3GPP TSG-RAN WG2 #113-e Tdoc R2-21xxxxx

Electronic meeting, January 25th – February 5th, 2021

Agenda Item: 6.8.1

Source: Ericsson (rapporteur)

Title: Summary of [AT113-e][221][DCCA] Other DCCA corrections

Document for: Discussion, Decision

# 1 Introduction

This document is to kick off the following email discussion:

* [AT113-e][221][DCCA] Other DCCA corrections (Ericsson)

Scope:

* + - Discuss corrections under 6.8.x marked for this discussion to see which CRs could be agreeable
		- Some (or even all) CRs may be merged together if seen needed

 Intended outcome:

* + - Discussion summary in [R2-2101967](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_113-e/Docs/R2-2101967.zip) (by email rapporteur).
		- Agreeable CRs (if any)

dline for providing comments, for rapporteur inputs, conclusions and CR finalization:

* + - Initial deadline (for companies' feedback): 1st week Thu, UTC 0900
		- Initial deadline (for rapporteur's summary): 1st week Fri, UTC 0900
		- Deadline for CR finalization: 2nd week Thu, UTC 1000

# 2 Discussion

To make it easier to find the correct contact delegate in each company for potential follow-up questions, the rapporteur encourages the delegates who provide input to provide their contact information in this table:

|  |  |
| --- | --- |
| Company | Delegate contact |

|  |  |
| --- | --- |
| Ericsson | stefan.wager@ericsson.com |
| vivo | wenjuan.pu@vivo.com |
| Nokia | jarkko.t.koskela@nokia.com |
| Apple | naveen.palle@apple.com |
| Qualcomm | chengp@qti.qualcomm.com |
| MediaTek | chun-fan.tsai@mediatek.com |
| OPPO | wangshukun@oppo.com |
| CATT | liangjing@catt.cn |

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

## 2.1 HARQ-ACK codebook configuration (RAN1)

[R2-2101076](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2101076.zip) CR on HARQ-ACK codebook configuration for secondary PUCCH group Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.3.1 2384 - F LTE\_NR\_DC\_CA\_enh-Core

[R2-2100095](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2100095.zip) Clarification on HARQ-ACK codebook for secondary PUCCH group CATT CR Rel-16 38.331 16.3.1 2299 - F LTE\_NR\_DC\_CA\_enh-Core

*Rapporteur comment: The above CRs both address incoming RAN1 LS in* [*R1-2009631*](http://www.3gpp.org/ftp/tsg_ran/WG1_RL1//TSGR1_103-e/Docs//R1-2009631.zip) *and are therefore discussed together. The RAN1 LS is to inform RAN2 that:*

*“RAN1 #103 discussed the issue that according to the current specification, both pdsch-HARQ-ACK-CodebookList-r16 and pdsch-HARQ-ACK-Codebook-secondaryPUCCHgroup-r16 can be configured simultaneously. In this case, it is not clear how to determine the HARQ-ACK codebook type for the two HARQ-ACK codebooks for the secondary PUCCH group. If pdsch-HARQ-ACK-CodebookList-r16 is followed, HARQ-ACK codebook type for the secondary PUCCH group cannot be separately configured from the primary PUCCH group. Otherwise if pdsch-HARQ-ACK-Codebook-secondaryPUCCHgroup-r16 is followed, only one HARQ-ACK codebook can be configured for the secondary PUCCH group which is not aligned with the intention in URLLC.*

*RAN1 agreed to resolve the issue with the following solution:*

*•* ***The same RRC configuration pdsch-HARQ-ACK-CodebookList-r16 is applied to both primary PUCCH group and secondary PUCCH group if two PUCCH groups are configured.”***

*The two CRs represent two alternative ways of capturing the RAN1 agreement in TS 38.331. Companies are requested to indicate in the table below whether they prefer*

