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

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

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| *CR-Form-v12.0* |
| **DRAFT CHANGE REQUEST** |
|  |
|  | **38.214** | **CR** |  | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  |
| *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 2-step RACH for 38.214 |
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| ***Source to WG:*** | Moderator (ZTE) |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_2step\_RACH-Core |  | ***Date:*** | 2020-08-21 |
|  |  |  |  |  |
| ***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 canbe 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:*** | The following updates and corrections are required:1. To capture the default TDRA table 6.1.2.1.1-3 of extended CP for MsgA PUSCH in Clause 6.1.2.1 (TP#2a in [102-e-NR-2step-RACH-02])
2. To capture the same assumption of Msg3 resource overhead for MsgA in Clause 6.1.4.2 (TP#3 in [102-e-NR-2step-RACH-02])
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| ***Summary of change:*** | Implement the above updates and corrections. |
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| ***Consequences if not approved:*** | Incomplete/incorrect support for 2-step RACH. |
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| ***Clauses affected:*** | 6.1.2.1, 6.1.4.2 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 38.202, 38.211, 38.212, 38.213 |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## 6.1.2.1       Resource allocation in time domain

\*\*\* Unchanged text is omitted \*\*\*

When transmitting MsgA PUSCH, if the UE is not configured with *startSymbolAndLengthMsgA-PO*, and if the TDRA list*PUSCH-TimeDomainResourceAllocationList* is provided in *PUSCH-ConfigCommon*, the UE shall use *msgA-PUSCH-TimeDomainAllocation* to indicate which values are used in the list. If *PUSCH-TimeDomainResourceAllocationList* is not provided in *PUSCH-ConfigCommon*, the UE shall use parameters *S*and *L* from table 6.1.2.1.1-2 or table 6.1.2.1.1-3 where *msgA-PUSCH-TimeDomainAllocation* indicates which values are used in the list. The time offset for PUSCH transmission is described in [6, TS38.213].

\*\*\* Unchanged text is omitted \*\*\*

## 6.1.4.2 Transport block size determination

\*\*\* Unchanged text is omitted \*\*\*

The UE shall first determine the number of REs (*NRE*) within the slot:

- A UE first determines the number of REs allocated for PUSCH within a PRB  by

- , where is the number of subcarriers in the frequency domain in a physical resource block,  $N\_{symb}^{slot}$$N\_{symb}^{slot}$is the number of symbols *L* of the PUSCH allocation according to Clause 6.1.2.1 for scheduled PUSCH or Clause 6.1.2.3 for configured PUSCH,  is the number of REs for DM-RS per PRB in the allocated duration including the overhead of the DM-RS CDM groups without data, as described for PUSCH with a configured grant in Clause 6.1.2.3 or as indicated by DCI format 0\_1 or DCI format 0\_2 or as described for DCI format 0\_0 in Clause 6.2.2, and  is the overhead configured by higher layer parameter *xOverhead* in *PUSCH-ServingCellConfig*. If the  is not configured (a value from 6, 12, or 18), the  is assumed to be 0. For Msg3 or MsgA PUSCH transmission the  is always set to 0. In case of PUSCH repetition Type B,  is determined assuming a nominal repetition with the duration of *L* symbols without segmentation.

\*\*\* Unchanged text is omitted \*\*\*