**3GPP TSG-RAN4 Meeting #110 *R4-2401779***

**Athens, Greece, 26th Feb 2024 - 1st Mar 2024**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-5** | **CR** | **0063** | **rev** | **-** | **Current version:** | **17.6.0** |  |
|  | | | | | | | | |
| *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\_NTN\_solutions-Core) CR for TS 38.101-5 to update NTN frequency range (R17) | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_NTN\_solutions-Core | | | | |  | ***Date:*** | | | 2024-02-19 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In the WF R4-2305925, RAN4 has agreed to update the following NTN frequency range for both TS 38.101-5 and TS 38.108.   |  |  | | --- | --- | | Frequency range designation | Corresponding frequency range | | FR1-NTN1 | 410 MHz – 7125 MHz | | FR2-NTN2 | 17300 MHz – 30000 MHz | | NOTE 1: [NTN bands within this frequency range are regarded as a FR1 band when references from other specifications.]  NOTE 2: [NTN bands within this frequency range are regarded as a FR2 band when references from other specifications.] | | | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | To introduce NTN suffix for NTN frequency range definition. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Current NTN frequency range definition in TS 38.101-5 is not aligned with the latest RAN4’s agreement in WF R4-2305925. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1, 5.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.521-5 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

## **<<Start of Change>>**

## 5.1 General

The channel arrangements presented in this clause are based on the operating bands and channel bandwidths defined in the present Release of specifications.

NOTE: Other operating bands and channel bandwidths may be considered in future Releases.

Requirements throughout the RF specifications are in many cases defined separately for different frequency ranges (FR). The frequency ranges in which NTN satellite can operate according to this version of the specification are identified as described in Table 5.1-1.

Table 5.1-1: Definition of NTN frequency ranges

|  |  |
| --- | --- |
| Frequency range designation | Corresponding frequency range |
| FR1-NTN1 | 410 MHz – 7125 MHz |
| NOTE 1: [NTN bands within this frequency range are regarded as a FR1 band when references from other specifications.] | |

The present specification covers FR1-NTN operating bands.

## 5.2 Operating bands

### 5.2.1 General

NTN satellite covers FR1-NTN operating bands in the present specification.

### 5.2.2 Operating bands with conducted requirements

NTN satellite is designed to operate in the operating bands defined in Table 5.2.2-1.

Table 5.2.2-1: NTN satellite bands in FR1-NTN

|  |  |  |  |
| --- | --- | --- | --- |
| NTN satellite operating band | Uplink (UL) operating band Satellite Access Node receive / UE transmit  FUL,low – FUL,high | Downlink (DL) operating band Satellite Access Node transmit / UE receive  FDL,low – FDL,high | Duplex mode |
| n256 | 1980MHz – 2010 MHz | 2170 MHz – 2200 MHz | FDD |
| n255 | 1626.5 MHz – 1660.5 MHz | 1525 MHz – 1559 MHz | FDD |
| NOTE: NTN satellite bands are numbered in descending order from n256. | | | |

## **<<End of Change>>**