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

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

**Agenda Item: 6**

**Source: Moderator (Huawei)**

**Title: Feature lead summary on 106-e-LTE-6CRs-02**

**Document for: Discussion and Decision**

# Introduction

This documents provides the summary of discussions on the corresponding email discussion, regarding the proposed CR in [1].

[106-e-LTE-6CRs-02] Email discussion/approval on Correction on cyclic shift for eMTC PUR ([R1-2107688](file:///C:\Users\Docs\R1-2107688.zip)) – Yubo (Huawei)

* Issue 3: Correction on cyclic shift for eMTC PUR
* Discussion and decision by August 18, CR by August 20, final check by August 24

# Discussion

In [1], a correction on cyclic shift for eMTC PUR is proposed due to the following reason:

|  |  |
| --- | --- |
| ***Reason for change:*** | The parameter *pusch-CyclicShift* in higher layer parameter *PUR-PUSCH-Config* is intended to be used in PUSCH corresponding to preconfigured uplink resource. However, in the current spec, it is not limited to PUR PUSCH. |
|  |  |
| ***Summary of change:*** | It is clarified that the parameter *pusch-CyclicShift* in higher layer parameter *PUR-PUSCH-Config* is for PUSCH corresponding to preconfigured uplink resource. |
|  |  |
| ***Consequences if not approved:*** | The parameter *pusch-CyclicShift* in higher layer parameter *PUR-PUSCH-Config* will also be used in non-PUR PUSCH mistakenly, such as msg3 etc. |

The proposed change is as following:

=======================Change to TS 36.211=====================================

**<Unchanged parts are omitted>**

5.5.2.1.1 Reference signal sequence

**<Unchanged parts are omitted>**

The cyclic shift  in a slot  is given as if the ul-V-SPS-RNTI-r14 was used to transmit the most recent uplink-related DCI for the transport block associated with the corresponding PUSCH transmission. For PUSCH transmissions not using sub-PRB allocations, if *pusch-CyclicShift* in higher layer parameter *PUR-PUSCH-Config* is configured it provides the value of and the cyclic shift  in a slot  is given as for PUSCH (re)transmission corresponding to preconfigured uplink resource.

**<Unchanged parts are omitted>**

======================End of change to TS 36.211=================================

Please input your comment on the motivation and CR above:

|  |  |
| --- | --- |
| Companies | Comments |
| Ericsson | If this CR is to be agreed for clarification purposes, we suggest using the same wording order we agreed for a similar issue (i.e., R1-2106196) in RAN1# 105-e, that is:   |  | | --- | | **<Unchanged parts are omitted>**  5.5.2.1.1 Reference signal sequence  **<Unchanged parts are omitted>**  The cyclic shift  in a slot  is given as if the ul-V-SPS-RNTI-r14 was used to transmit the most recent uplink-related DCI for the transport block associated with the corresponding PUSCH transmission. For PUSCH transmissions not using sub-PRB allocations, if *pusch-CyclicShift* in higher layer parameter *PUR-PUSCH-Config* is configured for PUSCH (re)transmission corresponding to preconfigured uplink resource it provides the value of , and the cyclic shift  in a slot  is given as .  **<Unchanged parts are omitted>** |   Moreover, in the revision above a “comma” was added after “”. Otherwise, it seems to say that the higher layer parameter provides both “” and “”, however in my understanding it only provides “” as to calculate “”. |
| Nokia, NSB | We support this clarification CR.  No strong view on where to insert the clarification text. We are fine with both Huawei’s and Ericsson’s proposal. |
| Lenovo, MotoM | We support the clarification and also OK for the update from E///. |
| Qualcomm | Although the change looks editorial (we don’t think there is a possible misinterpretation of the spec), we are OK with it if the majority agrees. Either Huawei or Ericsson text are fine for us. |
| ZTE, Sanechips | Both the original TP and updated TP from Ericsson are fine with us and we slightly prefer the original TP.  If modified part is added after the description of value , it looks like we are emphasizing the value of only can be used for PUSCH (re)transmission corresponding to preconfigured uplink resource. |
| Huawei, HiSilicon | Regarding the comments from Ericsson and ZTE/Sanechips, maybe we can have a modification as below to make it clearer.   |  | | --- | | **<Unchanged parts are omitted>**  5.5.2.1.1 Reference signal sequence  **<Unchanged parts are omitted>**  The cyclic shift  in a slot  is given as if the ul-V-SPS-RNTI-r14 was used to transmit the most recent uplink-related DCI for the transport block associated with the corresponding PUSCH transmission. For PUSCH transmissions not using sub-PRB allocations, if *pusch-CyclicShift* in higher layer parameter *PUR-PUSCH-Config* is configured, then for PUSCH (re)transmission corresponding to preconfigured uplink resource it provides the value of , and the cyclic shift  in a slot  is given as .  **<Unchanged parts are omitted>** | |
| Lenovo, MotoM | We are fine with the updated CR from moderator. |
| Ericsson v009 | We are Ok with the updated CR. |
| ZTE, Sanechips | We are fine with the updated CR |
| Nokia, NSB | We are fine with the updated CR. |

# Summary

Based on the comments, the following is proposed:

**Proposal: endorse the following text proposal to TS 36.211:**

**<Unchanged parts are omitted>**

5.5.2.1.1 Reference signal sequence

**<Unchanged parts are omitted>**

The cyclic shift  in a slot  is given as if the ul-V-SPS-RNTI-r14 was used to transmit the most recent uplink-related DCI for the transport block associated with the corresponding PUSCH transmission. For PUSCH transmissions not using sub-PRB allocations, if *pusch-CyclicShift* in higher layer parameter *PUR-PUSCH-Config* is configured, then for PUSCH (re)transmission corresponding to preconfigured uplink resource it provides the value of , and the cyclic shift  in a slot  is given as .

**<Unchanged parts are omitted>**

# References

1. R1-2107688 Correction on cyclic shift for eMTC PUR Huawei, HiSilicon