3GPP TSG-RAN WG2 Meeting #118e Tdoc R2-22xxxxx

Electronical meeting, May 9th – May 20th, 2022

Agenda: 8.14.3.2

Source: Ericsson

Title: Summary of [AT118-e][225][DCCA] RRC for CPAC (Ericsson) for 6.2.3

Document for: Discussion, Decision

# 1 Introduction

In this document the following offline is discussed:

* [AT118-e][225][DCCA] RRC for CPAC (Ericsson)

      Scope: Discuss RRC corrections for CPAC marked for this discussion.

Intended outcome: Discussion report in [R2-2206168](file:///C:\\Users\\terhentt\\Documents\\Tdocs\\RAN2\\RAN2_118-e\\R2-2206168.zip).

Deadline: Deadline 2

Contact information:

|  |  |
| --- | --- |
| **Company** | **Contact Name, Email** |
| Huawei, HiSilicon | David Lecompte (david.lecompte at huawei.com) |
| ZTE | Mengjie Zhang (zhang.mengjie@zte.com.cn) |
| Lenovo | Congchi Zhang (zhangcc16@lenovo.com) |
| MediaTek | Felix Tsai (chun-fan.tsai@mediatek.com) |
| Google | Jing-Rong Hsieh (jinghsieh@google.com) |
| ITRI | Nai-Lun Huang (NellenHuang@itri.org.tw) |
| Ericsson | Cecilia Eklöf (cecilia.eklof@ericsson.com) |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# 2 Discussion

## 2.1 RIL E022

The following RIL was added:

**[RIL]**: E022 **[Delegate]**: Ericsson (Cecilia) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: It was agreed to support the combination of CHO + CPC. That means that also VarConditionalReconfiguration may have been configured when CHO was configured and VarConditionalReconfiguration then needs to be released as well. This applies to all cases where VarConditionalReconfig is released.

**[Proposed Change]**: Add one more line with the text “remove all the entries within *VarConditionalReconfiguration* as specified in TS 36.331 [10] clause 5.3.5.9.6, if any;”.

**[Comments]**:

[R2-2206116](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206116.zip), [Miscellaneous CPAC corrections related to RIL E022, E023, E024 and E029](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206116%20Ericsson%20Miscellaneous%20CPAC%20corrections%20related%20to%20RIL%20E022,%20E023,%20E024%20and%20E029.docx), Ericsson, RAN2#118e, e, May 2022

[R2-2205168](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205168.zip), [[E022] [V190] Discussion on conditional reconfiguration removal](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205168%20ZTE%20%5bE022%5d%20%5bV190%5d%20Discussion%20on%20conditional%20reconfiguration%20removal.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

Question 1: Do you think RIL E022 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Yes | The TP in R2-2206116 is a good basis (not R2-2205168).  However:  - if we introduce VarConditionalReconfigSCG, that also should be cleared in every place where VarConditionalReconfig was cleared when CPC was configured in Rel-16  - "remove all the entries for CPC": it is unclear how the UE is supposed to distinguish entries for CPC from other entries. |
| ZTE | Yes but | According to the current specs, the VarConditionalReconfig specified in TS 38.331 is used to store the conditional reconfiguration for CHO in NR SA or MR-DC with NR PCell, CPA or inter-SN CPC in NR-DC, or intra-SN CPC without MN involvement in NR-DC or EN-DC. The VarConditionalReconfiguration specified in TS 36.331 is used to store the conditional reconfiguration for CHO in LTE SA or EN-DC, CPA or inter-SN CPC in EN-DC.  Since a UE cannot be configured with NR PCell and EN-DC simultaneously, we think the removal of VarConditionalReconfiguration (specified in TS 36.331, for R17 CPA/CPC) in NR spec shall only be required in case where NR PSCell is involved in EN-DC case, e.g. NR PSCell addition/change (which has been captured in the current NR RRC spec) or SCG release. So no need to add the line for VarConditionalReconfiguration release in some cases where the remove action shall never happen in the realistic operation.  For LTE spec, since the removal of VarConditionalReconfig (specified in TS 38.331) is used for R16 CPC, it is needed in most cases where VarConditionalReconfiguration is released. But for the RRC re-establishment case, the UE will perform MR-DC release (including CPC release) before removing conditional reconfigurations. So it seems no need to specify the redundant removal of VarConditionalReconfig in such case. |
| Lenovo | Yes | It needs to be implemented in the spec in some way, although we agree with Huawei and ZTE’s concerns. |
| MediaTek | Yes | Prefer TP in R2-2206116 as baseline. |
| Google | Yes | Can take R2-2206116 as basis. |
| ITRI | Yes | Support the change. When conditional reconfigurations are to be released, the UE should release any configuration in both *VarConditionalReconfiguration* (from 36.331) and *VarConditionalReconfig* (from 38.331).  Regarding the TP in R2-2206116, agree with Huawei that it is unclear how the UE distinguish entries for CPC from other entries in current specification. |
| Ericsson | Yes (proponent) | Can take R2-2206116 as baseline and remove changes where they are not needed. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.2 RIL E024

