**3GPP TSG-RAN WG2 #130DocNumber**

**St. Julian’s, Malta, May 19th – 23rd, 2025**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **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)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | Introduction of the inband operation for NTN IoT in NR NTN |
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| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NTNNBIoT\_inbandNTNNR |  | ***Date:*** | 22 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** |  |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | RAN4 has introduced support for inband operation mode for NTN NB-IoT in NR NTN since Release 18. In R4-2503035, RAN4 has informed RAN2 and stated the following condition: * In Rel-18, UE is only required to support the same operation mode for anchor and non-anchor carriers.
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| ***Summary of change:*** | A new note is added to describe that the same operation mode for anchor and non-anchor carrier is supported in NTN for this release of the specification. |
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| ***Consequences if not approved:*** | The supported operation mode deployments for IoT NTN are unclear.**Impact analysis**Impacted functionality: NB-IoT operation in NR NTN.Inter-operability:There are no inter-operability issues foreseen. |
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| ***Clauses affected:*** | 2, 5.5a |
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|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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| START OF CHANGE |

[XX] 3GPP TS 36.102: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); User Equipment (UE) radio transmission and reception for satellite access".

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| END OF CHANGE |

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| START OF CHANGE |

**Table 5.5a-1: Anchor and non-anchor carrier deployment combinations in FDD**

|  | ***Anchor Carrier*** |
| --- | --- |
|  | ***In-band*** | ***Guard-band*** | ***Standalone*** |
| **Non-Anchor Carrier** | **In-band** | Valid (Note 1) | Valid (Note 1) | Valid (Note 2, Note 3) |
| **Guard-band** | Valid (Note 1) | Valid (Note 1, Note 4) | Valid (Note 2, Note 3) |
| **Standalone** | Valid (Note 2, Note 3) | Valid (Note 2, Note 3) | Valid (Note 2, Note 4) |

NOTE 1: Both carriers associated with the same LTE cell.

NOTE 2: Total frequency span to not exceed 20MHz and both anchor and non-anchor carriers synchronised.

NOTE 3: Not applicable to SC-PTM reception.

NOTE 4: In NTN, deployment combinations with the same operation mode for anchor carrier and non-anchor carrier are supported in this release of the specification (see TS 36.102 [XX]).

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| END OF CHANGE |