**3GPP TSG RAN WG1 #106-e R1-21xxxxx**

**e-Meeting, August 16th – 27th, 2021**

**Agenda item:** 7.1

**Source:** Moderator (Samsung)

**Title:** Summary on [106-e-NR-7.1CRs-12]

**Document for:** Discussion and decision

# Introduction

This document is to collect company’s view on the email discussion [106-e-NR-7.1CRs-12]:

[106-e-NR-7.1CRs-12] For all remaining issues not covered under [106-e-NR-7.1CRs-01] ~ [106-e-NR-7.1CRs-11], determine whether to reject or continue discussions in future meetings by August 20 - Youngbum (Samsung)

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| --- |
| **Moderator’s note:** From the discussion in [106-e-Prep-NR-7.1CRs], the collected issues in this email thread [106-e-NR-7.1CRs-12] are basically considered not essential/critical. Nonetheless, there are still some views to clarify/conclude some point. Therefore, please provide your additional views taking into account the raised comments during [106-e-Prep-NR-7.1CRs] but not reiterate your previous comments. Note that this email thread is to determine whether to *reject* or *continue discussions in future meetings*. The first check point is set to August 17th 23:59 UTC. Moderator will suggest the potential conclusion based on your input provided by the first check point. |

# Issue#4: R1-2106535, Draft CR on the number of layers to determine TBS, ZTE

Table 1: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT, QC, Huawei, HiSilicon, vivo, Samsung, Ericsson |
| “Continue discussions in future meetings” | NTT DOCOMO (but OK with reject as well), OPPO (but ok with reject as well), ZTE |

Table 2: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | Although we agree that it is not clearly defined in the specification whether number of layers (*v*) is per TB or across all TBs for TBS determination, we do not think that companies would have different understandings. Therefore, we prefer to reject the CR since it is not an essential CR at this stage. However, if majority companies see the need for clarification, we would also be fine. |
| QC | The CR is not needed because it is defined in 38.214 in the same section |
| Huawei, HiSilicon | Agree with QC that v is defined already. |
| vivo | We think the specification is clear enough. |
| Samsung | The character v(number of layers) is already defined in the upper section, i.e., clause 5.1.3, which includes 5.1.3.2. |
| ZTE | In the current spec, it is unclear whether v is the number of layers per TB all across all TBs. Thus, it should be clarified as proposed in our draft CR. Even though people has the same understanding, the description of the existing 28.214 is unclear. |

# Issue#7: R1-2106726, Discussion on Configuration of First Active BWP, ZTE

Table 3: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT, QC, NTT DOCOMO, Huawei, HiSilicon, vivo, Samsung, Ericsson |
| “Continue discussions in future meetings” |  |

Table 4: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | It is our understanding that the first active BWP can be common BWP. If a conclusion is needed as proposed by ZTE, we would like to know whether we should also discuss the case whether it is allowed that UE falls back to a common BWP. According to current specification, when *bwp-InactiveTimer* expires, UE falls back to default BWP. If *defaultDownlinkBWP-Id* is absent, UE uses the initial BWP as default BWP. |
| NTT DOCOMO | Motivation of such a configuration is unclear for us. |
| Samsung. | Current specifications allow for the first active BWP to be either a dedicated or common BWP. According to 213, only a UE having a dedicated BWP configuration is configured with first active BWP. Therefore, if the NW wishes for a DCI-based BWP switching, it can always configure a dedicated BWP as a first active BWP. |
| ZTE | Based on the preparation phase, it seems that companies have common understanding that current specifications allows for the first active BWP to be either a dedicated or common BWP. If that is the case, we would propose to have the following conclusion in the chair’s note to avoid any further confusion in the future.  Conclusion:  Current specifications allows for the first active BWP to be either a dedicated or common BWP. |
| Ericsson | We don't see changing spec from 'Understanding#1' to 'Understanding#2' as essential correction. |

