**3GPP TSG-SA5 Meeting #139-e *S5-215073***

e-meeting, 11 - 20 October 2021 (revision of xx-yyxxxx)

**Source: China Mobile, Huawei**

**Title: New WID on Self-Configuration of RAN NEs**

**Document for: Approval**

**Agenda Item: 6.2**

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: Self-Configuration of RAN NEs

Acronym: RANSC

Unique identifier:

Potential target Release: *Rel-18*

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  |  | **X** |  |  |
| No | **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 …

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

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

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

### 2.3 Other related Work Items and dependencies

{List here other Work Items which relate to the proposed one, such as a Work Item in an earlier Release if further enhancing the feature from the previous Release)}

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 870028 | New WID on Self-Organizing Networks (SON) for 5G networks |  |
| 910029 | Plug and connect support for management of Network Functions | This work will reuse the outcome of R17 PNCMAN as possible. |

# 3 Justification

The feature of establishment of new eNodeB in network was introduced in 3GPP SA5 in Rel-8 and documented in TS32.501-TS 32.509, which is specific for eNodeB using IRP approach, and which is not applicable for establishment of NG-RAN Node and further RAN technology.

According to LTE specification TS 32.501, establishment of new eNodeB in network includes the following functionalities:

* Automatic Radio Configuration Data handling (ARCF data handling), documented in TS 32.501-TS 32.507
* Multi-Vendor Plug and Play eNB connection to network (MvPnC), documented in TS 32.501, TS 32.508 and TS 32.509
* Self-Configuration, including Self-Configuration Monitoring and Management, documented in TS 32.501-TS 32.507

For NR, the bullet 2 is already captured in WID PCMAN and will be documented in TS 28.314-TS 28.316. However, corresponding bullet 1 and bullet 3 are missing. Therefore following aspects need to be considered:

* The Self-configuration and ARCF data handling concepts, use cases and requirements, current TS 32.501 is for eNodeB only, it is no longer fit for NR and future RAN technology. It is better to create a new TS for Self-configuration of RAN NEs in the context of SBMA for NR and future RAT technology if possible.
* The Information Service (IS) for Self-configuration management and ARCF data handling, current TS 32.502 is using IRP approach, which is not applicable for SBMA. The MnS approach (e.g. especially model driven approach) for Self-configuration of RAN NEs for NR and future RAN technology is needed.
* The Solution Set (SS) for Self-configuration management and ARCF data handling, current TS 32.503 is CORBA based which is not used for MnS in SBMA, corresponding YAML (REST based) solution set needs to be introduced.
* Virtualized NEs are not taken into account in this WID.

# 4 Objective

The objectives of this work item are to document the self-configuration management of RAN NEs of NR and future RAT technology if possible in the context of SBMA by specifying the following aspects:

* Specify concepts, use cases and requirements for Self-configuration management and ARCF data handling of RAN NEs.
* Specify the procedure of self-configuration management and ARCF data handling of RAN NEs;
* Specify the management services for self-configuration management and ARCF data handling of RAN NEs which may include the management operations and management information.

The management operations specified in the generic management service specification shall be reused when applicable.

The work item will keep same scope of such content (i.e. Self-configuration management and ARCF data handling) in LTE.

# 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# | Rapporteur |
| TS | 28.XXX | Management and orchestration:Self-Configuration of RAN NEs | Dec 2022(SA#98) | June 2023(SA#100) | *Hu, Yaxi, China Mobile,* [*huyaxi@cmdi.chinamobile.com*](mailto:huyaxi@cmdi.chinamobile.com)  *Xu,Ruiyue, Huawei,* [*xuruiyue@huawei.com*](mailto:xuruiyue@huawei.com) |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| TS 28.313 | Move Self-configuration and Network configuration data handling content which is not specific for 5G to new specification | Dec 2022(SA#98) |  |
|  |  |  |  |

# 6 Work item Rapporteur(s)

*Hu, Yaxi, China Mobile,* [*huyaxi@cmdi.chinamobile.com*](mailto:huyaxi@cmdi.chinamobile.com) *responsible for* concepts, use cases, requirements and procedures for self-configuration management and ARCF data handling of RAN NEs.

*Xu,Ruiyue, Huawei,* [*xuruiyue@huawei.com*](mailto:xuruiyue@huawei.com) *responsible for* management services for self-configuration management and ARCF data handling of RAN NEs

# 7 Work item leadership

SA5

# 8 Aspects that involve other WGs

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| Huawei |
| China Telecom |
| China Unicom |
| ZTE |
| Asiainfo |
| CATT |
| Intel |