**3GPP TSG WG RAN5 Meeting #105 R5-247520**

**Orlando, US, November 17-21, 2024**

**3GPP TSG RAN Meeting #106 RP-24xxxx**

**Madrid, Spain, December 9-12, 2024** (revision of RP-yyxxxx)

**Source: Huawei, HiSilicon, China Telecom**

**Title: New WID on UE Conformance - New Rel-19 NR licensed bands and extension of existing NR bands**

**Document for: Information**

**Agenda Item: 4.1**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: UE Conformance - New Rel-19 NR licensed bands and extension of existing NR bands

Acronym: NR\_lic\_bands\_BW\_R19-UEConTest

Unique identifier:

|  |  |
| --- | --- |
| **This WID includes a Testing part** | **X** |
| **and it addresses the following 3GPP work area:** | **Radio Access** | **X** |
| **Core Network** |  |
| **Services** |  |

Potential target Release: Rel-19

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **Yes** |  |  |  |  |  |
| **No** | X | X | X | X |  |
| **Don't know** |  |  |  |  |  |

# 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

This description is either a

|  |
| --- |
| Normative Work Item:*tick applicable boxes below* |
|  | Stage 1 |
|  | Stage 2 |
|  | Stage 3 |
| X | Other (e.g. testing) |

### 2.2 Parent Work Item

The following lists of RAN4 work items that will be tested in this RAN5 basket work item will be maintained in future revisions of this WI description:

**New NR bands:**

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| NR\_FDD\_1400MHz | R4 | 1040127 | Introduction of the 1.4 GHz Band |
| NR\_bands\_n87\_n88 | R4 | 1040131 | Introduction of NR bands n87 and n88 |
| NR\_band\_n68 | R4 | 1040132 | Introduction of NR band n68 |
| NR\_NTN\_Sband | R4 | 1040129 | Introduction of NR-NTN S-band (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL) |
| NR\_NTN\_combinedLband | R4 | 1040134 | New NR NTN bands to support Extended L-band and combined MSS L-band and Extended L-band ranges |

Note: RAN5 testing of RAN4 WIs shall only start after the RAN4 WI is completed. The RAN4 WI completion will be tracked in the RAN5 workplan that will be attached to WI status reports.

**Extended channel bandwidth of the existing NR bands:**

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| NR\_bands\_CA\_ENDC\_R19\_BWs | R4 | 1040126 | Adding channel bandwidth(s) support to existing NR bands and CA/ENDC combinations in REL-19 |
| NR\_n28\_PC2\_40MHz\_CBW | R4 | 1040128 | Introduction of Power Class 2 and UE 40MHz Channel Bandwidth in NR band n28 |

Note: RAN5 testing of RAN4 WIs shall only start after the RAN4 WI is completed. The RAN4 WI completion will be tracked in the RAN5 workplan that will be attached to WI status reports.

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work/Study Items (if any) |
| **Acronym** | Unique ID | Title | Nature of relationship |
|  |  |  | *{optional free text}*  |

# 3 Justification

RAN4 have introduced Rel-19 work items for new NR licensed bands and extension of channel bandwidth of existing NR licensed bands. The new NR bands and extended channel bandwidth of the existing NR bands are introduced in Rel-19 NR specifications, but are release independent from Rel-15.

Following the RAN5 normal practice, a basket conformance WI is proposed to introduce the new NR licensed bands and channel bandwidth extensions of existing licensed bands as listed in clause 2.2 in RAN5 test specifications.

Note: As for all basket WIs, each unit of the basket (i.e. testing of one new NR band or testing of an extension of a new NR band) can progress and complete separately. Once the whole basket is declared completed, all units of the basket that are not completed will be removed from the basket WI and from the specifications.

