**3GPP TSG Meeting #111R4-2409832**

**Fukuoka, Japan, 20th – 24th May**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.307** | **CR** | **0169** | **rev** | **-** | **Current version:** | **18.1.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | CR on 8Rx demodulation requirements release independence | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | RF\_FR1\_enh2\_Demod | | | | |  | ***Date:*** | | | 2024-05-21 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Release independence of 8Rx demodulation requirements are specified | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 8Rx demodulation requirements are Rel-17 independent | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | 8Rx demodulation requirements are not Rel-17 independent | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | Table 5.4-1 in Clause 5.4 is modified to include release independence requirements with 8Rx. Annexure B.3.5 is introduced defining PDSCH demodulation, and CQI performance requirements. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **x** |  | Test specifications | | | | TS/TR 38.521-4 | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**<Start of changes>**

## 5.4 Other release independent features for NR frequency range 1

This clause covers requirements for a Rel-P UE coming from all other release independent features that are not covered under clause 5.1, 5.2 and 5.3, e.g. generic baseband requirements or requirements that are not band/CA/SUL configuration specific.

Table 5.4-1: Additional requirements of other release independent features

|  |  |  |  |
| --- | --- | --- | --- |
| Feature | Release  independent from | Requirements to be fulfilled  (see 38.307 of the REL when the feature was introduced) | Further information |
| RRM requirements for high speed train scenario | Rel-15 (NOTE 1) | Table C.1-1 | Rel-16 WI NR\_HST introduced band independent RRM requirements: see Table C.1-1 |
| UE demodulation requirements for high speed train scenario | Rel-15 (NOTE 1) | Table C.2-1 | Rel-16 WI NR\_HST introduced band independent UE demodulation requirements: see Table C.2-1 |
| RF requirements for 4Rx UEs | Rel-15 | Table B.4.10-1, Table B.4.10-2 |  |
| Transparent Tx diversity | Rel-15 | Table B.4.11-1 | Rel-17 WI NR\_RF\_TxD introduced transparent Tx diversity requirements: see Table B.4.11-1 |
| UE demodulation and CSI requirements for MMSE-IRC receiver for scenarios with inter cell and intra cell inter user interference | Rel-15 | Table B.3.3-1 | Rel-17 WI NR\_demod\_enh2-Perf: see Table B.3.3-1. These requirements are optional for Rel-15 and Rel-16 UEs and can be executed based on UE declaration. |
| RRM enhancement for FR1 high speed train scenario enhancement | Rel-16 (NOTE 2) | Table C.3-1 | Rel-17 WI NR\_HST\_FR1\_enh introduced band independent RRM enhancement: see Table C.3-1 |
| HST-SFN CA demodulation enhancement for FR1 high speed train scenario enhancement | Rel-16 (NOTE 3) | Table C.4-1 | Rel-17 WI NR\_HST\_FR1\_enh introduced band independent HST-SFN CA demodulation enhancement: see Table C.4-1 |
| HST-DPS CA demodulation enhancement for FR1 high speed train scenario enhancement | Rel-15 (NOTE 4) | Table C.4-1 | Rel-17 WI NR\_HST\_FR1\_enh introduced band independent HST-DPS CA demodulation enhancement: see Table C.4-1 |
| PDSCH absolute physical layer throughput requirements with link adaptation | Rel-17 | Table B.3.4-1 | Rel-18 WI NR\_demod\_enh3-Perf: see Table B.3.4-1. These requirements are optional for Rel-17 and can be executed based on UE declaration. |
| RF requirements for 8Rx UE | Rel-17 | Table B.4.x-1, Table B.4.x-2 |  |
| Demodulation requirements for 8Rx UE | Rel-17 | Table B.3.5-1 |  |
| NOTE 1: Rel-15 UEs supporting the high speed train are assumed to read the Rel-16 high speed train scenario information, which is broadcast to all UEs.  NOTE 2: Rel-16 UEs supporting the high speed train are assumed to read the Rel-17 high speed train scenario information, which is broadcast to all UEs.  NOTE 3: Rel-16 UEs supporting the high speed train are assumed to read the Rel-17 high speed train scenario information, which is broadcast to all UEs.  NOTE 4: Rel-15 UEs supporting the high speed train are assumed to read the Rel-17 high speed train scenario information, which is broadcast to all UEs. | | | |

## B.3.5 Common PDSCH demodulation and CQI requirements with 8Rx

The requirements and test cases listed in Table B.3.5-1 are specified in Rel-P version of TS 38.101-4 [5].

Table B.3.5-1: UE PDSCH demodulation requirements with 8Rx

|  |  |
| --- | --- |
| Section / Clause | Description |
| 5.2.4.1 | PDSCH demodulation requirements for 8Rx FDD |
| 5.2.4.2 | PDSCH demodulation requirements for 8Rx TDD |
| 5.2A.4 | PDSCH CA demodulation requirements for 8Rx |
| 6.2.4 | CQI requirements with 8Rx |

**<End of changes>**