1. *the formulation in* [R2-2101076](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2101076.zip)
2. *the formulation in* [R2-2100095](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2100095.zip)
3. *or none of the above*

|  |  |  |
| --- | --- | --- |
| Company | Agree 1 (R2-2101076), 2 (R2-2100095) or none. | Comments |
| Ericsson | 1 with change | In addition, the field description could also mention that *pdsch-HARQ-ACK-Codebook-secondaryPUCCHgroup* shall be ignored if *pdsch-HARQ-ACK-CodebookList* is present. |
| vivo | Agree 1 (R2-2101076) | Agree with Ericsson’s comment. |
| Nokia | Proponent (agree) | We would be OK to comply with Ericsson request e.g. by adding in field description of *pdsch-HARQ-ACK-Codebook-secondaryPUCCHgroup*:This field is ignored, if the field *pdsch-HARQ-ACK-CodebookList* is present |
| Apple | Either is fine… we are ok to go with majority. |  |
| Qualcomm  | Either is fine |  |
| MediaTek | Either 2) and 1) is fine  | But we don’t think it is not good idea to add UE ignore some useless parameter. We assume that NW does not configure these two together after applying the CR.  |
| OPPO | No strong view which CR is ok, but..  | Share the same comments with Ericsson. |
| CATT | Agree with 2) proponent |  |

## 2.2 Fast MCG recovery

[R2-2100096](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2100096.zip) Clarification on Fast MCG Link Recovery CATT CR Rel-16 36.331 16.3.0 4543 - F LTE\_NR\_DC\_CA\_enh-Core

[R2-2100097](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2100097.zip) Clarification on Fast MCG Link Recovery CATT CR Rel-16 38.331 16.3.1 2300 - F LTE\_NR\_DC\_CA\_enh-Core

*Rapporteur comment: The above two CRs cover changes in 36.331 and TS 38.331 respectively, related to agreements in RAN2#109 that in case of MCG failure during the execution of PSCell change or addition, the UE shall trigger RRC re-establishment procedure and not the MCG failure information. Since the changes proposed in both specs are the same, they can be discussed here together. Companies are requested to indicate in the table below whether they agree the CR or not and provide relevant comments.*

|  |  |  |
| --- | --- | --- |
| Company | Agree CRs?(yes or no) | Comments |
| Ericsson | No | The CRs are not needed, since during SCG addition, the UE does not yet have an SCG. It is there only once the procedure is concluded by the complete message. Thus, following current spec, legacy RRC re-establishment will be triggered.Regarding first change: During PSCell addition, there is no SCG for the UE to report the MCG failure information. There is then also no T316, and it is then covered by the following line in 5.3.7.2:1> upon detecting radio link failure and T316 is not configured, in accordance with 5.3.11; orRegarding second change: It is not needed since during SCG addition there is not yet an SCG, thus UE will fail the following two checks and not execute MCG failure information procedure: 2> if the UE is configured with (NG)EN-DC; and2> if T316 is configured; andRegarding the third change: PSCell addition does not need to be mentioned, as in that case UE is not configured with split SRB nor SRB3. The only change that could be considered is to add “PSCell change is not ongoing”, but that can be covered in rapporteur CR. |
| vivo | Agree 1st change and 2nd change | **For 1st change:** since PSCell addition case is mentioned in RAN2#109e agreement, so we agree with the intention. And the reason for having this agreement for PSCell addition is that RAN2 would like to have the simplest solution to solve the below issue.*If the PSCell addition is ongoing, whether the UE shall initiate MCG fast recovery after completion of PSCell addition (i.e. successful completion of RACH to the target PSCell) or shall stop the on going PSCell addition and initiate RRC re-establishment?* The current spec seems not clearly give the answer to this question. Thus, we think the change is correct.**For 2nd change:** we also think some changes are needed here. Since after applying SCG addition configuration, the UE can consider itself to have an SCG before sending RRC reconfiguration complete message according to 5.1.3, PSCell addition case can be present under the condition of ”if the UE is configured with (NG)EN-DC”. Since SCG suspension maybe meaningless for the case of PSCell addition, so we suggest the below change for the CR:2> if the UE is configured with (NG)EN-DC; and2> if T316 is configured; and2> if SCG transmission is not suspended; and2> if NR PSCell change ~~and~~or PSCell addition is not ongoing (i.e. T304 for the NR PSCell is not running as specified in TS 38.331 [82], clause 5.3.5.5.2, in (NG)EN-DC):**For 3rd change:** this change is unnecessary since it can be covered by the 2st change in section 5.3.11. |
| Nokia | Yes with changes | We disagree with Ericsson’s comment. T304 for SCG is stopped only upon successful RACH towards SCG, and on SN addition 37.340 states: “The order the UE sends the *RRCConnectionReconfigurationComplete* message and performs the Random Access procedure towards the SCG is not defined. The successful RA procedure towards the SCG is not required for a successful completion of the RRC Connection Reconfiguration procedure.”We think configuration of T316 and a newly added PSCell in the same RRC reconfig is not only possible but also typical, and in such a case UE can observe MCG RLF before RACH towards SCG is successfully completed.* On the 1st change: we should combine into "NR PSCell addition or change is ongoing"

