**3GPP TSG-RAN WG1 Meeting #114bisR1-230xxxx**

**Xiamen, China, October 9th - October 13th, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.213** | **CR** | **[DRAFT]** | **rev** | **-** | **Current version:** | **16.9.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **x** | Core Network |  |

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| ***Title:*** | Draft CR on HARQ timing for CEMode B | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Moderator (Lenovo) | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LTE\_eMTC5-Core | | | | |  | ***Date:*** | | | 2023-10-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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:*** | | For FDD, the HARQ timing for multiple TBs scheduling for UE configured with CEMode B is missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add the UE configured with CEMode B for the HARQ timing determination in  Clause 10.2 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | HARQ timing in FDD for multiple TBs scheduling in CE ModeB will remain missing | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 10.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | This is the first version for this CR. | | | | | | | | |

## 10.2 Uplink HARQ-ACK timing

For TDD or for FDD-TDD and primary cell frame structure type 2 or for FDD-TDD and primary cell frame structure type 1, if a UE configured with *EIMTA-MainConfigServCell-r12* for a serving cell, "UL/DL configuration" of the serving cell in Clause 10.2 refers to the UL/DL configuration given by the parameter *eimta-HARQ-ReferenceConfig-r12* for the serving cell unless specified otherwise.

**<Unchanged parts are omitted>**

For FDD, if a BL/CE UE is not configured with higher layer parameter *harq-AckBundling* in *ce-PDSCH-MultiTB-Config* and multiple TB are scheduled in the corresponding DCI, the BL/CE UE shall upon detection of a PDSCH intended for the UE and for which an HARQ-ACK shall be provided, transmit the HARQ-ACK response using the same  derived according to Clause 10.1.2.1 in subframe(s) with , *i =0,1, …, N-1*, where

- is the number of scheduled TB determined in the corresponding DCI;

- if the UE is not configured with higher layer parameter *interleaving* in *ce-PDSCH-MultiTB-Config* and the UE is not in half-duplex FDD operation

- ,

- otherwise

- **,**

- is the last subframe in which the PDSCH containing TB is transmitted;

- subframe is the last subframe in which the PDSCH is transmitted;

- denotes the number of consecutive subframes including non-BL/CE subframes where the PUCCH with HARQ ACK for TB with repetition number of *N* is transmitted;

**<Unchanged parts are omitted>**