**3GPP TSG-RAN WG1 Meeting #110bis-eR1-221xxxx**

**e-Meeting, October 10– 19, 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **DRAFT CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.213** | **CR** | **xxxx** | **rev** |  | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Draft CR on PUCCH resource determination of multicast HARQ-ACK | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Moderator (Huawei), Samsung | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_MBS-Core | | | | |  | ***Date:*** | | | 2022-10-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The specifications are currently missing the resource determination for a PUCCH with HARQ-ACK for multicast DCI-based PDSCHs and HARQ-ACK for multicast SPS PDSCHs when corresponding HARQ-ACK reporting modes are different (ACK/NACK and NACK-only mode 2). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | If a UE multiplexes in a PUCCH only first HARQ-ACK information associated with multicast SPS PDSCH receptions and second HARQ-ACK information associated with multicast DCI formats and having same priority value as the first HARQ-ACK information, and the first and second HARQ-ACK information are according to different HARQ-ACK reporting modes, the UE determines the PUCCH resource based on:  - *sps-PUCCH-AN-ListMulticast*, or *sps-PUCCH-AN-List* if *sps-PUCCH-AN-ListMulticast* is not provided, if the first HARQ-ACK information is according to the first HARQ-ACK reporting mode or  - the last multicast DCI format, as described in clause 9.2.3, if the second HARQ-ACK information is according to the first HARQ-ACK reporting mode. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | UE behaviour is unclear regarding PUCCH resource determination for multiplexing HARQ-ACK for multicast DCI-based PDSCHs and HARQ-ACK for multicast SPS PDSCHs when corresponding HARQ-ACK reporting modes are different (ACK/NACK and NACK-only mode 2). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 18 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

# 18 Multicast Broadcast Services

< Unchanged parts are omitted >

If a UE multiplexes in a PUCCH only first HARQ-ACK information associated with multicast SPS PDSCH receptions and second HARQ-ACK information associated with multicast DCI formats and having same priority value as the first HARQ-ACK information, and both the first and second HARQ-ACK information are according to the first HARQ-ACK reporting mode, the UE determines the PUCCH resource based on the last multicast DCI format, as described in clause 9.2.3.

If a UE multiplexes in a PUCCH only first HARQ-ACK information associated with multicast SPS PDSCH receptions and second HARQ-ACK information associated with multicast DCI formats and having same priority value as the first HARQ-ACK information, and the first and second HARQ-ACK information are according to different HARQ-ACK reporting modes, the UE determines the PUCCH resource based on:

- *sps-PUCCH-AN-ListMulticast*, or *sps-PUCCH-AN-List* if *sps-PUCCH-AN-ListMulticast* is not provided, if the first HARQ-ACK information is according to the first HARQ-ACK reporting mode or

- the last multicast DCI format, as described in clause 9.2.3, if the second HARQ-ACK information is according to the first HARQ-ACK reporting mode.

< Unchanged parts are omitted >