**3GPP TSG-RAN WG1 Meeting #116bis *R1-24xxxxx***

**Changsha, China, April 15 – 19, 2024**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.211** | **CR** |  | **rev** | **-** | **Current version:** | **18.2.0** |  |
|  | | | | | | | | |
| *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 for TS 38.211 for introduction of FR2-NTN | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, NTT DOCOMO, INC. | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_NTN\_enh-Core | | | | |  | ***Date:*** | | | 2024-04-16 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Introduction of NR over NTN for frequency bands defined by FR2-NTN. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Update references and abbreviations to include definition of FR2-NTN. Update of Table 6.3.3.2-4 to include FR2-NTN. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | NR over NTN in frequency bands defined by FR2-NTN will not be complete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 3.3, 6.3.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **x** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | This is the first version of the CR | | | | | | | | |

<unchanged parts omitted>

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 38.201: "NR; Physical Layer – General Description"

[3] 3GPP TS 38.202: "NR; Services provided by the physical layer"

[4] 3GPP TS 38.212: "NR; Multiplexing and channel coding"

[5] 3GPP TS 38.213: "NR; Physical layer procedures for control "

[6] 3GPP TS 38.214: "NR; Physical layer procedures for data "

[7] 3GPP TS 38.215: "NR; Physical layer measurements"

[8] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception"

[9] void

[10] 3GPP TS 38.306: "NR; User Equipment (UE) radio access capabilities"

[11] 3GPP TS 38.321: "NR; Medium Access Control (MAC) protocol specification"

[12] 3GPP TS 38.133: "NR; Requirements for support of radio resource management"

[13] 3GPP TS 38.304: "NR; User Equipment (UE) procedures in Idle mode and RRC Inactive state"

[14] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone"

[15] 3GPP TS 38.101-5: " User Equipment (UE) radio transmission and reception; Part 5: Satellite access Radio Frequency (RF) and performance requirements NR"

<unchanged parts omitted>

## 3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

BWP Bandwidth Part

CCE Control Channel Element

CORESET Control Resource Set

CRB Common Resource Block

CSI Channel-State Information

CSI-RS CSI Reference Signal

DCI Downlink Control Information

DM-RS Demodulation Reference Signal

FR1 Frequency Range 1 as defined in TS 38.104 [8]

FR2 Frequency Range 2 as defined in TS 38.104 [8]

FR2-NTN Frequency Range 2 for Non-terrestrial networks as defined in TS 38.101-5 [15]

IAB Integrated Access and Backhaul

IAB-MT IAB Mobile Termination

IE Information Element

NCR Network-Controlled repeater

NCR-MT NCR Mobile Termination

PBCH Physical Broadcast Channel

PDCCH Physical Downlink Control Channel

PDSCH Physical Downlink Shared Channel

PRACH Physical Random-Access Channel

PRB Physical Resource Block

PSS Primary Synchronization Signal

PT-RS Phase-tracking reference signal

PUCCH Physical Uplink Control Channel

PUSCH Physical Uplink Shared Channel

RAR Random Access Response

REG Resource-Element Group

RIM Remote Interference Management

RIM-RS Remote Interference Management Reference Signal

SRS Sounding Reference Signal

SSS Secondary Synchronization Signal

VRB Virtual Resource Block

<unchanged parts omitted>

#### 6.3.3.2 Mapping to physical resources

<unchanged parts omitted>

Table 6.3.3.2-4: Random access configurations for FR2 and unpaired spectrum, and for FR2-NTN and paired spectrum.

<unchanged parts omitted>