be described as follows:

The issue in RIL #S019 is summarized as follows:

MAC-CellGroupConfig ::= SEQUENCE {

 drx-Config SetupRelease { DRX-Config } OPTIONAL, -- Need M

 schedulingRequestConfig SchedulingRequestConfig OPTIONAL, -- Need M

 bsr-Config BSR-Config OPTIONAL, -- Need M

 tag-Config TAG-Config OPTIONAL, -- Need M

 phr-Config SetupRelease { PHR-Config } OPTIONAL, -- Need M

 skipUplinkTxDynamic BOOLEAN,

 ...,

 [[

 csi-Mask BOOLEAN OPTIONAL, -- Need M

 dataInactivityTimer SetupRelease { DataInactivityTimer } OPTIONAL -- Cond MCG-Only

 ]],

 [[

 usePreBSR-r16 ENUMERATED {true} OPTIONAL, -- Need M

 lbt-FailureRecoveryConfig-r16 LBT-FailureRecoveryConfig-r16 OPTIONAL, -- Need M

 schedulingRequestID-LBT-SCell-r16 SchedulingRequestId OPTIONAL, -- Need M

 lch-BasedPrioritization-r16 ENUMERATED {enabled} OPTIONAL, -- Need R

 schedulingRequestID-BFR-SCell-r16 SchedulingRequestId OPTIONAL -- Need R

 ]]

}

**[RIL]**: S057 **[Delegate]**: Samsung (Jaehyuk) **[WI]**: NR-U **[Class]**: 2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: It should be Need R so that the configuration can be released later.

**[Proposed Change]**: Change Need code to Need R.

**[Comments]**:

According to the issue raised in #S057, do companies agree to change the need code of schedulingRequestID-LBT-SCell-r16 to Need R?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | Yes |  |
| Huawei | Yes |  |
| MediaTek | Yes |  |
| Qualcomm | Yes |  |
|  |  |  |
|  |  |  |

## 2.8 RIL #O404

The issue in RIL #O404 can be described as follows:

MAC-CellGroupConfig ::= SEQUENCE {

 drx-Config SetupRelease { DRX-Config } OPTIONAL, -- Need M

 schedulingRequestConfig SchedulingRequestConfig OPTIONAL, -- Need M

 bsr-Config BSR-Config OPTIONAL, -- Need M

 tag-Config TAG-Config OPTIONAL, -- Need M

 phr-Config SetupRelease { PHR-Config } OPTIONAL, -- Need M

 skipUplinkTxDynamic BOOLEAN,

 ...,

 [[

 csi-Mask BOOLEAN OPTIONAL, -- Need M

 dataInactivityTimer SetupRelease { DataInactivityTimer } OPTIONAL -- Cond MCG-Only

 ]],

 [[

 usePreBSR-r16 ENUMERATED {true} OPTIONAL, -- Need M

 lbt-FailureRecoveryConfig-r16 LBT-FailureRecoveryConfig-r16 OPTIONAL, -- Need M

 schedulingRequestID-LBT-SCell-r16 SchedulingRequestId OPTIONAL, -- Need M

 lch-BasedPrioritization-r16 ENUMERATED {enabled} OPTIONAL, -- Need R

 schedulingRequestID-BFR-SCell-r16 SchedulingRequestId OPTIONAL -- Need R

 ]]

}

|  |
| --- |
| ***lch-BasedPrioritization***If this field is present, the UE is configured with prioritization between overlapping grants and between scheduling request and overlapping grants based on LCH priority, see see TS 38.321 [3]. Editor's Note: It is FFS whether SR/data prioritization can be a separate configurable parameter from data/data prioritization. |

**[RIL]**: O404 **[Delegate]**: OPPO(fuzhe) **[WI]**:IIOT **[Class]**:2 **[Status]**: DiscMail1 **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: lch-BasedPrioritization is configured per cell group. It is possible that either MCG or SCG is with this IE configured. For this case, UE can only perform LCH-based prioritization for the associated cell group other than UE itself.