# Issue#9: R1-2106927, Discussion on overlapping between positive SR and PUSCH without UL-SCH, CATT

Table 5: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT (with proposed conclusion in the following table), QC, Huawei, HiSilicon (fine to have a conclusion) , OPPO, Samsung, ZTE |
| “Continue discussions in future meetings” | NTT DOCOMO, Ericsson |

Table 6: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | The same issue was agreed to be continued discussing in the previous two RAN1 meetings. However, during preparation phase discussions, companies still object to discuss in the meetings. There is no point to agree to continue discussions in future meetings any more. Therefore, we propose the following potential conclusion to conclude the discussion.  Proposed Conclusion:  For the overlapped PUSCH without UL-SCH and PUCCH with positive SR, if there are no additional PUCCH(s) overlapping with the PUSCH and/or the PUCCH, PUSCH without UL-SCH is dropped; otherwise if there are additional PUCCH(s) overlapping with the PUSCH and/or the PUCCH, the UE behaviour is undefined. |
| NTT DOCOMO | We would like to ask companies that prefer ‘reject’. Which is the intention among following?   * Intention A: Spec is clear. Multiplexing/prioritization before PUSCH drop. * Intention B: Spec is clear. PUSCH drop before multiplexing/prioritization. * Intention C: Corner case. No need to define UE behaviour.   Without this alignment, just ‘reject’ is not reasonable way since it is not aligned with purpose of CR discussion. |
| Huawei, HiSilicon | For proposal 1 and 2, our view is that Case A and B are clear in the spec. Case C can be handled by UE implementation. For proposal 3, there is no need to specify a timeline for MAC generation. |
| vivo | We prefer to have a conclusion. It seems better to discuss the UE behaviour for the case there are additional PUCCH(s) overlapping with the PUSCH and/or the PUCCH. Either intention A or intention B is accepted to us. |
| Samsung | As following agreement in RAN1#93, overlapped PUCCHs are handled first and then PUCCH/PUSCH overlapping will be solved  Agreements(in RAN1#93):   * Within a group of overlapping PUCCH/PUSCH channels satisfying the timeline requirements, adopt the following procedure   + Step 1: determine a set of non-overlapping (in time)PUCCH resource(s) for UCI multiplexing by considering only the PUCCH resources in the group (irrespective whether or not PUSCH(s) exists), where each PUCCH resource satisfies the timeline requirements   + Step 2:     - if the resulting PUCCH resource(s) in step 1 overlapping with PUSCH(s), multiplex UCIs on the overlapping PUSCH(s);       * FFS: When UCI includes SR     - Otherwise, multiplex UCI on the determined PUCCH resource(s)   So, the current spec is clear and the CR is not needed. |
| ZTE | We are fine to clarify this issue for Rel-16 in this meeting, while would be also ok to reject this CR considering it has already been discussed for two meetings without any consensus. |
| Ericsson | After further investigation, we see there is value in further discussions. We commented at below in the previous meetings.  1) The addition to clarify that there is only overlapping between these two, is not necessary because it is clear from the rest of clause and also 9.2.5 that **if other PUCCHs are involved the behaviour is different.**  2) Also, it is not clear to us why one should add multiplexing timeline for this case. There is no multiplexing and SR trigger is UE implementation.  After further investigation, **maybe that part that is clear to us, is not a common understanding** 😊  There seems to be fundamental misunderstanding if we read the spec **without considering the relevant context**, that would make some statements applicable or not.  The example raised by CATT is a perfect example where the order of procedures that causes ambiguity for examples shown for Case A, B (Detailed comment: I would consider only PUCCH with AN, not AN/CSI due to triggering in the same slot A-CSI).  **The logical/sensible approach in my view would be to treat spec/the agreement below as if we were about to transmit these overlapping PUCCH/PUSCH and we were about to multiplex UCI in PUSCH, and then we would check whether to multiplex UCI in PUSCH or not. And if we have ended up in a case like in Table below, we would do dropping.**  At the time the agreement below in RAN1#92b was made, the intention was to follow LTE behaviour. But we were not thinking at that time that the procedure in 9.2.5 could result in new PUCCHs in different places in slot and changing the condition from overlapping to non-overlapping, or vice versa. As you see from the agreement the difficult issue at that time was enabling mux with different starting symbols 😊 A lot of agreements made early on, create confusion when they are affecting 9.2.5 procedures.  I would like to thank CATT/Yanping to be persistent to provide common understanding. And from explanation above, we don’t support the proposed conclusion for description for “otherwise”.  Agreements RAN1#92b:   * For SP-CSI on PUSCH or A-CSI-only on PUSCH colliding with SR/HARQ-ACK with the same starting symbol within the same CC, adopt the proposals in the table below  |  |  |  |  |  | | --- | --- | --- | --- | --- | | SP-CSI on PUSCH without UL-SCH | A-CSI-only on PUSCH without UL-SCH | HARQ-ACK | SR | Proposal | |  | \* |  |  | Drop A-CSI-only on PUSCH, transmit SR on PUCCH. (follow LTE approach) | |  | \* | \* | \* | Drop A-CSI-only on PUSCH, transmit SR and HARQ-ACK on PUCCH. (follow LTE approach) | | \* |  |  | \* | Drop SP-CSI on PUSCH, transmit SR on PUCCH (follow LTE approach) | | \* |  | \* | \* | Drop SP-CSI on PUSCH, transmit HARQ-ACK and SR on PUCCH (follow LTE approach) |  * The symbol “\*” in SR means when SR is positive * FFS when the starting symbols among UL transmissions are different in the above scenarios. |