The following RIL was added:

**[RIL]**: E024 **[Delegate]**: Ericsson (Cecilia) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: As both CHO and CPC can be configured at the same time, both measConfig for MCG and SCG for conditional reconfigurations need to be released. It is not clear here that the UE needs to release both MCG measConfig and SCG measConfig if the reportType is set to condTriggerConfig. This issue is valid for all occurrences where the measurement configurations for condition reconfigurations are released.

**[Proposed Change]**: Clarify that both MCG and SCG measurement configurations for conditional reconfigurations are released.

**[Comments]**: Huawei (David): this would be consistent with the clearing of VarConditionalReconfig(uration) just above and aligned with R17 agreement but we would like to highlight the following scenario: if CHO and R16 CPC are configured, the R17 UE will release R16 CPC configurations upon CHO execution and vice-versa, while the R16 UE will not do that.

Ericsson (Cecilia): The issue is related to the release of the measurement configuration, not the release of the UE variable for conditional reconfiguration.

[R2-2206116](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206116.zip), [Miscellaneous CPAC corrections related to RIL E022, E023, E024 and E029](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206116%20Ericsson%20Miscellaneous%20CPAC%20corrections%20related%20to%20RIL%20E022,%20E023,%20E024%20and%20E029.docx), Ericsson, RAN2#118e, e, May 2022

Question 2: Do you think RIL E024 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Yes | Suggest adding "associated with the MCG, if configured, and associated with the SCG, if configured" to make it 100% clear. |
| ZTE | No strong view | I guess the current text “for each *measId* of the source SpCell configuration” can also cover both related MCG and SCG measurement configurations. But it is a bit strange to say “of the source SpCell configuration”, so it is fine to remove it. |
| Lenovo | Yes |  |
| MediaTek | Yes |  |
| Google | Yes |  |
| ITRI | Yes |  |
| Ericsson | Yes (proponent) |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.3 RIL E023

The following RIL was added:

**[RIL]**: E023 **[Delegate]**: Ericsson (Cecilia) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: In rel-17 there can be conditional reconfigurations both in MCG and the SCG at the same time. There then needs to be two variables for conditional reconfigurations, one for MCG and one for SCG. If this is not defined, there need to be additions in RAN3 specifications instead, such as coordination of condReconfigId.

**[Proposed Change]**: Define a new variable VarConditionalReconfig-SCG and add relevant procedure text and ASN.1 for it.

**[Comments]**:

[R2-2206116](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206116.zip), [Miscellaneous CPAC corrections related to RIL E022, E023, E024 and E029](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206116%20Ericsson%20Miscellaneous%20CPAC%20corrections%20related%20to%20RIL%20E022,%20E023,%20E024%20and%20E029.docx), Ericsson, RAN2#118e, e, May 2022

[R2-2205485](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205485.zip), [[E023] Introduction of UE variable for SN configured conditional Reconfigurations](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205485%20Samsung%20%5bE023%5d%20Introduction%20of%20UE%20variable%20for%20SN%20configured%20conditional%20Reconfigurations.docx), Samsung R&D Institute UK, RAN2#118e, e, May 2022

Question 3: Do you think RIL E023 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Yes | It should no be difficult (and see comment to question 1) |
| ZTE |  | If we support the coexistence of R16 CPC and CHO/R17 CPC, yes, a separate variable for R16 CPC is needed. But how to specify this may need further discussion, e.g. whether need to specify how does the UE identify the received configuration corresponds to which variable? |
| Lenovo | Yes |  |
| MediaTek |  | We are okay with the TP from R2-2206116. Similar to measurement configuration, we assume the UE maintain two independent UE variables from MCG and SCG.  We disagree on original TP in R2-2205444 and R2-2205485. |
| Google | Yes |  |
| ITRI | Yes | Without two separate UE variables, there would be issues caused by condReconfigId conflict. |
| Ericsson | Yes | It is the TP from R2-2206116 that is the valid one. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.4 RIL E050

The following RIL was added:

**[RIL]**: E050 **[Delegate]**: Ericsson (Cecilia) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: A UE can be configured with CPA when a DAPS HO is configured. In case of a fallback to the source cell, which is described here, the evaluation of the stored CPA configuration then needs to be restarted.

