**3GPP TSG-RAN4 Meeting #112 *R4-2414290***

**Maastricht, Netherlands, 19th Aug 2024 - 23rd Aug 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-1** | **CR** | **2449** | **rev** | **1** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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:*** | (NR\_SL\_enh-Core) CR to add third level clause suffixes for V2X - TS38.101-1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Anritsu Limited | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_SL\_enh-Core | | | | |  | ***Date:*** | | | 2024-08-20 |
|  |  | | | |  | |  | | |  |
| ***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 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:*** | | It is not indicated in section 4.3 that for V2X, suffixes A and F are used for indicating at 3rd level clause.  Whereas, there is such indication for: “shared spectrum channel access, suffixes A, B, and D are used for indicating at 3rd level clause.” | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add “For V2X, suffixes A and F are used for indicating at 3rd level clause”. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Readers may not notice that V2X as share sprectrum channel access makes use of suffixes at 3rd level clause. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **x** |  | Test specifications | | | | TS 38.521-1 | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | The first version (R4-2412481) of that CR was submitted as Cat-F but the same issue is present in Rel-17 spec.  This revision includes: a change of the category (Cat F -> Cat A), the WI code (5G\_V2X\_NRSL-Core -> NR\_SL\_enh-Core) and so the title is updated as well.  The Rel-17 CR (Cat A) is R4-2414291. | | | | | | | | |

<<Unchanged sections skipped>>

<<Start of change>>

## 4.3 Specification suffix information

Unless stated otherwise, the suffixes shown in Table 4.3-1 are used for indicating at 2nd level clause. For shared spectrum channel access, suffixes A, B, and D are used for indicating at 3rd level clause. For V2X, suffixes A and F are used for indicating at 3rd level clause.

Table 4.3-1: Definition of suffixes

|  |  |
| --- | --- |
| Clause suffix | Variant |
| None | Single Carrier |
| A | Carrier Aggregation (CA) |
| B | Dual-Connectivity (DC) |
| C | Supplementary Uplink (SUL) |
| D | UL MIMO |
| E | V2X |
| F | Shared spectrum channel access |
| G | Tx Diversity (TxD) |
| H | Carrier Aggregation (CA) with UL MIMO |
| I | RedCap |
| J | ATG |
| K | Aerial UE (UAV) |
| L | Carrier Aggregation (CA) with Tx Diversity |

A terminal which supports the above features needs to meet both the general requirements and the additional requirement applicable to the additional clause (suffixes A to L) in clauses 5, 6 and 7. Where there is a difference in requirement between the general requirements and the additional clause requirements (suffixes A to L) in clauses 5, 6 and 7, the tighter requirements are applicable unless stated otherwise in the additional clause.

A terminal which supports advanced V2X services, public safety services and other commercial use cases related to NR sidelink operation shall meet all of the separate corresponding requirements in suffix E.

For a terminal that supports SUL for the band combination specified in Table 5.2C-1, the current version of the specification assumes the terminal is configured with active transmission either on UL carrier or SUL carrier at any time in one serving cell and the UE requirements for single carrier shall apply for the active UL or SUL carrier accordingly.

For a terminal that supports public safety service using sidelink, the minimum requirements are applicable when

- The UE is associated with a serving cell on PS carrier, or

- The UE is not associated with a serving cell on the PS carrier and is provisioned with the preconfigured radio parameters for PS that are associated with known Geographical Area, or

- The UE is associated with a serving cell on a carrier different than the PS carrier, and the radio parameters for PS that are provided by the serving cell, or

- The UE is associated with a serving cell on a carrier different than the PS carrier, and has a non-serving cell selected on the PS carrier with the preconfigured radio parameters.

When the advanced-V2X or PS UE is not associated with a serving cell on the V2X or PS carrier, and the UE does not have knowledge of its geographical area, or is provisioned with preconfigured radio parameters that are not associated with any Geographical Area, V2X or PS UE’ transmissions are not allowed, and the requirements in Section 6.3E.2 apply.

For a terminal that supports operation in shared spectrum, the current version of this specification assumes in the uplink sub-bands within a wideband channel shall be contiguously allocated to the UE. The uplink requirements for one or more non-transmitted sub-bands between two transmitted sub-bands does not form a part of the current version of this specification.

Terminal that supports inter-band NR-DC configuration shall meet the minimum requirements for corresponding CA configuration (suffix A), unless otherwise specified.

For a terminal that supports inter-band Carrier Aggregation (CA) with UL MIMO or Tx diversity operation, the requirements are targeted for FWA form factor in current version of specification.

A terminal which supports intra-band contiguous UL CA with UL MIMO shall meet the corresponding requirements in suffix H with all UL CCs with UL MIMO.

A terminal which supports inter-band UL CA with UL MIMO shall meet the corresponding requirements in suffix H with all UL CCs with UL MIMO for the frequency band(s) said to be with UL MIMO.

<<Unchanged sections skipped>>

<<End of change>>