# Issue#14: R1-2107299, TP for editor’s CR, NEC

Table 7: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | QC, OPPO, vivo |
| “Continue discussions in future meetings” | Samsung |

Table 8: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | We think it can be up to editor to decide. |
| QC | We don’t think this editorial change is needed. Current spec is clear enough. |
| NTT DOCOMO | Agree with CATT. |
| Huawei, HiSilicon | Okay to leave it to editor. |
| OPPO | The spec is clear enough and has no ambiguity. Moreover, According to TR 21.900, "An editorial modification CR to a frozen Release shall not be permitted." |
| vivo | The proposed change is not necessary, as there is no different interpretation without the change. |
| Samsung | Not critical issue, but editorial change. |
| ZTE | No need to discuss in the future meetings. We are fine either to leave to editors or reject this CR. |
| Ericsson | Can be handled by editor |
| NEC | The proposed change may be shared with spec editors offline just for information without any recommendation. |

# Issue#16: R1-2107312, Draft CR on Rel-16 Type-1 HARQ-ACK codebook construction, Qualcomm

Table 9: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT, Huawei, HiSilicon, vivo, Samsung, ZTE, Ericsson (but endorse conclusion from QC) |
| “Continue discussions in future meetings” | QC, NTT DOCOMO, OPPO |

