**3GPP TSG RAN4 Meeting #116bis R4-2514335  
Prague, Czech Republic, 13th – 18th October, 2025**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** |  | **rev** |  | **Current version:** | 19.1.0 |  |
|  | | | | | | | | |
| *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:*** | DraftCR to 38.133 on inter-frequency measurements with SSB index detection in less than 5 MHz operation | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_IoT\_NTN\_req\_test\_enh-Perf | | | | |  | ***Date:*** | | | 2025-08-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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:*** | | Introducing the new test case for inter-frequency measurements in less than 5 MHz operation | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Introduces the new test | | | | | | | | |
| ***T*** | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Test case will be missing | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.14.5.2.X (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

***<Start of change 1>***

#### A.14.5.2.X SA event triggered reporting tests for FR1 with SSB time index detection when DRX is used with single gap for 3 MHz channel bandwidth in satellite access

##### A.14.5.2.X.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event. This test will partly verify the SA inter-frequency NR cell search requirements in clause 9.3C.4. This test is applicable for UEs that support less than 5 MHz operation.

The test procedure in clause A.14.5.2.3 applies for this test. Supported test configurations are specified in Table A.14.5.2.X.1-1. The list of general and NR specific test configuration reuse those in test clause A.14.5.2.3, except for those provided in Tables A.14.5.2.X.1-2 and A.14.5.2.X.1-3.

Table A.14.5.2.X.1-1: SA event triggered reporting tests with SSB index reading for FR1-FR1

|  |  |
| --- | --- |
| Config | Description |
| 1 | GSO, NR 15 kHz SSB SCS, 3 MHz bandwidth, FDD duplex mode |
| 2 | NGSO, NR 15 kHz SSB SCS, 3 MHz bandwidth, FDD duplex mode |
| NOTE 1: If UE supports both NGSO and GSO, the test case Config 1 can be skipped if the UE passes test case Config 2.  NOTE 2: target NR cell has the same SCS, BW and duplex mode as NR serving cell | |

Table A.14.5.2.X.1-2: General test parameters for SA inter-frequency event triggered reporting for FR1 without SSB time index detection in operation with 3 MHz Channel Bandwith

| **Parameter** | **Unit** | **Test configuration** | **Value** | | **Comment** |
| --- | --- | --- | --- | --- | --- |
| NR RF Channel Number |  | Config 1,2 | 1, 2 | | Two FR1 NR carrier frequencies is used. |
| Active cell |  | Config 1,2 | NR Cell 1 (Pcell) | | NR Cell 1 is on NR RF channel number 1. |
| Neighbour cell |  | Config 1,2 | NR Cell 2 | | NR Cell 2 is on NR RF channel number 2. |
| Gap Pattern Id |  | Config 1,2 | 0 | | As specified in clause 9.1.2-1. |
| Measurement gap offset |  | Config 1,2 | 9 | |  |
| A3-Offset | dB | Config 1,2 | -6 | |  |
| Hysteresis | dB | Config 1,2 | 0 | |  |
| CP length |  | Config 1,2 | Normal | |  |
| TimeToTrigger | s | Config 1,2 | 0 | |  |
| Filter coefficient |  | Config 1,2 | 0 | | L3 filtering is not used |
| DRX |  | Config 1,2 | DRX.1 | DRX. 7 | As specified in clause A.3.3 |
| Time offset between serving and neighbour cells |  | Config 1,2 | 3 ms | | Asynchronous cells.  The timing of Cell 2 is 3 ms later than the timing of Cell 1. |
| T1 | s | Config 1,2 | 5 | |  |
| T2 | s | Config 1,2 | 1.1 | 11 |  |

Table A.14.5.2.X.1-3: Cell specific test parameters for SA inter-frequency event triggered reporting for FR1 with SSB time index detection in operation with 3 MHz Channel Bandwith

| Parameter | Unit | Test configuration | Cell 1 | | Cell 2 | |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | T1 | T2 | T1 | T2 |
| PDSCH Reference measurement channel |  | Config 1,2 | SR.1.2FDD | |  | |
| RMSI CORESET Reference Channel |  | Config 1,2 | CR.1.2 FDD | |  | |
| Dedicated CORESET Reference Channel |  | Config 1,2 | CCR.1.7 FDD | |  | |
| SSB parameters |  | Config 1,2 | SSB.13 FR1 | | SSB.13 FR1 | |
| SMTC configuration defined in A.3.11 |  | Config 1,2 | SMTC.2 | | SMTC.2 | |
| Note2 | dBm/15 kHz | Config 1,2 | -98 | | -98 | |
| Note2 | dBm/SCS | Config 1,2 | -98 | | -98 | |
| SS-RSRP Note 3 | dBm/SCS | Config 1,2 | -94 | -94 | -Infinity | -91 |
|  | dB | Config 1,2 | 4 | 4 | -Infinity | 7 |
|  | dB | Config 1,2 | 4 | 4 | -Infinity | 7 |
| IoNote3 | dBm/2.7 MHz | Config 1,2 | -69.99 | -69.99 | -75.44 | -67.60 |

##### A.14.5.2.X.2 Test Requirements

In test 1 with per-UE gap, the UE shall send one Event A3 triggered measurement report, with a measurement reporting delay less than 1440 ms from the beginning of time period T2. The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled. The rate of correct events observed during repeated tests shall be at least 90 %.

NOTE: The actual overall delays measured in the test may be up to 2xTTIDCCH higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.