**[Proposed Change]**: Add text saying that the evaluation of stored CPA configurations needs to be restarted.

**[Comments]**:

[R2-2205445](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205445.zip), [CPA and DAPS handover correction of RIL E050](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205445%20Ericsson%20CPA%20and%20DAPS%20handover%20correction%20of%20RIL%20E050.docx), Ericsson, RAN2#118e, e, May 2022

Question 4: Do you think RIL E050 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Maybe | I actually can't see where it would be specified that "the UE shall not trigger execution of another procedure that is included in a stored conditional reconfigurations" or that "the UE is not required to continue evaluation of any conditional reconfigurations that it may have stored"  The TP for proposal 3 would be fine. |
| ZTE | Maybe | Slightly prefer to not support the coexistence of CPA and DAPS (i.e. the NW releases CPA configuration before sending DAPS configuration). Anyway DAPS with DC is not supported, so it seems no much need to keep CPA configuration during DAPS HO.  The TP for proposal 3 would be fine. |
| MediaTek |  | We also prefer not to support the coexistence of CPA and DAPS. So, TP from P3 is also fine to us. |
| Google |  | Prefer not supporting the coexistence of CPA and DAPS. |
| ITRI | Maybe | We share the same view with Huawei and prefer P3. |
| Ericsson | Yes (proponent) | We are fine with P3. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.5 RIL H110

The following RIL was added:

**[RIL]**: H110 **[Delegate]**: Huawei (David) **[WI]**: DCenh **[Class]**: 2 **[Status]**: ToDo **[TDoc]**: R2-22xxxxx **[Proposed Conclusion]**: v197

**[Description]**: For Rel-17 CPC, one issue raised was the "unsynchronized reconfiguration", i.e. the UE will apply a conditional reconfiguration that can change the MCG configuration at a time not known by the network and send an RRCReconfigurationComplete message. One way to solve this problem could be to use reconfigurationWithSync of the MN, but this is forbidden because the UE will then consider the PCell as the applicable cell.

**[Proposed Change]**: Discuss possible solutions, e.g.

- if the PCell of the conditional configuration is the current PCell, the UE considers the applicable cell to be the PSCell of the conditional configuration

- the network can indicate explicitly that the applicable cell is the PSCell

- allow the network to indicate explictly the applicable cell (i.e. PCI, and from the MO of the measId the UE the UE can know the carrier), as was proposed in Rel-16 but too late

-

**[Comments]**:

[R2-2206139](file:///C:\Users\terhentt\Documents\Tdocs\RAN2\RAN2_118-e\R2-2206139.zip) [38.331 - H110] Applicable cell for a conditional reconfiguration Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

Question 5: Do you think RIL H110 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Yes (Proponent) | As in R2-2206139 |
| ZTE | No | We agreed that it’s up to the NW implementation to handle the “unsynchronized update of MCG configuration” issue at last meeting. A possible solution is that the NW ensures the contained MCG configuration for each candidate PSCell will not include the SRB configuration to update the SRB or lower layer configuration of the MN. So we think that the reconfigurationWithSync for MCG should not be included. And then there is no applicable cell issue. |
| Lenovo | No | Upon implementation. |
| MediaTek | Maybe | We are fine to support “MCG reconfiguration with sync” in the reconfiguration message for “MN-initiated inter-SN CPC”. To clarify, if the intention to do reconfiguration with sync to the same PCell. Or is it really intend to do MCG change based on evaluation of SCG cells ?  Please note that if we agree to support this scenario, the TP also impact the discussion #036 CHO with SCG in TEI-17. |
| Google | No | Up to implementation. |
| Ericsson | No | We think the problem is more related to that the MN doesn’t know when the reconfiguration will take place. It could also be a reconfiguration which doesn’t require reconfigurationWithSync. We think it would be good to solve the problem, but there was another proposal before which we think was better, e.g. the use of UL Transfer message. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.6 RIL H111

The following RIL was added:

**[RIL]**: H111 **[Delegate]**: Huawei (David) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: R2-22xxxxx **[Proposed Conclusion]**: v197

**[Description]**: This procedure will be executed upon every addition/modification of conditional reconfiguration (5.3.5.13.3), but it applies for each condReconfigId in VarConditionalReconfig, i.e. including previous configurations.

In Rel-16, either there are only CPC configurations configured by the SN, or only CHO configuration configured by the MN, so whether "it is configured" is considered to be "the current RRC message that includes the conditionalReconfiguration" or "the message by which this condExecutionCond was added" makes no difference.

However, in Rel-17, it is no more the case, i.e. different conditional configurations may be configured differently and it depends on which message the configuration was added.

**[Proposed Change]**: Discuss how to clarify that the UE shall store how each conditional configuration was added. Note that it applies not only for this procedure, but also in 5.3.5.3 for the sending of the complete message.

