**3GPP T****SG-RAN WG1 Meeting #104-e R1-2102104**

**E-Meeting, January 25th – February 5th, 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.213** | **CR** | **0197** | **rev** | **-** | **Current version:** | **16.4.0** |  |
|  | | | | | | | | |
| *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:*** | CR on Timing for secondary cell activation / deactivation with sub-slot PUCCH | | | | | | | | | |
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| ***Source to WG:*** | Moderator (OPPO) | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
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| ***Work item code:*** | [NR\_L1enh\_URLLC-Core](http://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=830174) | | | | |  | ***Date:*** | | | 2021-02-04 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | Present specification does not make a difference between slot and sub-slot counting and, if applied rigorously, leads to later SCell activation with sub-slot PUCCH in use. When an indicated PDSCH-to-HARQ\_feedback timing indicator field in the DCI format scheduling the PDSCH reception for SCell activation determines the number of sub-slots, inconsistency occurs in determination of *k.* | | | | | | | | |
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| ***Summary of change:*** | | Definition of SCell activation/deactivation timing *k.* based on the index of a slot of 14 symbols that includes a sub-slot based PUCCH transmission. | | | | | | | | |
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| ***Consequences if not approved:*** | | Delayed activation/deactivation and risk of different interpretation of the specification between UE and network vendors. | | | | | | | | |
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| ***Clauses affected:*** | | 4.3 | | | | | | | | |
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|  | | **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:*** | | **Isolated impact analysis:**  This CR is based on RAN1’s common understanding, which has no impact on UE behavior. | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |

## 4.3 Timing for secondary cell activation / deactivation

With reference to slots for PUCCH transmissions each consisting of symbols as defined in [4, TS 38.211], when a UE receives in a PDSCH an activation command [11, TS 38.321] for a secondary cell ending in slot *n*, the UE applies the corresponding actions in [11, TS 38.321] no later than the minimum requirement defined in [10, TS 38.133] and no earlier than slot , except for the following:

- the actions related to CSI reporting on a serving cell that is active in slot 

- the actions related to the *sCellDeactivationTimer* associated with the secondary cell [11, TS 38.321] that the UE applies in slot 

- the actions related to CSI reporting on a serving cell which is not active in slot that the UE applies in the earliest slot after  in which the serving cell is active.

The value of  is where slot *n*+*m* is a slot indicated for PUCCH transmission with HARQ-ACK information for the PDSCH reception as described in Clause 9.2.3 and  is a number of slots per subframe for the SCS configuration  of the PUCCH transmission as defined in [4, TS 38.211].



With reference to slots for PUCCH transmissions each consisting of symbols as defined in [4, TS 38.211], if a UE receives a deactivation command [11, TS 38.321] for a secondary cell ending in slot , the UE applies the corresponding actions in [11, TS 38.321] no later than the minimum requirement defined in [10, TS 38.133], except for the actions related to CSI reporting on an activated serving cell which the UE applies in slot *.*

If the *sCellDeactivationTimer* associated with the secondary cell expires in slot , the UE applies the corresponding actions in [11, TS 38.321] no later than the minimum requirement defined in [10, TS 38.133], except for the actions related to CSI reporting on an activated serving cell which the UE applies in the first slot that is after slot  where  is the SCS configuration for PDSCH reception on the secondary cell.

<Unchanged parts are omitted>