**3GPP TSG-RAN WG2 Meeting #109-e *R2-20xxxxx***

**Online, 24 February - 6 March 2020**

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| *CR-Form-v11.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.300** | **CR** | **TBU** | **rev** | **-** | **Current version:** | **16.0.0** |  |
|  |
| *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 | **x** | Core Network |  |

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|  |
| ***Title:***  | Introduction of SON support |
|  |  |
| ***Source to WG:*** | Nokia (rapporteur), Nokia Shanghai Bell |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_SON\_MDT-Core |  | ***Date:*** | 2020-02 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-16 |
|  | *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 canbe 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | Introduction of NR SON  |
|  |  |
| ***Summary of change:*** | The new sections introduced consists of:1. Section 15 Self-Configuration and Self-Optimization for SON associated definitions (same as in LTE)2. Voided Sub-section 15.2 replaced by description on UE support for self-configuration and self-optimization3. Sub-section 15.5 to structure specification for RAN3 inputs on Mobility Load Balancing, Mobility Robustness Optimisation and RACH Optimisation use cases.  |
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| ***Consequences if not approved:*** | NR SON is not specified in stage 2. |
|  |  |
| ***Clauses affected:*** | 15 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  |  |
| ***affected:*** |  | **x** |  Test specifications |  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** |  |

*Start of changes*

# 15 Self-Configuration and Self-Optimisation

## 15.1 Definitions

This concept includes several different functions from gNB activation to radio parameter tuning. Figure 15.1-1 is a basic framework for all self-configuration /self-optimization functions.

**Self-configuration process** is defined as the process where newly deployed nodes are configured by automatic installation procedures to get the necessary basic configuration for system operation.

This process works in pre-operational state. Pre-operational state is understood as the state from when the gNB is powered up and has backbone connectivity until the RF transmitter is switched on.

As described in Figure 15.1-1, functions handled in the pre-operational state like:

- Basic Setup; and

- Initial Radio Configuration.

are covered by the Self Configuration process.

**Self-optimization process** is defined as the process where UE & gNB measurements and performance measurements are used to auto-tune the network.

This process works in operational state. Operational state is understood as the state where the RF interface is additionally switched on.

As described in Figure 21.1, functions handled in the operational state like:

- Optimization / Adaptation

are covered by the Self Optimization process.



Figure 15.1-1: Ramifications of Self-Configuration /Self-Optimization functionality

## 15.2 UE Support for self-configuration and self-optimisation

UE shall support measurements and procedures which can be used for self-configuration and self-optimisation of the NG-RAN system.

- UE shall support measurements and measurement reporting to support self-optimisation of the NG-RAN system. Measurements and reports used for the normal system operation, should be used as input for the self-optimisation process as far as possible.

- The network is able to configure the measurements and the reporting for self-optimisation support by RRC signalling messages.

## 15.3 Self-configuration

< NO CHANGE>

## 15.4 Support for Energy Saving

< NO CHANGE>

## 15.5 Self-optimisation

### 15.5.1 Support for Mobility Load Balancing

<Editor’s Note: RAN3’s Input>

### 15.5.2 Support for Mobility Robustness Optimisation

<Editor’s Note: RAN3’s Input>

### 15.5.3 Support for RACH Optimisation

<Editor’s Note: To be filled >