**[Proposed Change]**: Change "If this field is present, the UE is configured with prioritization between overlapping grants and between scheduling request and overlapping grants based on LCH priority" to "If this field is present, the corresponding MAC entity of the UE is configured with prioritization between overlapping grants and between scheduling request and overlapping grants based on LCH priority".

**[Comments]**:

According to the issue raised in #O404, do companies agree to change the field description of lch-BasedPrioritization to what is proposed in the RIL?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | Yes |  |
| Huawei | Yes, but | The reason for change is valid. But, we see many similar issue in the currents spec even in R15. It is also OK to not change this. |
| MediaTek | Yes | There may be similar issues elsewhere. However as we now have the opportunity to correct such an issue here, it is best to do so. |
| Qualcomm | Yes | Even though confusion risk is small, it is acceptable. |
|  |  |  |
|  |  |  |

## 2.9 RIL #Z280

The issue in RIL #Z280 can be summarized as follows:

MAC-CellGroupConfig ::= SEQUENCE {

 drx-Config SetupRelease { DRX-Config } OPTIONAL, -- Need M

 schedulingRequestConfig SchedulingRequestConfig OPTIONAL, -- Need M

 bsr-Config BSR-Config OPTIONAL, -- Need M

 tag-Config TAG-Config OPTIONAL, -- Need M

 phr-Config SetupRelease { PHR-Config } OPTIONAL, -- Need M

 skipUplinkTxDynamic BOOLEAN,

 ...,

 [[

 csi-Mask BOOLEAN OPTIONAL, -- Need M

 dataInactivityTimer SetupRelease { DataInactivityTimer } OPTIONAL -- Cond MCG-Only

 ]],

 [[

 usePreBSR-r16 ENUMERATED {true} OPTIONAL, -- Need M

 lbt-FailureRecoveryConfig-r16 LBT-FailureRecoveryConfig-r16 OPTIONAL, -- Need M

 schedulingRequestID-LBT-SCell-r16 SchedulingRequestId OPTIONAL, -- Need M

 lch-BasedPrioritization-r16 ENUMERATED {enabled} OPTIONAL, -- Need R

 schedulingRequestID-BFR-SCell-r16 SchedulingRequestId OPTIONAL -- Need R

 ]]

}

|  |
| --- |
| ***schedulingRequestID-BFR-SCell***If present, it indicates the scheduling request configuration applicable for BFR on SCell, as specified in TS 38.321 [3]. |

**[RIL]**: Z280 **[Delegate]**: ZTE (Dong Fei) **[WI]**: NR\_eMIMO-Core **[Class]**: 3 **[Status]**: DiscMail1 **[TDoc]**: **[Proposed Conclusion]**:

**[Description]**: It seems the following contents is needed in the field description:

In case the BFR on SCell is not configured, it shall be absent

**[Proposed Change]**:

***schedulingRequestID-BFR-SCell***

If present, it indicates the scheduling request configuration applicable for BFR on SCell, as specified in TS 38.321 [3].In case the BFR on SCell is not configured, it shall be absent

**[Comments]**:

According to the issue raised in #Z280, do companies agree to change the field description of schedulingRequestID-BFR-SCell to what is proposed in the RIL?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| OPPO | No, | It use need R, it would be change “If present” to “If configured”Agree the intention, but maybe we don’t need the change from ZTE, because the field description says “… applicable for BFR on SCell”, it implicitly says network will only configure it for SpCell case.Or to make it clear, we can use COND |
| Huawei | No  | Prefer to use the conditional presence tag |
| MediaTek | No | Agree with Huawei. A conditional presence tag would be much clearer |
| Qualcomm | Yes | Condition would be an overkill only for this IE. Agree with Oppo on “If configured” |
|  |  |  |
|  |  |  |

# Conclusion

In the previous sections we made the following observations:

Based on the discussion in the previous sections we propose the following:

# References

[1]