On the 2nd change: it should rather say "neither .. nor" because now it sounds like if both are not ongoing concurrently, which is not the intention. |
| Qualcomm  | Yes with change | For 1st and 2nd change, we share the same view of Nokia and their suggested change. For 3nd change, we also think it has been covered by 2nd change. But we can follow majority if majority think this change is fine. |
| MediaTek | Yes | It is not critical but indeed it make SPEC more clear.  |
| OPPO | Yes  |  |
| CATT | Agree proponent | we agree to modify change 2 to be “if neither NR PSCell change nor NR PSCell addition is ~~not~~ ongoing” to make it clearer. |

[R2-2100438](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2100438.zip) T316 handling when rlf-TimersAndConstantsMCG-Failure is received Samsung, ZTE Corporation, Sanechips CR Rel-16 36.331 16.3.0 4550 - F LTE\_NR\_DC\_CA\_enh-Core

*Rapporteur comment: The CR proposes to add procedural text in section 5.3.10.7 for the handling of received rlf-TimersAndConstantsMCG-Failure (i.e. t316). Companies are welcome to provide their input in the below table.*

|  |  |  |
| --- | --- | --- |
| Company | Agree CR?(yes or no) | Comments |
| Ericsson | Yes, with change | It seems this was indeed missing. There is a refence to 5.3.10.7 when receiving *rlf-TimersAndConstantsMCG-Failure* but there is no corresponding text in 5.3.10.7:1> if the received *radioResourceConfigDedicated* includes the *rlf-TimersAndConstants* or the *rlf-TimersAndConstantsMCG-Failure*:2> reconfigure the values of timers and constants as specified in 5.3.10.7;But the CR cover page requires updates. There is no impact analysis. It mentions no functional change, but the CR adds procedural text. |
| vivo | Yes |  |
| Nokia | Yes but only with changes | If T316 is running, even if the RRC reconfig indicates to release it, it is not sufficient to just stop and release it: the UE has suspended its MCG transmissions and is waiting for a response from the network via SCG.In the timer-release case the spec should say: if the received *rlf-TimersAndConstantsMCG-Failure* is set to release:* release the value of T316;
* if T316 is running and is not stopped by this RRC reconfiguration:

