**3GPP TSG RAN5 Meeting #95-e R5-223311**

**Electronic Meeting, May 9 - 20, 2022**

**3GPP TSG RAN Meeting #96-e RP-22xxxx**

**Electronic Meeting, June 6 - 9, 2022**

**Source: China Unicom**

**Title: New WID on UE Conformance - High power UE (power class 2) for one NR FDD band**

**Document for: endorsement**

**Agenda Item: 7.4.1**

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 - High power UE (power class 2) for one NR FDD band

## Acronym: NR\_PC2\_UE\_FDD-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-17

## 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 work item is a …

|  |  |
| --- | --- |
|  | Feature |
| X | Building Block |
|  | *Work Task* |
|  | Study Item |

### 2.2 Parent Work Item

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| NR\_PC2\_UE\_FDD | R4 | 930058 | High power UE (power class 2) for one NR FDD band |
| NR\_PC2\_UE\_FDD-Core | R4 | 930158 | Core part: High power UE (power class 2) for one NR FDD band |
| NR\_PC2\_UE\_FDD-Perf | R4 | 930258 | Perf. part: High power UE (power class 2) for one NR FDD band |

### 2.3 Other related Work Items and dependencies

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

## 3 Justification

Increasing the transmit power of UE has significant benefits on extending cell coverage area and improving the experience of cell edge users. In Rel-16 several study/work items related to HPUE have been proposed and worked on to standardize the requirements for EN-DC scenarios. In Rel-17, HPUE for NR CA and SUL is also specified.

RAN4 introduced a study item on FS\_NR\_PC2\_UE\_FDD at the RP#90 meeting. In the SI, several SAR compliance solutions for NR FDD PC2 were studied, companies reached on consensus that UE-implementation based method would be used to make sure SAR regulation is not violated. At the RP#93 meeting, RAN4 introduced a R17 WI High power UE (power class 2) for one NR FDD band. The completion of the core part and performance part of this R4 WI has achieved 100% at RP#95 meeting.

It is proposed to introduce an associated RAN5 work item to enable UE conformance test for NR PC2 UE on FDD bands.

## 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 UE conformance requirements corresponding to the WI ‘NR\_PC2\_UE\_FDD’, including the RF Test cases for PC2 UE for NR FDD band n1 and n3.

## 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 38.508-1 | Definition of common environment for R17 NR High power UE. | TSG RAN#102(Dec-23) |  |
| TS 38.508-2 | Introduction of physical implementation capabilities for R17 NR High power UE. | TSG RAN#102(Dec-23) |  |
| TS 38.521-1 | Introduction of RF testing for R17 NR High power UE. | TSG RAN#102(Dec-23) |  |
| TS 38.522 | Introduction of test applicability for R17 NR High power UE. | TSG RAN#102(Dec-23) |  |
| TR 38.903 | Derivation of test tolerances and measurement uncertainty for User Equipment (UE) conformance test cases for R17 NR High power UE. | TSG RAN#102(Dec-23) |  |
| TR 38.905 | Derivation of test points for R17 NR High power UE requirements in radio transmission and reception User Equipment (UE) conformance test cases. | TSG RAN#102(Dec-23) |  |

## 6 Work item Rapporteur(s)

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## 7 Work item leadership

RAN5

## 8 Aspects that involve other WGs

None

## 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Unicom |
| Huawei |
| Hisilicon |
| CATT |
| CAICT |
| Nokia |
| ZTE Corporation |
| Vodafone |
| Qualcomm |
| Orange |