**3GPP TSG- Meeting # r2-draft R5-221379**

**Electronic Meeting, 21st Feb 2022 - 4th Mar 2022**

**3GPP TSG RAN Meeting #95e RP-22xxxx**

**Electronic Meeting, March 17 - 23, 2022**

**Source: CMCC**

**Title: New WID on UE Conformance - Enhancement of data collection for SON and MDT in NR SA and MR-DC**

**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 - Enhancement of data collection for SON (Self-Organising Networks)/MDT (Minimization of Drive Tests) in NR standalone and MR-DC (Multi-Radio Dual Connectivity)

## Acronym: NR\_ENDC\_SON\_MDT\_enh-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 | 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\_ENDC\_SON\_MDT\_enh | RAN3 | 860053 | Enhancement of data collection for SON (Self-Organising Networks)/MDT (Minimization of Drive Tests) in NR and EN-DC |
| NR\_ENDC\_SON\_MDT\_enh-Core | RAN3 | 860153 | Core part: Enhancement of data collection for SON (Self-Organising Networks)/MDT (Minimization of Drive Tests) in NR and EN-DC |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work Items (if any) |
| Unique ID | Title | Nature of relationship |
|  |  |  |

## 3 Justification

Self-Organising Networks (SON) and Minimization of Drive Tests (MDT) were introduced in LTE to support deployment of the system and performance optimization. Many of the standardized SON/MDT features are implemented in LTE commercial networks and have provided means for a cost-efficient handling of the networks.

The core part of the WI SON/MDT support for NR was introduced in Rel-16. It uses LTE solutions as a baseline and takes the NR architectures and features into account, e.g. MR-DC, beam, inactive state, etc. In this WI, SON features Mobility Robustness Optimisation (MRO), RACH optimisation, L2 measurements and Minimization of Drive Tests (MDT) support for NR were introduced. Due to the time constraints, some of the objectives listed in the Rel-16 SON and MDT WID were considered in Rel-17.

Therefore, the core part of the data collection enhancement in NR SA (standalone) and MR-DC (EN-DC, NE-DC, NR-DC) for SON/MDT was introduced in Rel-17. This WI tackles the leftover features and further enhancement of SON/MDT, including leftovers of Rel-16 WI, e.g., Successful HO reports, RACH Optimisation enhancements, MDT enhancements, MDT for MR-DC, etc, and enhancement of R16 new features enabled by data collection, e.g. 2-step RACH, mobility enhancements, etc.

The completion level of the 3GPP Rel-17 work item on enhancement of data collection for SON/MDT in NR and MR-DC has achieved 75% at RP#94-e (Dec-2021), and the Target Completion Date of the WI is March-2022. There is a need to introduce an associated RAN5 work item to enable UE conformance testing for enhancement of data collection for SON/MDT in NR SA (standalone) and MR-DC (EN-DC, NE-DC, NR-DC).

## 4 Objective

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

The objective of this work item is to enable protocol conformance testing for enhancement of data collection for SON/MDT in NR SA (standalone) and MR-DC (EN-DC, NE-DC, NR-DC) corresponding to the WID on NR\_ENDC\_SON\_MDT\_enh-Core with Unique identifier [860153](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840191).

## 5 Expected Output and Time scale

|  |
| --- |
| **New specifications** |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Remarks |
|  |  |  |  |  |  |

|  |
| --- |
| **Impacted existing TS/TR** |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TS 38.508-1 | Definition of common environment for R17 NR SA and MR-DC SON and MDT. | TSG RAN#100-e(Jun-23) |  |
| TS 38.508-2 | Introduction of common implementation conformance statements for R17 NR SA and MR-DC SON and MDT. | TSG RAN#100-e(Jun-23) |  |
| TS 38.523-1 | Introduction of the SIG test cases for R17 NR SA and MR-DC SON and MDT. | TSG RAN#100-e(Jun-23) |  |
| TS 38.523-2 | Introduction of test applicability for SIG test cases impacted by R17 NR SA and MR-DC SON and MDT. | TSG RAN#100-e(Jun-23) |  |
| TS 38.523-3 | Introduction of test model for R17 NR SA and MR-DC SON and MDT requirements. | TSG RAN#100-e(Jun-23) | Note: Progress of TTCN development is tracked in MCC TF160 reports to RAN5/RAN. |

## 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

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| --- |
| Supporting IM name |
| CMCC |
| Huawei |
| HiSilicon |
| ZTE |
| MediaTek Inc |
| Lenovo |
| Motorola Mobility |
| DISH Network |
| Orange |
| Ericsson |
| CATT |
| AT&T |
| Qualcomm |
| Verizon |