**3GPP TSG-SA5 Meeting #154 *S5-241828***

Changsha, China, 15 - 19 April 2024 (revision of S5-241743)

**Source: Ericsson AB**

**Title: New WID on charging enhancement for application functions**

**Document for: Agreement**

**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: Charging enhancement for application functions

Acronym: CHAF

Unique identifier: TBD

Potential target Release: Rel-19

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 …

|  |  |
| --- | --- |
|  | Study  |
|  | Normative – Stage 1 |
| X | Normative – Stage 2 |
| X | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

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

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| N/A |  |  |

# 3 Justification

3GPP SA5 has specified charging using service-based interface for Network Functions (NFs) pertaining to the 5G system in Release 18. TS 32.254 specifies charging related to exposure function northbound APIs covering the Network Exposure Function (NEF). The current exposure function northbound APIs charging relies on the NEF acting as a consumer of the converged charging service and the AF as a consumer of the NEF provided services.

TS 23.501 describes three services (Naf\_EventExposure, Naf\_ProSe, and Naf\_Authentication) that can be provided by the AF and consumed by network functions like NEF, NWDAF, 5G DDNMF, and UAS NF, in addition to AF internal services. Charging is in most cases triggered by service consumption at the service producer this means that charging for services provided by the AF is not specified, this applies to both trusted and untrusted AF.

# 4 Objective

The objective of this work item is to specify AF charging functionalities, covering:

- WT-1: trusted and untrusted AF

- WT-2: services provided by the AF

- WT-3: identifying the AF and its application

While making it as generic as possible and using converged charging service-based interface.

## TU estimates and dependencies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Work Task ID | TU Estimate(Study) | TU Estimate(Normative) | RAN Dependency(Yes/No/Maybe)  | SA Dependency(Yes/No/Maybe) | Non-3GPP Dependency(Yes/No/Maybe) |
| WT-1 | 0 | 1 | No | No | No |
| WT-2 | 0 | 1 | No | No | No |
| WT-3 | 0 | 1 | No | No | No |

Total TU estimates for the study phase: 0

Total TU estimates for the normative phase: 3

Total TU estimates: 3

# 5 Expected Output and Time scale

|  |
| --- |
| New specifications |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |

|  |
| --- |
| Impacted existing TS/TR |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| 32.240 | New NF consumer in charging architecture | TSG SA#106 (Dec 2024) |  |
| 32.254 | New AF charging using service-based interface - Stage 2 | TSG SA#106 (Dec 2024) |  |
| 32.290 | Update common converged charging service description with AF | TSG SA#106 (Dec 2024) |  |
| 32.291 | Update Nchf\_ConvergedCharging service API with definitions specific to AF | TSG SA#106 (Dec 2024) |  |
| 32.298 | AF CHF CDR(s) definition and ASN.1 | TSG SA#106 (Dec 2024) |  |

# 6 Work item Rapporteur(s)

# 7 Work item leadership

SA5

# 8 Aspects that involve other WGs

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Ericsson AB |
|  |
|  |
|  |
|  |
|  |