**3GPP TSG-SA5 Meeting #145-e *S5-225353***

**e-meeting, 15 - 24 August 2022**

**Source: China Mobile, HUAWEI**

**Title: Concept Proposal for Draft TS 28.317**

**Document for: Approval**

**Agenda Item: 6.4.1.1**

# 1 Decision/action requested

***Discuss and approve on the proposal.***

# **2 References**

[1] SP-211431 New WID on Self-Configuration of RAN Nes

[2] S5-222726 TS 28.317 v0.1.0

# **3 Rationale**

This document is going to provide proposals on concepts for ARCF data handling and self-configuration, which can leading to definition of use cases and requirements.

# **4 Detailed proposal**

This document proposes the following updates for TS 28.317.

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| **1st Change** |

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[X] 3GPP TS 28.314 Management and orchestration; Plug and Connect; Concepts and requirements

[Y] 3GPP TS 28.315 Management and orchestration; Plug and Connect; Procedure flows

# 3 Definitions of terms, symbols and abbreviations

## 3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

**Self Configuration:** The process which brings a RAN network element into service requiring minimal human operator intervention or none at all.

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

ARCF Automatic Radio Configuration Data handling Function

RANSC RAN NE self-configuration

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# Concept and Background

## Background

Establishment of a new RAN NE in network by an autonomous way can greatly improve the efficiency of RAN deployment. It referes to the procedure of a new RAN NE automatically establishing when it is powered up and connects to the IP network, which includes:

- ARCF(Automatic Radio Configuration Data handling Function) data handling

- Plug and connect to management system

- Self-Configuration

Plug and connect to management system has been specified in TS 28.314 [X]. This document mainly focuses on ARCF data handling and Self-Configuration management.

## ARCF data handling

ARCF data are the data which are required for successful activation (of e.g. cell, gNB) that require coordination between several cells and cannot be generated by RAN NE self-configuration(RANSC) MnS producer (i.e. SCS defined in TS 28.315[Y]). Some of the ARCF data may be used directly as RAN NE initial configuration data and some of the ARCF data may be used to generate more other RAN NE initial configuration data. The RAN NE initial radio configuration data will be provided to RAN NE during self-configuration processes.

ARCF data handling makes the ARCF data available to RANSC MnS producer.

## 4.3 Self-configuration

RAN NE can be taken to a state ready to carry traffic using Self-configuration in an automated manner. Self-configuration may include following processes: generate the RAN NE initial configuration data, download and activate software, download and active configuration data, self-test and update network resource model, etc.

Besides, management of self-configuration also is needed to control and monitor of self-configuration process.

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| **End of change** |