**3GPP TSG- Meeting #118 *R1-240XXXX***

**Maastricht, NL, August 19th – 23rd, 2024**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.214** | **CR** |  **XXXX** | **rev** |  | **Current version:** |  |  |
|  |
| *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 Remaining issues for uplink Tx switching  |
|  |  |
| ***Source to WG:*** | Moderator (Apple), Ericsson |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_RF\_FR1  |  | ***Date:*** | 2024-08-22 |
|  |  |  |  |  |
| ***Category:*** | A |  | ***Release:*** | Rel-18 |
|  | *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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | Uplink switching gap is not relaxed for the case that UE is configured to transmit a CG-PUSCH on a serving cell, and CG-PUSCH transmission triggers uplink Tx switching, but an UL-DCI schedules a DG-PUSCH on the same serving cell which cancels CG-PUSCH.  |
|  |  |
| ***Summary of change:*** | When uplink CG-PUSCH transmission on a serving cell triggers Tx switching, an additional time duration *Tswitch* is added to the existing *N2* symbols between the end of UL DCI that cancels CG-PUSCH, and the beginning of CG-PUSCH. |
|  |  |
| ***Consequences if not approved:*** | UE does not commit uplink switching based on CG-PUSCH which has been canceled by NW. If timeline is not relaxed, UE may drop UL transmissions on victim band given that UE starts switching based on CG-PUSCH.  |
|  |  |
| ***Clauses affected:*** | 6.1.2.1 |
|  |  |
|  | **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:*** |  |

#

## 6.1 UE procedure for transmitting the physical uplink shared channel

<text unchanged are omitted>

A UE is not expected to be scheduled by a PDCCH ending in symbol $i$ to transmit a PUSCH on a given serving cell overlapping in time with a transmission occasion, where the UE is allowed to transmit a PUSCH with configured grant according to [10, TS38.321], starting in a symbol $j$ on the same serving cell if the end of symbol $i$ is not at least $N\_{2}$ symbols and an additional time duration *Tswitch* before the beginning of symbol $j$, if

- the UE is not provided *prioLowDG-HighCG* or *prioHighDG-LowCG*, or the UE is provided *prioLowDG-HighCG* or *prioHighDG-LowCG* and the two PUSCHs have the same priority index as described in Clause 9 of [6, TS 38.213] and

- the UE is not provided *enableSTx2PofmDCI,* or is provided *enableSTx2PofmDCI* and the two PUSCHs are associated with the same *coresetPoolIndex* value.

The value $N\_{2}$ in symbols is determined according to the UE processing capability defined in Clause 6.4, and $N\_{2} $and the symbol duration are based on the minimum of the subcarrier spacing corresponding to the PUSCH with configured grant and the subcarrier spacing of the PDCCH scheduling the PUSCH. The value *Tswitch* is defined in Clause 6.4.

If a UE receives an ACK for a given HARQ process in CG-DFI in a PDCCH ending in symbol *i* to terminate a transport block repetition in a PUSCH transmission with a configured grant on a given serving cell with the same HARQ process after symbol *i*, the UE is expected to terminate the repetition of the transport block in a PUSCH transmission starting from a symbol *j* if the gap between the end of PDCCH of symbol *i* and the start of the PUSCH transmission in symbol *j* is equal to or more than *N2* symbols. The value *N2* in symbols is determined according to the UE processing capability defined in Clause 6.4, and *N2* and the symbol duration are based on the minimum of the subcarrier spacing corresponding to the PUSCH and the subcarrier spacing of the PDCCH indicating CG-DFI. A UE is not expected to be scheduled by a PDCCH ending in symbol $i$ to transmit a PUSCH on a given serving cell for a given HARQ process, if there is a transmission occasion where the UE is allowed to transmit a PUSCH with configured grant according to [10, TS38.321] with the same HARQ process on the same serving cell starting in a symbol $j$ after symbol $i$, and if the gap between the end of PDCCH and the beginning of symbol $j$ is less than $N\_{2}$ symbols and an additional time duration *Tswitch*. The value $N\_{2}$ in symbols is determined according to the UE processing capability defined in clause 6.4, and $N\_{2} $and the symbol duration are based on the minimum of the subcarrier spacing corresponding to the PUSCH with configured grant and the subcarrier spacing of the PDCCH scheduling the PUSCH. The value *Tswitch* is defined in Clause 6.4.

<text unchanged are omitted>

### 6.1.6 Uplink switching

<text unchanged are omitted>

If an uplink switching is triggered for an uplink transmission starting at *T0*, after *T0-Toffset*, the UE is not expected to cancel the uplink switching, or to trigger any other new uplink switching occurring before *T0* for any other uplink transmission that is scheduled after *T0-Toffset*, where *Toffset* is the UE processing procedure time defined for the uplink transmission(s) triggering the switch given in clause 5.3, clause 5.4, clause 6.1, clause 6.2.1, clause 6.4 and in clause 9 of [6, TS 38.213].

<text unchanged are omitted>