 initiate RRC Re-establishment [which will also stop T316].  |
| Qualcomm  | Yes with change | Agree with Ericsson  |
| MediaTek | Yes | The original proposal just add procedure text to handle the *rlf-TimersAndConstantsMCG-Failure-r16*, and we think it is of course correct. Regarding to the UE behavior (trigger reestablishment) mentioned by Nokia, we think that it is reasonable UE behavior. We however not sure whether SPEC want to specify this kind of core case (NW configure T316, receive MCG failure indication, but decide to release T316 instead of reconfigure UE). In addition, we may also need 38.331 CR to align the UE behavior. |
| OPPO | Yes  |  |
| CATT | No | As Nokia mentioned, if T316 is running, UE can’t receive the reconfiguration message any more before the T316 expiry or T316 stop due to reception of NW response. so the following can’t occur“1> if the received *rlf-TimersAndConstantsMCG-Failure* is set to release:2> stop timer T316, if running, and”And in NR, there is also no text procedure to specify the configuration T316. T316 mainly is to enable the MCG fast recovery, it not a common timer.If some change is needed, we prefer to delete the reference in 5.3.10.0 5.3.10.01> if the received *radioResourceConfigDedicated* includes the *rlf-TimersAndConstants*:2> reconfigure the values of timers and constants as specified in 5.3.10.7;1> if the received *radioResourceConfigDedicated* includes the *measSubframePatternPCell*: |

## 2.3 Embedded RRC message handling

[R2-2100093](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2100093.zip) Correction on the Handling of Reconfiguration within RRC Resume CATT CR Rel-16 38.331 16.3.1 2298 - F LTE\_NR\_DC\_CA\_enh-Core

[R2-2100094](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2100094.zip) Correction on the Handling of Reconfiguration within RRC Resume CATT CR Rel-16 36.331 16.3.0 4542 - F LTE\_NR\_DC\_CA\_enh-Core

*Rapporteur comment: The above two CRs cover changes in 38.331 and TS 36.331 respectively, related to the handling of the SCG RRCReconfigurationComplete message for a RRCReconfiguration message received as part of a RRCResume or RRCConnectionResume message. Companies are welcome to provide their input in the below table.*

|  |  |  |
| --- | --- | --- |
| Company | Agree CRs?(yes or no) | Comments |
| Ericsson | No | Tend to agree that it would be cleaner not to have the description of where to send the complete message in the procedure part describing how to set the contents of the complete message. On the other hand, the proposed placing for handling the complete message may not work either, since it is under the EN-DC / NE-DC branch, and the UE may not be yet in EN-DC /NE-DC until the complete message has been submitted. Making changes in these parts now easily may cause some changes needed in other parts as well. It requires careful checking. In summary, if nothing is erroneous or broken with the current text, we would prefer not to change at this late stage. |
| vivo | No | Similar view with Ericsson.  |
| Nokia | Yes | Correct, the placement of existing specification text was incorrect and now it is being moved to right place.The current text is indeed broken since it erroneously says to submit the Complete embedded in EUTRA Reconfig Complete even in the case where the Reconfig was included in EUTRA Resume. |
| Qualcomm  | No  | Same view as Ericsson |
| MediaTek | Yes | Indeed the original placement of text is incorrect. |
| OPPO | No  | Agree with Nokia  |
| CATT | Yes | We think we should follow the current distribution of the text procedure of the handling of the RRC reconfiguration. The content of the RRC reconfiguration complete message and the submission of the RRC reconfiguration complete are in separate parts, any change introduced in later Release should follow it.Firstly: To Ericsson: seems to ignore the changes for TS38.331 in R2-2100093.We need to point out that in R2-2100093, there is another change refer to the submission of *RRCReconfigurationComplete* message for the case of (NG)EN-DC, which seems to be ignored by Ericsson.*RRCReconfiguration* message was received via E-UTRA SRB1 （high light in yellow）means that the *RRCReconfiguration* message was received within *nr-SecondaryCellGroupConfig* in *RRCConnectionReconfiguration* message or within *nr-SecondaryCellGroupConfig* in *RRCConnectionResume* message. For the later case, UE should submit the *RRCReconfigurationComplete* message via E-UTRA embedded in E-UTRA RRC message *RRCConnectionResumeComplete*. However, current TS38.331specifies that for the two cases, UE both submit the *RRCReconfigurationComplete* via E-UTRA embedded in E-UTRA RRC message *RRCConnectionReconfigurationComplete*.Thus, we propose the following change:-------------------------------------------------------Omit unchanged1> if the UE is configured with E-UTRA *nr-SecondaryCellGroupConfig* (UE in (NG)EN-DC):2> if the *RRCReconfiguration* message was received via E-UTRA SRB1 as specified in TS 36.331 [10]; or2> if the *RRCReconfiguration* message was received via E-UTRA RRC message *RRCConnectionReconfiguration* within *MobilityFromNRCommand*;3> if the *RRCReconfiguration* is applied due to a conditional reconfiguration execution:4> submit the *RRCReconfigurationComplete* message via the E-UTRA MCG embedded in E-UTRA RRC message *ULInformationTransferMRDC* as specified in TS 36.331 [10], clause 5.6.2a.3> else if the *RRCReconfiguration* message was included in E-UTRA *RRCConnectionResume* message:4> submit the *RRCReconfigurationComplete* message via E-UTRA embedded in E-UTRA RRC message *RRCConnectionResumeComplete* as specified in TS 36.331 [10], clause 5.3.3.4a;3> else:4> submit the *RRCReconfigurationComplete* via E-UTRA embedded in E-UTRA RRC message *RRCConnectionReconfigurationComplete* as specified in TS 36.331 [10], clause 5.3.5.3/5.3.5.4/5.4.2.3;Omit unchanged------------------------------------------------------------------------------------------Secondly: In 38.331, for the case that the the *RRCReconfiguration* message was included in an *RRCResume* message, there is already a description of how to handle the *RRCReconfigurationComplete* message in clause 5.3.13.4 “Reception of the *RRCResume* by the UE”. Thus, we propose to delete how to handle the *RRCRconfigurationComplete* message from the description of setting the content of the *RRCReconfigurationComplete* message. Thirdly: Setting the description of how to handle the SCG *RRCReconfigurationComplete*/*RRCConnectionReconfigurationComplete* message in the catalogue of how to set the content of the *RRCReconfigurationComplete/RRCConnectionReconfigurationComplete* message seems make some confusions.  |