**[Comments]**:

[R2-2206140](file:///C:\Users\terhentt\Documents\Tdocs\RAN2\RAN2_118-e\R2-2206140.zip) [38.331 - H111] Handling of conditional configurations Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

Question 6: Do you think RIL H111 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Yes (proponent) but | this is purely a clarification, it is not critical to come with a final text right now. |
| ZTE | No | The current procedural text is clear. |
| Lenovo | Yes |  |
| MediaTek | Not sure | There is no TP in R2-2206140. We do not fully understand the proposal and the issue. The change seems require careful review. Maybe we should postpone it as proponent indicated this is not critical? |
| Google | Not sure |  |
| Ericsson |  | Isn’t this solved by RIL E023? |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.7 RIL Z003

The following RIL was added:

**[RIL]**: Z003 **[Delegate]**: ZTE (Mengjie) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: xxx **[Proposed Conclusion]**:

**[Description]**: For CPAC addition, the NW always configures either *triggerCondition* or *triggerConditionSN* (not both) for a *condReconfigurationId*. But for CPAC modification, the NW is allowed to include none of the fields *triggerCondition* and *triggerConditionSN* (i.e. when the execution condition is not changed). However, according to the current field description, the NW should always configures either one of fields in any cases.

*CondReconfigExecCondSN* should be *CondReconfigExecCondSCG* as specified in TS 38.331.

**[Proposed Change]**: Change the Need code for *triggerCondition* and *triggerConditionSN*, update the field description and explain the presence condition as follows:

CondReconfigurationAddMod-r16 ::= SEQUENCE {

condReconfigurationId-r16 CondReconfigurationId-r16,

triggerCondition-r16 SEQUENCE (SIZE (1..2)) OF MeasId

OPTIONAL, -- ~~Need ON~~Cond CondReconfigurationAdd1

condReconfigurationToApply-r16 OCTET STRING (CONTAINING RRCConnectionReconfiguration)

OPTIONAL,-- Cond CondReconfigurationAdd

...,

[[

triggerConditionSN-r17 OCTET STRING OPTIONAL -- ~~Need ON~~Cond CondReconfigurationAdd2

]]

}

|  |
| --- |
| ***triggerCondition***  The condition that needs to be fulfilled in order to trigger the execution of a conditional reconfiguration for CHO, CPA or MN initiated inter-SN CPC. When configuring two triggering events (MeasIds) for a candidate cell, the network ensures that both refer to the same *measObject*. ~~For each~~ *~~condReconfigurationId~~*~~, the network always configures either~~ *~~triggerCondition~~* ~~or~~ *~~triggerConditionSN~~* ~~(not both).~~ |
| ***triggerConditionSN***  Includes the NR *CondReconfigExecCondS~~N~~CG* as specified in TS 38.331 [82]. ~~For each~~ *~~condReconfigurationId~~*~~, the network always configures either~~ *~~triggerCondition~~* ~~or~~ *~~triggerConditionSN~~* ~~(not both)~~. The field is applied to the case of SN initiated inter-SN CPC. |

|  |  |
| --- | --- |
| Conditional Presence | Explanation |
| *CondReconfigurationAdd* | The field is mandatory present if a *condReconfigurationId* is being added. Otherwise it is optional, need ON. |
| *CondReconfigurationAdd1* | The field is mandatory present if a *condReconfigurationId* is being added and the *triggerConditionSN* is absent. For each *condReconfigurationId*, the field is absent when the *triggerConditionSN* is configured. Otherwise it is optional, need ON. |
| *CondReconfigurationAdd2* | The field is mandatory present if a *condReconfigurationId* is being added and the *triggerCondition* is absent. For each *condReconfigurationId*, the field is absent when the *triggerCondition* is configured. Otherwise it is optional, need ON. |

[R2-2205170](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205170.zip), [[Z003] Correction to CondReconfigurationToAddModList](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205170%20ZTE%20%5bZ003%5d%20Correction%20to%20CondReconfigurationToAddModList.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

Question 7: Do you think RIL Z003 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | No | "configured" does not mean "included", the text is clear and correct. |
| ZTE | Yes (proponent) | We understand that the current description “For each condReconfigurationId, the network **always** configures ...” may cause the ambiguity that the NW must configure/include one of the fields every time the NW (re)-configures something for the condReconfigurationId. But for CPAC modification, the NW is allowed to include none of the fields triggerCondition and triggerConditionSN (i.e. when the execution condition is not changed). So we think it is better to use the Cond code to explain detailed conditions for the present/absence of the corresponding fields, which has also been used in R16 specs.  But if the majority thinks the current text is clear enough, we can also accept it. |
| Lenovo | Yes | ZTE’s proposal seems clearer. |
| MediaTek | No | Same view as Huawei. We think that current text is fine. |
| Google | No strong view | The current text is fine though. |
| ITRI | Yes | ZTE’s change removes ambiguity. |
| Ericsson | No | Not needed. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.8 RIL Z004

The following RIL was added:

**[RIL]**: Z004 **[Delegate]**: ZTE (Mengjie) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: xxx **[Proposed Conclusion]**:

**[Description]**: It’s not clear whether the events (i.e. EventA3, EventA4, EventA5) for normal RRM measurement can also be reused for the execution conditions. Suggest to clarify this.

