**3GPP TSG-CT Meeting #105CP-242248**

**Melbourbne; 9th – 10th September 2024 (Rev CP-242104)**

**3GPP TSG-CT WG1 Meeting #150C1-245030**

**Maastricht, Netherlands, 19-23 August 2024 (rev of C1-244505)**

**3GPP TSG-CT WG3 Meeting #136C3-244393**

**Maastricht, Netherlands, 19-23 August 2024 (rev of C3-244060)**

**3GPP TSG-CT WG4 Meeting #124C4-243407**

**Maastricht, Netherlands, 19-23 August 2024 (rev of C4-243384)**

**Source: Apple, China Telecom**

**Title: New WID on CT aspects of Multi-Access (ATSSS\_Ph4)**

**Document for: Approval**

**Agenda item: 19.1.1**

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: CT aspects of Multi-Access (ATSSS\_Ph4)

Acronym: MASSS

Unique identifier: 1050020

Potential target Release: Rel-19

# 1 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 |
|  | Normative – Stage 2 |
| X | Normative – Stage 3 |
|  | Normative – Other\* |

## 2.2 Parent Work Item

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| MASSS | SA2 | 1040034 | Multi-Access (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 | SA2 Rel-18 Work Item |
| 960018 | Study on upper layer traffic steering, switching and split over dual 3GPP access | SA1 Rel-19 Study for DualSteer |
| 1020031 | Upper layer traffic steering and switching over dual 3GPP access  | SA1 Rel-19 Work item for DualSteer |
| 1020070 | Study on Multi-Access (DualSteerand ATSSS\_Ph4) | SA2 Rel-19 Study on Multi-Access (DualSteerand ATSSS\_Ph4) |

**Dependency on non-3GPP (draft) specification: None**

# 3 Justification

In Rel-19 SA2 is working on Multi-Access (MASSS) which covers support for phase 4 of Access Traffic Steering, Switching and Splitting feature (ATSSS\_Ph4). The ATSSS\_Ph4, involves specifying how the MPQUIC steering functionality defined in Rel-18 as part of phase 3 of Access Traffic Steering, Switching and Splitting feature (ATSSS\_Ph3) is extended to be able to steer, switch, and split the IP traffic and the Ethernet traffic.

The stage 2 work for Multi-Access was initiated at SA#102 with the approval of SA2 study item (FS\_MASSS) on Multi-Access. The key issues, solutions, and conclusions of the SA2 study are captured in TR 23.700-54. Furthermore, a new SA2 work item (MASSS) "Multi-Access (ATSSS\_Ph4)" was approved at SA#104.

Considering the above, impacts on protocols and interfaces under CT WGs' responsibilities are foreseen. The CT WGs will need to carry out stage-3 work in Rel-19 to satisfy the normative requirements arising out of stage-2 work.

Based on progress in SA2, this WID will be updated as needed.

# 4 Objective

The objective of this work item is to specify the CT aspects of (MASSS). The stage-3 work shall be started after the applicable normative stage-2 requirements in SA2 are available.

The stage-3 aspects will include the following (CT WGs impact areas will be identified based on the progress in the normative work in SA2):

CT1:

1) Support the Multipath QUIC-IP (MPQUIC-IP) and Multipath QUIC-Ethernet (MPQUIC-E) steering functionalities that includes:

a) updating the ATSSS rules to support the new steering functionalities when using MPQUIC for IP and Ethernet proxying of HTTP datagram payload and specifying the potential impacts of the new steering functionalities on the NAS signalling;

b) defining the co-existence of MPQUIC-IP and MPQUIC-E steering functionalities with existing steering functionalities.

CT3:

1) Potentially support the new steering functionalities when using MPQUIC for IP and Ethernet proxying of HTTP datagram payload in Npcf\_SMPolicyControl service.

CT4

1) Updates to the N4 rules to support the new steering functionalities when using MPQUIC for IP and Ethernet proxying of HTTP datagram payload.

# 5 Expected Output and Time scale

|  |
| --- |
| **Impacted existing TS/TR *{One line per specification. Create/delete lines as needed}*** |
| **TS/TR No.** | **Description of change**  | **Target completion plenary#** | **Remarks** |
| 24.193 | Support for (MPQUIC-IP) and (MPQUIC-E) steering functionalities. | TSG#109 (September 2025) | CT1 Responsibility |
| 24.501 | Possible update of NAS signalling (PDU Session Establishment procedure) to support any new ATSSS capabilities caused by the new steering functionalities. | TSG#109 (September 2025) | CT1 Responsibility |
| 29.512 | Possible update of Npcf\_SMPolicyControl service for the UE to support MA-PDU session for IP and ethernet traffic flows. | TSG#109 (September 2025) | CT3 Responsibility |
| 29.244 | Updates to N4 rules to support the new steering functionalities. | TSG#109 (September 2025) | CT4 Responsibility |

# 6 Work item Rapporteur(s)

Gupta, Vivek, Apple (vivek\_g\_gupta@apple.com)

# 7 Work item leadership

CT1

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Apple |
| InterDigital Inc. |
| Nokia |
| Ericsson |
| LG Electronics |
| China Telecom |
| Intel |
| CATT |
| Xiaomi |
| NEC |
| Lenovo |
| ZTE |
| Qualcomm Incorporated |