[R2-2101018](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2101018.zip) Correction on the submission of RRCReconfigurationComplete vivo CR Rel-16 38.331 16.3.1 2376 - F LTE\_NR\_DC\_CA\_enh-Core

*Rapporteur comment: The above CR covers changes in 38.331 related to the handling of the SCG RRCReconfigurationComplete message for a RRCReconfiguration message received via E-UTRA SRB1. Companies are welcome to provide their input in the below table.*

|  |  |  |
| --- | --- | --- |
| Company | Agree CR?(yes or no) | Comments |
| Ericsson | Yes | We agree UE may enter this also for the EUTRA resume case, so we are ok with deleting the proposed parts. As this is a minor change we can add it in rapporteur CR. |
| vivo | Yes | For (NG)EN-DC, if the *RRCReconfiguration* message was received via E-UTRA SRB1, we can just indicate the UE shall submit the *RRCReconfigurationComplete* via E-UTRA embedded in E-UTRA RRC message, as specified in TS 36.331, to avoid too much details about what the E-UTRA RRC message is, since clear behavior have been specified in TS 36.331. |
| Nokia | No | It seems R2-21100093/94 handles the stated problem better. |
| Qualcomm  | Yes | We agree it can be included in rapporteur CR |
| MediaTek | Yes |  |
| OPPO | No  | Agree with Nokia  |
| CATT | No | The change can’t reflect the applicable scenarios. |

## 2.4 NR-DC power control

[R2-2101016](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2101016.zip) Correction on FR2 NR-DC power control parameter vivo CR Rel-16 38.331 16.3.1 2374 - F LTE\_NR\_DC\_CA\_enh-Core

[R2-2101092](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_113-e%5CR2-2101092.zip) Correction on p-UE-FR2 and p-NR-FR2 for NR-DC power control Ericsson CR Rel-16 38.331 16.3.1 2386 - F LTE\_NR\_DC\_CA\_enh-Core

