**3GPP TSG RAN Meeting #95e RP-220819**

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

**Source: CMCC**

**Title: Revised WID: Further enhancement of data collection for SON (Self-Organising Networks)/MDT (Minimization of Drive Tests) in NR standalone and MR-DC (Multi-Radio Dual Connectivity)**

**Document for: Approval**

**Agenda Item: 9.3.3.1**

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: **New WID on further 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\_enh2-Core

## Unique identifier: 941107

NOTE: For new WIs/SIs leave the Unique identifier empty and make a proposal for an Acronym.

For a revised WI/SI: Take Unique identifier and acronym as shown in 3GPP workplan.

If this is a RAN WID including Core and Perf. part, then Title, Acronym and Unique identifier refer to the feature WI.

Please tick (X) the applicable box(es) in the table below:

Either:

|  |  |
| --- | --- |
| **This WID includes a Core part** | X |
| **This WID includes a Performance part** |  |

or:

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

## 1 Impacts

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

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

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

NOTE: Normally, Core/Perf./Testing parts in RAN WIDs are Building Blocks. Only if they are under an SA or CT umbrella, they are defined as work tasks. If you are in doubt, please contact MCC.

### 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
|  |  |  |  |

NOTE: RAN agreed some time ago, that it describes the feature WI + Core/Perf. part WI or Testing part WI in one WID. Therefore the table above should just include the feature WI data (In case the feature covers Core and Perf. part, please list under Working Group the leading WG of the Core part).

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 801000 | Study on RAN-centric Data Collection and Utilization for LTE and NR | Preceding Study Item |
| 840091 | SON/MDT support for NR | Preceding Work Item |
| [860053](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840191) | New WID on enhancement of data collection for SON/MDT in NR | Preceding Work Item |

NOTE: Also related or dependent WIs/SIs in other TSGs should be indicated.

**Dependency on non-3GPP (draft) specification**:

## 3 Justification

Self-Organising Networks (SON), which encompasses solutions for network self-configuration and self-optimisation, was introduced in LTE to support deployment of the system and performance optimization. SON for NR was first introduced in Rel-16 and further enhanced in Rel-17.

Due to the time constraints, some of the features in the Rel-17 SON and MDT WID are postponed to Rel-18. In addition, taking the tangible commercial interests and the stability and technological maturity into account, SON/MDT enhancements for some Rel-16/Rel-17 new features are also considered in Rel-18.

## 4 Objective

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

The objective of this work item is to specify data collection enhancement in NR for SON/MDT purpose.

The specific objectives of this work item are:

- Support of data collection for SON features, including inter-RAT Successful Handover Report (SHR), MRO for MR-DC SCG failure scenario/CPAC, successful PScell change report, MRO [and UL MLB?] for NR-U, and MRO for inter-system handover voice fallback [RAN3, RAN2]

- Specification of the UE reporting necessary to enhance the mobility parameter tuning [RAN2].

- Specification of the inter-node information exchange, including possible enhancements to interfaces [RAN3]

- Support of SON/MDT enhancements for fast MCG recovery, F1AP enhancement for RACH report, [SN RACH report for (NG)EN-DC and NE-DC cases], NR-U and NPN. [RAN3, RAN2]

*((Note by Moderator: what do we do with* [UHI transfer during CHO] ? Anyway, low prio/supported only by one (?) company))

*((Note by Moderator: select between these two or combine to a single meaningful one – the second had more supporters in the Intermediate round))*

Support of signaling based logged MDT overwrite protection to address the scenario where the signaling based MDT is configured in E-UTRA, and the UE connects to NR before the measurement is reported. [RAN2, RAN3]

*((OR))*

For signaling based logged MDT, specify mechanisms to minimize loss of logged data in the following scenarios [RAN2, RAN3]:

* UE reselects to NR while logged measurements are collected (after logged MDT configuration in LTE)
* UE reselects to NR after logged measurements are collected and before uploading the logged MDT report.

If needed, co-operate with RAN1, SA2, SA5, CT4.

### 4.2 Objective of Performance part WI

NOTE: Leave empty if the WI proposal does not contain a RAN performance part.

### 4.3 RAN time budget request (not applicable to RAN5 WIs/SIs)

NOTE: For all new RAN related WIs/SIs which are not led by RAN WG5 the WI/SI rapporteur has to fill out the attached Excel table to request time budgets for corresponding RAN WG meetings.  
The Excel table has to be filled out for all affected RAN WGs and up to the target date of the WI/SI.  
One time unit (TU) corresponds to ~ 2 hours in the meeting.  
If no TU is needed, then leave the field empty otherwise enter a number >0 in the field.

For revisions of already approved WI/SI descriptions: Please remove the Excel table from the WID/SID's zip file. The time budgets are already recorded. If you want to modify them, then this has to be done via the status report and not via a revised WID/SID.

If this WID is covering Core and Performance part, then please fill out one line for each part in the attached Excel table.

**additional comments to the time budget request in the attached Excel table:**

## 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 |
|  |  |  |  |  |  |

NOTE: If this is a RAN WI including Core and Perf. part, then all new Core part specs have to be listed first and then all new Perf. part specs. Indicate "Core part" or "Perf. part" under Remarks for each spec.  
By default a new specs can only be new for one of both parts.

|  |  |  |  |
| --- | --- | --- | --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| 38.300 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 37.320 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.314 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.306 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.331 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.401 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.410 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.413 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.420 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.423 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.460 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.463 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.470 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 38.473 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 37.340 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 36.413 | Support of enhancement of data collection for NR | RAN#102 | Core part |
| 36.423 | Support of enhancement of data collection for NR | RAN#102 | Core part |

NOTE: If this is a RAN WI including Core and Perf. part, then all new Core part specs have to be listed first and then all new Perf. part specs. Indicate "Core part" or "Perf. part" under Remarks for each spec.  
If an existing spec is affected by both (Core part and Perf. part), then it has to be listed twice with appropriate approval dates.

## 6 Work item Rapporteur(s)

**Liu Liang, CMCC,** [**liuliang@chinamobile.com**](mailto:liuliang@chinamobile.com)

## 7 Work item leadership

**Primary responsible WG: RAN3**

**Secondary responsible WG: RAN2**

## 8 Aspects that involve other WGs

NOTE: For RAN WIs: Section 8 applies only toWGs outside of TSG RAN because RAN WG aspects have to be covered in section 4.

## 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| CATT |
| CAICT |
| CMCC |
| China Unicom |
| CHTTL |
| Continental Automotive GmbH |
| Deutsche Telekom |
| Ericsson |
| Huawei |
| Intel |
| KDDI |
| Lenovo |
| LG |
| NEC |
| NTT Docomo |
| Nokia |
| Nokia Shanghai Bell |
| Qualcomm Incorporated |
| SAMSUNG |
| Sharp |
| Spreadtrum |
| Telecom Italia |
| Telia |
| Verizon |
| Vodafone |
| Vivo |
| Xiaomi |
| ZTE |