Table 10: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | As commented in the preparation phase, there is no problem even if UE behaviour is not clear when duplicated K1 values are configured in *dl-DataToUL-ACK* or *dl-DataToUL-ACK-ForDCIFormat1\_2* since it is an error case. We should not change specification or draw conclusion for such error case. |
| QC | First of all, this is a real issue that we observed in a field test. We do see duplicated K1 values in dl-DataToUL-ACK configuration.  Based on the discussion in preparation phase, it seems companies have different understanding on what is UE behaviour when a UE sees duplicated K1 values in dl-DataToUL-ACK or in dl-DataToUL-ACK-ForDCIFormat1\_2.  At this late stage, we don’t expect RAN1 can reach agreement to change spec to clarify UE behaviour. Fortunately, every company seems agreeing this is a wrong gNB configuration. Therefore, can we simply agree to capture the following conclusion in Chairman’s note?  **Proposed Conclusion: UE is not expected to receive duplicated K1 values in dl-DataToUL-ACK or in dl-DataToUL-ACK-ForDCIFormat1\_2.**  Please notice that such a conclusion is needed. Because per today’s spec, without the above conclusion, nothing prevents gNB to configure duplicated K1 values. Then UE will have to handle it. But UE does not know how to handle it. |
| NTT DOCOMO | OK to have the conclusion proposed by QC. |
| Huawei, HiSilicon | The motivation to configuring duplicated K1 values for dl-DataToUL-ACK and DL-DataToUL-ACK-DCI-1-2 is not clear since the DCI field may be reduced by not doing so. For the union of K1 lists, the duplicated K1 values will be removed. |
| vivo | As commented by other companies, there is no motivation for gNB to configure duplicated K1 values. |
| Samsung | For “and” case, current specification is clear. For “or” case, a gNB has no reason to configure same K1 values in a set. Even if the gNB does that, the UE does not care (it will execute the procedure of the pseudo-code in 9.1.2.1 of 213), only the system gets penalized. |
| ZTE | For ‘or’ case, it's not clear why a gNB would do this. For ‘and’ case, the current spec is clear that K1 is provided by the union of dl-DataToUL-ACK and dl-DataToUL-ACK-ForDCIFormat1\_2, which means no duplicated K1 values. |
| Ericsson | Support conclusion proposed by QC. No spec change is needed.  We do agree that configuring duplicated K1 values is a poor configuration on NW side. However, it seems such issues have been observed as QC described. Therefore, while changing specification is not needed, we support to be accommodating to help potential fields issues. Therefore, the conclusion by proposed by QC serves this purpose and we support endorsing this conclusion. |

# Issue#18: R1-2107389, Draft CR on PDCCH DMRS scrambling sequence, CMCC, ZTE

Table 11: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | QC, Huawei, HiSilicon, vivo, Samsung, Ericsson |
| “Continue discussions in future meetings” | CATT, NTT DOCOMO, ZTE |

Table 12: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| QC | This is NBC change. |
| Huawei, HiSilicon | The change is NBC. *pdcch-DMRS-ScramblingID* is configured in CORESET not search space for the UE. The proposed change is inconsistent with the current specification. |
| vivo | 1. It is an NBC change. 2. With this change, the UE cannot receive USS and CSS in a same CORESET in some cases, because the DMRS becomes different for USS and CSS. |
| ZTE | This issue should be further discussed at least for Rel-16 considering backward compatible issue. If we follow the existing spec, the RRC configured scrambling ID may be used for CSS which is shared among multiple UEs. However, different UEs are usually configured with different scrambling IDs. This leads that the PDCCH DMRS cannot be shared for those UEs. |
| Ericsson | This is a NBC change. |

# Issue#19: R1-2107504, On two DCIs in the same slot for BWP switch, MediaTek Inc.

Table 13: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT, QC, vivo |
| “Continue discussions in future meetings” | MTK, NTT DOCOMO, Huawei, HiSilicon, Ericsson |

Table 14: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| MTK | To our understanding, spec does not have any description on whether UE expects to receive two DCIs (Ex. DCI 1\_1 and DCI 0\_1) in the same slot both indicating BWP switch for the same cell (an example show below). We think some discussion is needed to clarify whether this kind of scenario is allowed. A RAN1 conclusion would be enough.  cid:image003.jpg@01D78F6E.1F226000 |
| CATT | We think the cases discussed in the contribution is clear according to the current specification. |
| QC | This is an error case can be handled by UE implementation |
| Huawei, HiSilicon | We are fine to have some further discussion. |
| vivo | Agree with QC this is an error case, thus no need to specify the UE behaviour. |
| ZTE | We are open to this issue. If clarification is needed, maybe conclusion in the Chair’s note is sufficient. |

# Issue#20: R1-2107507, R1-2107836, Clarification on PUSCH with UCI only and DMRS multiplexing, MediaTek, DOCOMO

Table 15: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT, Samsung |
| “Continue discussions in future meetings” | MTK, QC, NTT DOCOMO, Huawei, HiSilicon, ZTE, Ericsson |