*Rapporteur comment: The above CRs both address the* *RAN4 LS in* [*R4-2011721*](http://www.3gpp.org/ftp/tsg_ran/WG4_Radio//TSGR4_96_e/Docs//R4-2011721.zip)*, indicating that p-UE-FR2 will not be used in Rel-16. This was discussed during RAN2#112e and it was agreed not to dummify p-UE-FR2, but instead indicate in field description that it is not used in Rel-16. The exact formulation for the field description could however not be agreed and since there was also a question whether the same applies also to p-NR-FR2, it was decided to postpone the topic and send an LS back to RAN4 to ask whether the same applies also to p-NR-FR2. Once that reply is received, the field descriptions could then be updated to both fields at once.*

*The above CRs provide two alternative approaches for updating the required field descriptions. Both CRs include changes also to p-NR-FR2 fields. Rapporteur notes the following:*

1. *For the changes affecting p-NR-FR2 we need to await the RAN4 confirmation that p-NR-FR2 fields are also affected before agreeing the CRs.*
2. *There is also a dependency on the discussion on FR2 p-max in dedicated signalling that was held in offline [AT112-e][005]. As discussed during offline [AT112-e][225], when it comes to the formulation in the field description, we should use same formulation as is used there. In this meeting, p-max for FR2 dedicated signalling is handled in offline [AT113-e][004][NR15] Connection Control I (ZTE).*

*Companies are welcome to provide their input in the below table.*

|  |  |  |
| --- | --- | --- |
| Company | Agree 1 (R2-2101016), 2 (R2-2101092) or none. | Comments |
| Ericsson | Not yet | We need to await a) and b) above, i.e. the RAN4 LS and the discussion on FR2 p-max signalling for dedicated signalling. |
| vivo | Not yet | Agree with Ericsson. |
| Nokia | Not yet | Wait for RAN4 |
| Apple | Wait for RAN4 |  |
| Qualcomm  | Wait for RAN4 |  |
| MediaTek | Prefer R2-2101016, but of course should wait R4 | See also our comment in offline#004, we don’t see the reason for NW to configure useless dedicate parameter in dedicate message and ask UE to ignore it. |
| OPPO | Not yet |  |
| CATT | Wait for RAN4 |  |

## 2.5 Rapporteur CRs

[R2-2101088](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_113-e/Docs/R2-2101088.zip) Misc corrections for Rel-16 DCCA Ericsson CR Rel-16 38.331 16.3.1 2385 - F LTE\_NR\_DC\_CA\_enh-Core

[R2-2101089](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_113-e/Docs/R2-2101089.zip) Misc corrections for Rel-16 DCCA Ericsson CR Rel-16 36.331 16.3.0 4568 - F LTE\_NR\_DC\_CA\_enh-Core

*Rapporteur comment: In the of the 1st week online Rel-16 DCCA session it was agreed to include also the rapporteur CRs into the scope of this email discussion. The CRs include minor corrections to TS 38.331 and TS36.331 respectively. Companies are welcome to provide their input in the below table.*

|  |  |  |
| --- | --- | --- |
| Company | Agree CRs?(yes or no) | Comments |
| Ericsson | Yes |  |
| vivo | Yes |  |
| Nokia | Yes | And possibly combine some of above CRs if deemed purely editorial. |
| Qualcomm  | Yes |  |
| MediaTek | Yes with intention, but | Change related to the NOTE in 38.331, I believe it should be inter-RAT cell reselection. Similar comment to 36.331.It is up to UE implementation whether to continue idle/inactive measurements according to SIB11 and SIB4 configurations or according to E-UTRA SIB5 and E-UTRA SIB24 configurations as specified in TS 36.331 [10] upon inter-RAT handover to E-UTRA, after T331 has expired or stopped. |
| OPPO | Yes  |  |
| CATT | Yes |  |

# Conclusion

Tbd…

**No table of figures entries found.**