**[Proposed Change]**: If it is confirmed that the events for normal RRM measurement can be reused, the following change is needed:

3> if the *condEventId* is associated with condEventA3, condEventA4 or condEventA5, or if *EventId* is associated with EventA3, EventA4 or EventA5, and if the leaving condition(s) applicable for this event associated with the *condReconfigId*, i.e. the event corresponding with the *condEventId(s)* or *EventId(s)* of the corresponding *condTriggerConfig* within *VarConditionalReconfig*, is fulfilled for the applicable cells for all measurements after layer 3 filtering taken during the corresponding *timeToTrigger* defined for this event within the *VarConditionalReconfig*:

**[Comments]**:

[R2-2205171](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205171.zip), [[Z003][Z004] Discussion on applicable events for execution conditions](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205171%20ZTE%20%5bZ003%5d%5bZ004%5d%20Discussion%20on%20applicable%20events%20for%20execution%20conditions.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

Question 8: Do you think RIL Z004 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | No | It is clearly captured already that only conditional events can be used.  The proposal is actually a functional change, so that normal events can be used for execution conditions.  This would mean that there would be two types of measIds in execution conditions, one type that will be cleared in case of mobility and another type that won't be cleared. This increases the complexity a lot. |
| ZTE | Yes (proponent) | We see some benefits to allow the normal Events configured for execution condition, e.g. reusing the measIds for normal RRM measurements as execution conditions. Anyway the UE just removes the measIds whose reportType set to condTriggerConfig when the release is needed (the current spec has supported this). So we do not see the extra complexity.  Besides, if only CondEvents can be used for execution conditions, the NW must include source SN configuration in the MN RRC reconfiguration message for SN initiated inter-SN CPC, to reconfigure the source SCG measurement configuration for execution conditions. It revises our previous agreement that the MN RRC reconfiguration for CPC **may** include the source SN configuration. |
| Lenovo | No | Nothing seems broken from existing text? It seems optimization and does have different implications. Prefer to stick with the existing text. |
| MediaTek | No | This is clear NOT a bug fixing. We should not introduce more function at this stage. |
| Google | No | The current text is fine. |
| ITRI | No | The current specification captures clearly that only conditional events can be used. |
| Ericsson | No | This is not an error, but new functionality which increases the complexity. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.9 RIL V197

The following RIL was added:

**[RIL]**: V197 **[Delegate]**: vivo-Chenli **[WI]**: DCenh **[Class]**:1 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**: v128

**[Description]**: Should this note also apply for NR SCG?

**[Proposed Change]**: Assuming this note also applies for NR SCG, then, this note should be also added into 5.3.5.13.4. But it could be considered after we determine the below FFS.

Editors Note: FFS If EN-DC support in 5.3.5.13.4a should be merged to 5.3.5.13.4.

**[Comments]**: vivo-Chenli/v143: update the WI code

Question 9: Do you think RIL V197 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | No strong view |  |
| ZTE | No strong view |  |
| Lenovo | Yes |  |
| MediaTek | Yes | We understand that this applies also for NR SCG |
| Google | No strong view |  |
| ITRI | No strong view |  |
| Ericsson | No strong view |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.10 RIL E029

The following RIL was added:

**[RIL]**: E029 **[Delegate]**: Ericsson (Cecilia) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: The MN may configure the UE with CPC before informing the S-SN which candidate PSCells that were accepted. Hence, if not all candidates were accepted by the target candidate SN(s) the UE may end up being configured with an SCG MeasConfig for CPC which includes one or more instances of MeasIdToAddMod(s) with a measId associated to a reportConfigId whose ReportConfigNR has a reportType set to ‘condTriggerConfig-r16’, with that MeasId not being referred in any execution condition i.e. not in any condExecutionCond-r16.