Table 16: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| MTK | We think current spec tends to reflect interpretation1 as Chair’s initial assessment but it is not very clear in spec. Furthermore, some companies seem to have different understanding on the interpretation. We suggest RAN1 to have some discussions to align companies’ understandings. |
| CATT | Our understanding is that the current specification is interpretation 1. |
| QC | We think RAN1 should conclude that this case should be treated as an error case and it is up to UE to handle this case. We do not see why gNB would instruct UE to FDM data and DMRS given gNB knows that there is no UL-SCH on this PUSCH. |
| NTT DOCOMO | At least discussion is needed. |
| Huawei, HiSilicon | We are fine to have some further discussion. |
| vivo | Our understanding is interpretation 1. We can accept to continue the discussion if it is the majority’s view. |
| Samsung | Current specification is clear to reflect Interpretation #1. |
| ZTE | We suggest to further study this issue to make spec clear. |

# Issue#21: R1-2107525, Correction to cell-specific PUCCH resource configuration with pucch-ResourceCommon, Nokia/NSB

Table 17: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT, QC, NTT DOCOMO, Huawei, HiSilicon, OPPO, vivo, Samsung, ZTE, Ericsson |
| “Continue discussions in future meetings” |  |

Table 18: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | The proposed change is incorrect. |
| QC | Same view as CATT. Current spec is clear. The proposed CR is actually incorrect and conflict with previous agreements. |
| NTT DOCOMO | Motivation to correct the text is unclear for us. |
| Huawei, HiSilicon | The current specification is clear that each row of Table 9.2.1-1 corresponds to a set of PUCCH resources, i.e. a PUCCH resource set. The proposed change is incorrect. |
| Samsung | Our understanding is that the current specification is clear. Each row in the Table 9.2.1-1 corresponds to a PUCCH resource set. And, since the description later in same clause describe how the UE determine one of them (i.e., each row in Table 9.2.1-1), the confusion will not be occurred. |
| Ericsson | Reject the CR.  The CR is incorrect.  Each row in the table, indeed provides 16 cell specific PUCCH resources to the UE. The description later in the same clause describes how the UE determines one of the PUCCH resources from these 16 ones based on CCE, PRI, etc.  The 16 rows in the table should not be confused with the 16 PUCCH resources that are provided to the UE for each index. |

# Issue#24: R1-2107708, R1-2107709, Draft CR on PT-RS threshold report, Apple

Table 19: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT, QC, NTT DOCOMO, Huawei, HiSilicon, vivo, Samsung, ZTE, Ericsson |
| “Continue discussions in future meetings” |  |

Table 20: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | The proposed CR is a nice-to-have proposal but not essential in our view. UE capability reporting is clearly specified in TS 38.306. Redundant specification is not necessary. The only thing that needs to clarify is the assumed MCS for the reporting. But as pointed out during the discussion, the reporting is only a recommendation. gNB would choose threshold based on its own algorithm/consideration. Without any clarification, the system would not break. |
| NTT DOCOMO | We don’t think this is essential issue, because 2-49 (Uplink PTRS density recommendation) is just "recommendation", and gNB is not necessary to read it. |
| Samsung | Actually we are supportive at the preparation phase since this issue seems editorial. However, based on looking at the other companies’ views, this issue seems not necessary as the issue is related to describe the UE capability, which is already captured in TS 38.306. |

# Issue#25: R1-2107973, Discussion on CSI-RS multiplexing with PDSCH scheduled by PDCCH with CRC scrambled by P-RNTI and SI-RNTI, vivo

Table 21: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | QC, Samsung, ZTE, Ericsson |
| “Continue discussions in future meetings” | CATT, Huawei, HiSilicon, vivo |