# 4 Objective

### 4.1 Objective of SI or Core part WI or Testing part WI

The objective of this work item is to define the corresponding UE conformance requirements, analyse the test case impact, applicability, test environment, and update the relevant conformance specifications for the new licensed bands and extended channel bandwidth of exiting licensed bands covered by the RAN4 work items in Rel-19.

|  |  |  |
| --- | --- | --- |
| RAN4 WI Code | RAN4 completion | New band/New CBW |
| NR\_FDD\_1400MHz | 40% | n110 |
| NR\_bands\_n87\_n88 | 33% | n87, n88 |
| NR\_band\_n68 | 25% | n68 |
| NR\_NTN\_Sband | 20% | n253, n251, n250 |
| NR\_NTN\_combinedLband | 15% | n252 |
| NR\_n28\_PC2\_40MHz\_CBW | 20% | 40MHz |
| NR\_bands\_CA\_ENDC\_R19\_BWs | 5% | n48 adding 50MHz (15-60 kHz SCS)n48 adding 60, 70, 80, 90, 100 MHz50MHz (30 and 60 kHz SCS) |
| NR\_bands\_CA\_ENDC\_R19\_BWs | 5% | n5 adding 3MHz (15 kHz SCS) |
| NR\_bands\_CA\_ENDC\_R19\_BWs | 5% | n12 adding 3MHz (15 kHz SCS) |
| NR\_bands\_CA\_ENDC\_R19\_BWs | 5% | n84 adding 45MHz (15-60 kHz SCS) |
| NR\_bands\_CA\_ENDC\_R19\_BWs | 5% | n80 adding 35, 45 and 50MHz (15-60 kHz SCS) |

# 5 Expected Output and Time scale

|  |
| --- |
| **New specifications** *{One line per specification. Create/delete lines as needed}* |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Remarks |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|  |
| --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TS 36.521-1 | Updating new NTN bands associated RF co-existence requirements  | TSG RAN#114(Dec-26) |  |
| TS 38.508-1 | Definition of common environment for new Rel-19 bands and extension of existing NR bands. | TSG RAN#114(Dec-26) |  |
| TS 38.508-2 | Introduction of physical implementation capabilities for new Rel-19 bands. | TSG RAN#114(Dec-26) |  |
| TS 38.521-1 | Introduction of new Rel-19 FR1 bands and extension of existing NR FR1 bands and associated specific RF requirements. | TSG RAN#114(Dec-26) |  |
| TS 38.521-3 | Including the new bands as protected bands for EN-DC configurations | TSG RAN#114(Dec-26) |  |
| TS 38.521-4 | Introduction of new Rel-19 FR1 bands and extension of existing NR FR1 bands and associated specific demodulation requirements. | TSG RAN#114(Dec-26) |  |
| TS 38.521-5 | Introduction of Rel-19 NTN bands and extension of existing NR NTN bands and associated specific RF requirements. | TSG RAN#114(Dec-26) |  |
| TS 38.533 | Introduction of new Rel-19 bands in groups of bands definition for NR RRM tests. | TSG RAN#114(Dec-26) |  |
| TS 38.523-3 | Update of the test case execution guidelines for new Rel-19 bands.Note: Progress of TTCN development of the new protocol test cases is tracked in MCC TF160 reports to RAN5/RAN. | TSG RAN#114(Dec-26) |  |
| TR 38.903 | Derivation of test tolerances and measurement uncertainty for User Equipment (UE) conformance test cases if new group of bands are introduced by the new Rel-19 bands. | TSG RAN#114(Dec-26) |  |
| TR 38.905 | Derivation of test points for new Rel-19 bands in radio transmission and reception User Equipment (UE) conformance test cases. | TSG RAN#114(Dec-26) |  |

# 6 Work item Rapporteur(s)

Yuxin Hao (Huawei)

haoyuxin@huawei.com

Lei Gao (China Telecom)

gaol8@chinatelecom.cn

# 7 Work item leadership

RAN5

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Huawei |
| HiSilicon |
| China Telecom |
| Nokia |
| Ericsson |
|  |
|  |