**[Proposed Change]**: Make the following update:

5.5.3.1            General

[…]

The UE shall:

[…]

1> for each *measId* included in the *measIdList* within *VarMeasConfig*:

[…]

~~2> if the~~ *~~reportType~~* ~~for the associated~~ *~~reportConfig~~* ~~is~~ *~~periodical~~*~~,~~ *~~eventTriggered~~* ~~or~~ *~~condTriggerConfig~~*~~:~~

2> if the *reportType* for the associated *reportConfig* is *periodical* or *eventTriggered*; or

2> if the *reportType* for the associated *reportConfig* is *condTriggerConfig*, and the *measId* is set to at least one *condExecutionCond* associated to a *condReconfigId*;

3> if a measurement gap configuration is setup, or

3> if the UE does not require measurement gaps to perform the concerned measurements:

4> if *s-MeasureConfig* is not configured, or

4> if *s-MeasureConfig* is set to *ssb-RSRP* and the NR SpCell RSRP based on SS/PBCH block, after layer 3 filtering, is lower than *ssb-RSRP,* or

4> if *s-MeasureConfig* is set to *csi-RSRP* and the NR SpCell RSRP based on CSI-RS, after layer 3 filtering, is lower than *csi-RSRP*:

5> if the *measObject* is associated to NR and the *rsType* is set to *csi-rs*:

6> if reportQuantityRS-Indexes and maxNrofRS-IndexesToReport for the associated reportConfig are configured:

7> derive layer 3 filtered beam measurements only based on CSI-RS for each measurement quantity indicated in *reportQuantityRS-Indexes*, as described in 5.5.3.3a;

6> derive cell measurement results based on CSI-RS for the trigger quantity and each measurement quantity indicated in *reportQuantityCell* using parameters from the associated *measObject*, as described in 5.5.3.3;

5> if the *measObject* is associated to NR and the *rsType* is set to *ssb*:

6> if reportQuantityRS-Indexes and maxNrofRS-IndexesToReport for the associated reportConfig are configured:

7> derive layer 3 beam measurements only based on SS/PBCH block for each measurement quantity indicated in *reportQuantityRS-Indexes*, as described in 5.5.3.3a;

6> derive cell measurement results based on SS/PBCH block for the trigger quantity and each measurement quantity indicated in *reportQuantityCell* using parameters from the associated *measObject*, as described in 5.5.3.3;

[…]

2> perform the evaluation of reporting criteria as specified in 5.5.4, except if *reportConfig* is *condTriggerConfig*.

NOTE 1: The evaluation of conditional reconfiguration execution criteria is specified in 5.3.5.13.

[…]

~~Editors Note: FFS to specify that the UE ignores measId(s) that were not indicated in the condExecutionCond/triggerCondition.~~

**[Comments]**:

[R2-2206116](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206116.zip), [Miscellaneous CPAC corrections related to RIL E022, E023, E024 and E029](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206116%20Ericsson%20Miscellaneous%20CPAC%20corrections%20related%20to%20RIL%20E022,%20E023,%20E024%20and%20E029.docx), Ericsson, RAN2#118e, e, May 2022

Question 10: Do you think RIL E029 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon |  | We expect that this is not needed because the MN will inform the source SN if not all candidate target cells are prepared.  However, the change is simple so would be ok. |
| ZTE | No strong view | We assume that the NW can remove the useless measIds before sending CPC configuration to the UE. But if the NW dose not do it (e.g. not perform source SCG configuration update before sending CPC configuration), it is fine for the UE to not measure those measIds. |
| Lenovo | Yes |  |
| MediaTek | No strong view | We are not sure if NW will have this kind of configuration. But anyway, the change is fine. |
| Google | No strong view |  |
| ITRI | Yes | This change makes the UE behaviour clearer, i.e. the UE need not perform measurements on *measId*(s) with *reportType* set to *condTriggerConfig* that are not linked to any conditional reconfigurations. |
| Ericsson | Yes (proponent) | We actually agreed to make this change if the MN was allowed to configure the UE before informing the S-SN which candidates that were accepted. Then the agreement was put on hold until we had agreed on which option to use for inter-SN CPC and whether the second step to the S-SN would be mandatory or not. Later we agreed that the second step is optional and then this change should be made. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.11 RIL H067

The following RIL was added:

**[RIL]**: H067 **[Delegate]**: Huawei (David) **[WI]**: DCenh **[Class]**: 2 **[Status]**: ToDo **[TDoc]**: R2-22xxxxx **[Proposed Conclusion]**: v038

**[Description]**: RAN2 also defines fields to release the candidate target cell.

**[Proposed Change]**: Remove the ToReleaseList. Discuss about the ToAddModList.

**[Comments]**:

[R2-2206141](file:///C:\Users\terhentt\Documents\Tdocs\RAN2\RAN2_118-e\R2-2206141.zip) [38.331 - H067] Update of candidate target cell and configuration Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

Question 11: Do you think RIL H067 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Yes (proponent) |  |
| ZTE | No strong view | The PSCell Change Information Update IE defined in RAN3 message informs a list of PSCells prepared at the target SN. With the updated list, the MN can know which cells have been canceled. So it is also fine to not have the ToReleaseList. But the ToAddModList is still useful for the candidate cell configuration update. |
| Lenovo | No strong view | Same view as ZTE. |
| Google | No | The CG-CandidiateList (i.e., the ToReleaseList and ToAddModList) is used between the T-SN and MN and with the structure the T-SN is allowed to release and modify some PSCells using the RRC container alone. There was no procedural text or semantics description for the PSCell ID list in the SN Modification Required message or SN Modification Request Acknowledge message that the absence of some PSCell means no change or cancellation. |
| ITRI | No | Same view as Google. |
| Ericsson | No | We think it is clearer to use the lists. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.12 RIL E021

