**TSG SA Meeting #SP-105 SP-241331**

**10 – 13 September 2024, Melbourne, Australia**

**Title: Updated WID on Multi-Access (DualSteer and ATSSS\_Ph4)**

**Source: Huawei, HiSilicon**

**Document for: Approval**

**Agenda Item: 6.3.2**

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: Multi-Access (ATSSS\_Ph4)

Acronym: MASSS

Unique identifier: 1040034

Potential target Release: Rel-19

# Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X |  | 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 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

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

## 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) |
| FS\_MASSS | SA2 | 1020070 | Study on Multi-Access (DualSteerand ATSSS\_Ph4) |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 940070 | Access Traffic Steering, Switch and Splitting support in the 5G system architecture; Phase 3 | Rel-18 Work Item |

# 3 Justification

1) In Rel-18, a high-layer steering functionality “MPQUIC steering functionality using UDP proxying over HTTP” was defined that enables steering, switching, and splitting UDP traffic based on IETF protocols. It would be beneficial to specify how to enable the MPQUIC steering functionality to also steer, switch, and split non-UDP traffic (IP & Ethernet traffic).

2) In the existing market, most UEs support to access the network over non-3GPP access via ePDG. In 5G, it has been specified for ATSSS to support interworking between 5GS and EPS, i.e. the UE can request MA PDU Session with 3GPP access over 5GS and non-3GPP access over EPS. It is beneficial to further simplify the deployment for ATSSS, i.e. to enable ePDG collocation with the UPF, which requires to provides the ePDG IP address to the UE via SM NAS signaling when the MA PDU Session is established over 3GPP access.

# 4 Objective

The objective of this work item is to specify the architecture enhancements, functionalities and procedures to support MASSS features based on conclusions of TR 23.700-54 (clause 8).

Specifically, the detailed objectives include:

1. New functionalities and procedures to support MPQUIC steering functionalities in order to steer, switch, and split non-UDP traffic.
2. Enhance the SM NAS signaling to provide the ePDG IP address to the UE when MA PDU Session is established over 3GPP access, to enable the collocation of the ePDG with the UPF.

NOTE 1: The support of collocation of the ePDG with the UPF is only applicable to non-Roaming and LBO scenarios.

NOTE 2: The existing ePDG related interfaces and procedures defined in EPS for authentication and establishment of IPSec would be reused and not be impacted.

# 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 |
|  |  |  |  |  |  |

|  |
| --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TS 23.501 | Description of new MPQUIC steering functionalities to support steering, switching and splitting of IP and Ethernet traffic.Description of the enhancement to ATSSS for collocation of ePDG with the UPF. | TSG#106 (Dec. 2024) |  |
| *TS 23.502* | *Procedures to support steering, switching and splitting of IP and Ethernet traffic using MPQUIC steering functionality.*Procedures to provide the ePDG IP address to the UE when MA PDU Session is established over 3GPP access. | *TSG#106 (Dec. 2024)* |  |
| *TS 23.503* | *Policy control to support steering, switching and splitting of IP and Ethernet traffic using MPQUIC steering functionality.* | *TSG#106 (Dec. 2024)* |  |

# 6 Work item Rapporteur(s)

Primary Rapporteur: Krisztian Kiss (Apple), krisztian@apple.com

Secondary Rapporteur: Zhuoyi Chen (China Telecom), chenzy34@chinatelecom.cn

(in charge of producing reports to the WG plenary on progress)

# 7 Work item leadership

SA2

# 8 Aspects that involve other WGs

N/A

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Apple |
| BT |
|  |
| CATT |
|  |
| China Telecom |
| Comcast |
| Ericsson |
| ETRI |
| InterDigital |
| Lenovo |
| LG Electronics |
| NEC |
| Nokia |
| SHARP |
| ZTE |
| Huawei |
| HiSilicon |