**3GPP TSG RAN WG1 #102-e R1-200XXXX**

**e-Meeting, August 17th – 28th, 2020**

**Agenda item:** 7.1

**Source:** Moderator (CATT)

**Title:** Summary for [102-e-NR-7.1CRs-04] Correction on the definition for timeline condition

**Document for:** Discussion and Decision

# Introduction

This document is created to facilitate the email discussion “[102-e-NR-7.1CRs-04] Correction on the definition for timeline condition. This thread is triggered by Issue #10 of [1] and originates from draft CRs to TS38.213 in [2][3].

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| **Issue#** | **Tdoc#** | **Source** | **Issue description** |
| 10 | R1-2005660,R1-2006069 | CATT, OPPO | Correction on the definition for timeline condition. Carry over from previous meeting. |

The same issue was initially brought up in R1-2000517 in RAN1#100-e meeting. The conclusion in the last meeting was to further discuss as follows.

[R1-2003592](file:///C%3A%5CUsers%5Cxingyanping%5CAppData%5CLocal%5CTemp%5CDocs%5CR1-2003592.zip) Correction on the definition for timeline condition    CATT

For further discussion in future meeting(s)

# Company views

Please provide company’s view in the table below:

|  |  |
| --- | --- |
| **Company** | **Comments** |
| ZTE |  We are supportive of all the above changes. |
| Ericsson |  We support the CR x5660 on all the changes above. |
| Samsung | -  is not before a symbol with CP starting after after a last symbol of any corresponding PDSCH, is given by maximum of where for the i-th PDSCH with corresponding HARQ-ACK transmission on a PUCCH which is in the group of overlapping PUCCHs and PUSCHs, , is selected for the i-th PDSCH following [6, TS 38.214], is selected based on the UE PDSCH processing capability of the i-th PDSCH and SCS configuration , where corresponds to the smallest SCS configuration among the SCS configurations used for the PDCCH scheduling the i-th PDSCH, the i-th PDSCH, the PUCCH with corresponding HARQ-ACK transmission for the i-th PDSCH, and all PUSCHs in the group of overlapping PUCCHs and PUSCHs. -  is not before a symbol with CP starting after after a last symbol of any corresponding SPS PDSCH release. is given by maximum of where for the i-th PDCCH providing the SPS PDSCH release with corresponding HARQ-ACK transmission on a PUCCH which is in the group of overlapping PUCCHs and PUSCHs, , is described in Subclause 10.2 and is selected based on the UE PDSCH processing capability of the i-th SPS PDSCH release and SCS configuration , where corresponds to the smallest SCS configuration among the SCS configurations used for the PDCCH providing the i-th SPS PDSCH release, the PUCCH with corresponding HARQ-ACK transmission for the i-th SPS PDSCH release, and all PUSCHs in the group of overlapping PUCCHs and PUSCHs. - if there is no aperiodic CSI report multiplexed in a PUSCH in the group of overlapping PUCCHs and PUSCHs,  is not before a symbol with CP starting after after a last symbol of - any PDCCH with the DCI format scheduling an overlapping PUSCH, and - any PDCCH scheduling a PDSCH or SPS PDSCH release with corresponding HARQ-ACK information in an overlapping PUCCH in the slotIf there is at least one PUSCH in the group of overlapping PUCCHs and PUSCHs, is given by maximum of where for the i-th PUSCH which is in the group of overlapping PUCCHs and PUSCHs, , and are selected for the i-th PUSCH following [6, TS 38.214], is selected based on the UE PUSCH processing capability of the i-th PUSCH and SCS configuration , where  corresponds to the smallest SCS configuration among the SCS configurations used for the PDCCH scheduling the i-th PUSCH, the PDCCHs scheduling the PDSCHs, or providing the SPS PDSCH release(s), with corresponding HARQ-ACK transmission on a PUCCH which is in the group of overlapping PUCCHs/PUSCHs, and all PUSCHs in the group of overlapping PUCCHs and PUSCHs.If there is no PUSCH in the group of overlapping PUCCHs and PUSCHs, is given by maximum of where for the i-th PDSCH, or the i-th SPS PDSCH release with corresponding HARQ-ACK transmission on a PUCCH which is in the group of overlapping PUCCHs, , is selected based on the UE PUSCH processing capability of the PUCCH serving cell if configured.   is selected based on the UE PUSCH processing capability 1, if PUSCH processing capability is not configured for the PUCCH serving cell. is selected based on the smallest SCS configuration between the SCS configuration used for the PDCCH scheduling the i-th PDSCH, or providing the i-th SPS PDSCH release, with corresponding HARQ-ACK transmission on a PUCCH which is in the group of overlapping PUCCHs, and the SCS configuration for the PUCCH serving cell. |
| vivo | Fine with all changes in principle. For the 2nd change, is it better to remove “and SCS configuration μ”? |
| NTT DOCOMO | Support the CR x5660 |
| Qualcomm | We are supportive of the corrections. Regarding the draft TPs from CATT and Samsung,* For “and is selected based on the UE PDSCH processing capability of the i-th SPS PDSCH release”, we prefer to adopt CATT’s change as it is more accurate.
* For other changes, we prefer to adopt Samsung’s suggestions. They are essentially equivalent, but Samsung’s TP is simpler and cleaner.
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| Huawei, HiSilicon | We are supportive of the corrections in the x5660 except to add the “if any” in bracket, it is understood when there is no such transmission/reception, corresponding SCS is not applied, so it is not necessary to add the “if any” every possible channels. |
| Apple | We are fine with the draft TPs from CATT; except that we prefer not to take the change from “In the second bullet of timeline condition definition, it is not clear what ‘the UE PDSCH processing capability of the i-th SPS PDSCH release’ is. Since there is no such definition in the specification and the definition of N for the i-th SPS PDSCH release is directly defined in clause 10.2 based on the configuration of PDSCH processing capability, it is sufficient to refer to section 10.2 only without defining ‘the UE PDSCH processing capability of the i-th SPS PDSCH release’.”. If the wording in the specification needs to be fixed, we are open to that. |
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# Conclusion

To be added after the discussion.

# Reference

1. [R1-2006958](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_102-e/Inbox/R1-2006958.zip), RAN1#102-e preparation phase on NR Rel-15 CRs, Ad-hoc chair (Samsung)
2. R1-2005660, Correction on the definition for timeline condition, CATT, RAN1#102-e
3. R1-2006069, Correction on UCI multiplexing timeline, OPPO, RAN1#102-e