The following RIL was added:

**[RIL]**: E021 **[Delegate]**: Ericsson (Cecilia) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: The max number of CPC candidates is already coordinated in XnAP signalling, see agreed RAN3 CR R3-222909, so there is no need to coordinate it in the inter-node message as well.

**[Proposed Change]**: Remove this IE.

**[Comments]**:

Question 12: Do you think RIL E021 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| ZTE | No | The indicator introduced in RAN3 signalling is for coordinating the maximum number of PSCells that the target SN may prepare. The RAN2 indicator here is for indicating the maximum number of PSCells that the source SN is allowed to configure for SN initiated CPC in case of the coexistence MI-CPC+SI-CPC and CHO+CPC. These two indicators are introduced for different usages. |
| Lenovo | No | As ZTE explained, this is for the cooridination for coexistence case. But maybe some clarification is needed for the field discription,e.g.,  ***maxNumberCPCCandidates***  Indicates the maximum number of candidate cells that can be preparedduring the overall SN initiated CPC, if triggered by the source secondary node.  And a relevant question, we suppose when ***maxNumberCPCCandidates***  is absent, that means source SN cannot trigger the SN initiated CPC, or? Shouldn’t it be clarified? |
| Google | No | Share the same understanding as ZTE by the current field description. |
| ITRI | No | We share the same understanding as ZTE and think the current field description of ***maxNumberCPCCandidates*** is ok. |
| Ericsson | Yes (proponent) |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 2.13 RIL Z007

The following RIL was added:

**[RIL]**: Z007 **[Delegate]**: ZTE (Mengjie) **[WI]**: DCenh **[Class]**: 1 **[Status]**: ToDo **[TDoc]**: xxx **[Proposed Conclusion]**:

**[Description]**: For CPAC addition, the NW always configures either *condExecutionCond*

or *condExecutionCondSCG* (not both) for a *condReconfigId*. But for CPAC modification, the NW is allowed to include none of the fields *condExecutionCond* and *condExecutionCondSCG* (i.e. when the execution condition is not changed). However, according to the current field description, the NW should always configures either one of fields in any cases.

**[Proposed Change]**: Change the Need code for *condExecutionCond* and *condExecutionCondSCG*, update the field description and explain the presence condition as follows:

CondReconfigToAddMod-r16 ::= SEQUENCE {

condReconfigId-r16 CondReconfigId-r16,

condExecutionCond-r16 SEQUENCE (SIZE (1..2)) OF MeasId OPTIONAL, -- ~~Need M~~Cond condReconfigAdd1

condRRCReconfig-r16 OCTET STRING (CONTAINING RRCReconfiguration) OPTIONAL, -- Cond condReconfigAdd

...,

[[

condExecutionCondSCG-r17 OCTET STRING (CONTAINING CondReconfigExecCondSCG-r17) OPTIONAL -- ~~Need M~~Cond condReconfigAdd2

]]

}

| *CondReconfigToAddMod* field descriptions |
| --- |
| ***condExecutionCond***  The execution condition that needs to be fulfilled in order to trigger the execution of a conditional reconfiguration for CHO, CPA, intra-SN CPC without MN involvement or MN initiated inter-SN CPC. When configuring 2 triggering events (Meas Ids) for a candidate cell, network ensures that both refer to the same *measObject.* If network configures *condEventD1* or *condEventT1* for a candidate cell network configures a second triggering event *condEventA3, condEventA4* or *condEventA5*. Network does not configure both *condEventD1* or *condEventT1* for the same candidate cell. For CPAC, the *RRCReconfiguration* message contained in *condRRCReconfig* cannot contain the field *scg-State*. |
| ***condExecutionCondSCG***  Contains execution condition that needs to be fulfilled in order to trigger the execution of a conditional reconfiguration for SN initiated inter-SN CPC. The Meas Ids refer to the *measConfig* associated with the SCG. When configuring 2 triggering events (Meas Ids) for a candidate cell, network ensures that both refer to the same *measObject*. ~~For each~~ *~~condReconfigurationId~~*~~, the network always configures either~~ *~~triggerCondition~~* ~~or~~ *~~triggerConditionSCG~~* ~~(not both).~~ |

|  |  |
| --- | --- |
| Conditional Presence | Explanation |
| *condReconfigAdd* | The field is mandatory present when a *condReconfigId* is being added. Otherwise the field is optional, need M. |
| *condReconfigAdd1* | The field is mandatory present when a *condReconfigId* is being added and the *condExecutionCondSCG* is absent. For each *condReconfigId*, the field is absent when the *condExecutionCondSCG* is configured. Otherwise the field is optional, need M. |
| *condReconfigAdd2* | The field is mandatory present when a *condReconfigId* is being added and the *condExecutionCond* is absent. For each *condReconfigId*, the field is absent when the *condExecutionCond* is configured. Otherwise the field is optional, need M. |