Table 22: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | Overlapping between broadcast PDSCH and CSI-RS is allowed or not should be clarified. |
| QC | This scenario seems an error case and can be handled by UE implementation |
| Huawei, HiSilicon | We are fine to have some further clarification. |
| vivo | Based on companies input in previous round, there are still following two kinds of interpretations on table:   * One understanding is that the UE behavior for CSI-RS and Paging (or system information) PDSCH multiplexing was not discussed in Rel-15, thus UE does not expect such overlapping. * Another understanding is that specification does not preclude CSI-RS and Paging (or system information) PDSCH reception in overlapping PRBs, thus UE needs to be prepared for such overlapping.   A formal RAN1 conclusion would be needed. |
| Ericsson | On principle should always be followed: It is what is in the specifications that matters. That combinations of features were not discussed does not mean that they are undefined. In some cases, we will explicitly mention that combinations are not expected to be supported, but the motivation is then that the implementation burden is unreasonable. In this this case we fail to see that there would be extra implementation effort since the PDSCH decoding and CSI reporting are independent functions. |

# Issue#26: R1-2107974, Draft CR on PUCCH power control for Rel-15, vivo

Table 23: Please indicate your company name in either row below

|  |  |
| --- | --- |
| “Reject” | CATT,QC, Huawei, HiSilicon, Samsung |
| “Continue discussions in future meetings” | NTT DOCOMO, OPPO, vivo, ZTE, Ericsson |

Table 24: Please add your additional comment, if any, supporting your above position (refrain from reiterating your previous comment during [106-e-Prep-NR-7.1CRs])

|  |  |
| --- | --- |
| Company | Comment (if any) |
| CATT | The current spec is correct since the set of (P0, alpha, closed-loop index) are configured and indicated by *SpatialRelationInfoID* |
| OPPO | We proposed the same CR in previous meeting, which was rejected unfortunately. |
| vivo | @CATT  Yes, we understand that power control setting including P0, closed loop index and PL-RS can be acquired through the link to the spatial relation info indicated by *SpatialRelationInfoID.* However, based on the description in current specification, closed loop index is obtained through index of P0 instead of directly by *SpatialRelationInfoID,* which means UE shall confirm a *SpatialRelationInfoID* according to the P0 index first then closed loop index is acquired by the *SpatialRelationInfoID*. Actually, different *SpatialRelationInfoID* can be linked with same P0 index. In this case, UE cannot distinguish a unique *SpatialRelationInfoID* by P0 index. So, we propose to modify the description to remove the confusion. |
| ZTE | This issue has been discussed in previous meeting based on OPPO’s CR. Although the spec may still work well without this CR, we sympathize the motivation of this CR for making current spec much clear. |
| Ericsson | Clarification seems to be helpful for case when two closed loops are configured for UE. |

# Conclusions

[To be updated]

# References

[1] Email discussion [106-e-Prep-NR-7.1CRs]

[2] R1-2106535 Draft CR on the number of layers to determine TBS ZTE

[3] R1-2106726 Discussion on Configuration of First Active BWP ZTE

[4] R1-2106927 Discussion on overlapping between positive SR and PUSCH without UL-SCH CATT

[5] R1-2107299 TP for editor’s CR NEC

[6] R1-2107312 Draft CR on Rel-16 Type-1 HARQ-ACK codebook construction Qualcomm Incorporated

[7] R1-2107389 Draft CR on PDCCH DMRS scrambling sequence CMCC, ZTE

[8] R1-2107504 On two DCIs in the same slot for BWP switch MediaTek Inc.

[9] R1-2107507 Clarification on PUSCH with UCI only and DMRS multiplexing MediaTek Inc.

[10] R1-2107836 Discussion on PUSCH without UL-SCH and with FDM indication NTT DOCOMO, INC.

[11] R1-2107525 Correction to cell-specific PUCCH resource configuration with pucch-ResourceCommon Nokia, Nokia Shanghai Bell

[12] R1-2107708 Draft CR on PT-RS threshold report (CatF) Apple

[13] R1-2107709 Draft CR on PT-RS threshold report (CatA) Apple

[14] R1-2107973 Discussion on CSI-RS multiplexing with PDSCH scheduled by PDCCH with CRC scrambled by P-RNTI and SI-RNTI vivo

[15] R1-2107974 Draft CR on PUCCH power control for Rel-15 vivo