**3GPP TSG-SA5 Meeting #140-e *S5-216131***

e-meeting, 15 - 24 November 2021 (revision of xx-yyxxxx)

**Source: China Mobile**

**Title: New SID on Charging Aspects for Enhanced Support of Non-Public Networks**

**Document for: Approval**

**Agenda Item: 7.2**

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: Study on Charging Aspects for Enhanced Support of Non-Public Networks

Acronym: FS\_eNPN\_CH

Unique identifier:

Potential target Release: *{Rel-18}*

# 1 Impacts

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

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

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

## 2.2 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

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 800007 | Service requirements for cyber-physical control applications in vertical domains | SA1 work item |
| 820017 | 5GS Enhanced support of Vertical and LAN Services | SA2 stage 2 work item |
| 900015 | Enhanced support of Non-Public Networks | SA2 stage 2 work item |
|  |  |  |
|  |  |  |

# 3 Justification

This work item aims at studying charging aspects for Non-Public Networks. In SA1, Non-Public Networks service requirements are documented in TS 22.261. In SA2, there are two study items and two work items which are related to Non-Public Networks. The corresponding studies are documented in TR 23.734 and TR 23.700-07, respectively and the normative work is documented in TS 23.501, TS 23.502, TS 23.503, TS 23.228 and TS 23.167.

A Non-Public Network (NPN) is a 5GS deployed for non-public use. An NPN is either a Stand-alone Non-Public Network (SNPN) or a Public Network Integrated NPN (PNI-NPN).

The following aspects are supported for Non-Public Networks in SA2 WID 5GS Enhanced support of Vertical and LAN Services:

- Enhancements to the 5G system to support Non-Public Network

- Network identification, discovery, selection and access control for non-public networks

- Access to PLMN services via non-public networks; access to non-public network services via PLMN

The following objectives are supported for Non-Public Networks in SA2 WID Enhanced support of Non-Public Networks:

- Enhancements to Support SNPN along with credentials owned by an entity separate from the SNPN

- NPN enhancements to enable support for Video, Imaging and Audio for Professional Applications (VIAPA)

- Support of IMS voice and emergency services for SNPN

- Support for UE Onboarding and remote provisioning

This study will address the potential charging requirements and possible charging solutions for Non-Public Networks to support stage-2 system architecture for NPN in vertical domain.

# 4 Objective

The objective of the study is to investigate and make recommendations on charging aspects for Non-Public Networks based on the TS 23.501, TS 23.502, TS 23.503, TS 23.228 and TS 23.167:

* Identify charging scenarios and potential charging requirements for Non-Public Networks. It may include either Stand-alone Non-Public Network (SNPN) or Public Network Integrated NPN (PNI-NPN) models with one or more tenants.
* Identify the potential charging solutions for Non-Public Networks, i.e. identify the charging solution for SNPN and PNI-NPN.
* Identify the recommendations for the normative work further.

# 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 |
| Internal TR | 28.XXX | Study on Charging Aspects for Non-Public Networks | TSG#98  (Dec. 2022) | TSG#99  (Mar. 2023) | Chen, Ai, China Mobile, chenai@chinamobile.com |
|  |  |  |  |  |  |

# 6 Work item Rapporteur(s)

Chen, Ai, China Mobile, chenai@chinamobile.com

# 7 Work item leadership

SA5

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| MATRIXX Software |
| Huawei |
| ZTE |
| CATT |
|  |