[R2-2205169](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205169.zip), [[Z007] Correction to CondReconfigToAddModList](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205169%20ZTE%20%5bZ007%5d%20Correction%20to%20CondReconfigToAddModList.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

Question 13: Do you think RIL Z007 is an issue which needs to be corrected? Any comments/proposals on the solution in such case?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | No | As commented before, "configured" does not mean "included" and the text is correct. In addition, the proposed text is very complicated, in such case, it is better to use the field description. |
| ZTE | Yes (proponent) | See the same comment as Q7. |
| Lenovo | Yes | ZTE’s proposal seems clearer. |
| MediaTek | No | Same view as Huawei. |
| Google | No strong view | The current text is fine though. |
| ITRI | Yes | ZTE’s change removes ambiguity. |
| Ericsson | No | Not needed. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 3 Summary

TBD

# 4 References

1. [R2-2205168](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205168.zip), [[E022] [V190] Discussion on conditional reconfiguration removal](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205168%20ZTE%20%5bE022%5d%20%5bV190%5d%20Discussion%20on%20conditional%20reconfiguration%20removal.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

1. [R2-2205169](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205169.zip), [[Z007] Correction to CondReconfigToAddModList](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205169%20ZTE%20%5bZ007%5d%20Correction%20to%20CondReconfigToAddModList.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

1. [R2-2205170](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205170.zip), [[Z003] Correction to CondReconfigurationToAddModList](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205170%20ZTE%20%5bZ003%5d%20Correction%20to%20CondReconfigurationToAddModList.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

1. [R2-2205171](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205171.zip), [[Z003][Z004] Discussion on applicable events for execution conditions](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205171%20ZTE%20%5bZ003%5d%5bZ004%5d%20Discussion%20on%20applicable%20events%20for%20execution%20conditions.docx), ZTE Corporation, Sanechips, RAN2#118e, e, May 2022

1. [R2-2205444](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205444.zip), [Miscellaneous CPAC corrections related to RIL E022, E023, E024 and E029](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205444%20Ericsson%20Miscellaneous%20CPAC%20corrections%20related%20to%20RIL%20E022,%20E023,%20E024%20and%20E029.docx), Ericsson, RAN2#118e, e, May 2022

1. [R2-2205445](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205445.zip), [CPA and DAPS handover correction of RIL E050](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205445%20Ericsson%20CPA%20and%20DAPS%20handover%20correction%20of%20RIL%20E050.docx), Ericsson, RAN2#118e, e, May 2022

1. [R2-2205485](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205485.zip), [[E023] Introduction of UE variable for SN configured conditional Reconfigurations](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2205485%20Samsung%20%5bE023%5d%20Introduction%20of%20UE%20variable%20for%20SN%20configured%20conditional%20Reconfigurations.docx), Samsung R&D Institute UK, RAN2#118e, e, May 2022

1. [R2-2206116](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206116.zip), [Miscellaneous CPAC corrections related to RIL E022, E023, E024 and E029](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206116%20Ericsson%20Miscellaneous%20CPAC%20corrections%20related%20to%20RIL%20E022,%20E023,%20E024%20and%20E029.docx), Ericsson, RAN2#118e, e, May 2022

1. [R2-2206139](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206139.zip), [[38.331 - H110] Applicable cell for a conditional reconfiguration](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206139%20Huawei%20%5b38.331%20-%20H110%5d%20Applicable%20cell%20for%20a%20conditional%20reconfiguration.docx), Huawei, HiSilicon, RAN2#118e, e, May 2022

1. [R2-2206140](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206140.zip), [[38.331 - H111] Handling of conditional configurations](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206140%20Huawei%20%5b38.331%20-%20H111%5d%20Handling%20of%20conditional%20configurations.docx), Huawei, HiSilicon, RAN2#118e, e, May 2022

1. [R2-2206141](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206141.zip), [[38.331 - H067] Update of candidate target cell and configuration](file:///c:\3GPP_RAN1\RAN2_118e_e\6.2.3\R2-2206141%20Huawei%20%5b38.331%20-%20H067%5d%20Update%20of%20candidate%20target%20cell%20and%20configuration.docx), Huawei, HiSilicon, RAN2#118e, e, May 2022