**3GPP TSG-WG SA2 Meeting #169S2-250xxxx**

**Fukuoka City, Fukuoka, JP, 19th May – 23rd May, 2025 (revision of S2-250xxxx)**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.501** | **CR** | **XXXX** | **rev** | **X** | **Current version:** | **19.3.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | Clarification on MPQUIC-E functionality in roaming and EPS scenarios | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MASSS | | | | |  | ***Date:*** | | | 2025-05-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | LS from CT4 (C4-250554) has mentioned whether and how the MQPUIC-E is applied to Home-routed MA PDU session and the MA PDU session which is established over 3GPP access in EPC.  According to the technical analysis, for EPC scenario, if PGW-C+SMF also signal the IP type to eNB via MME, there will be impact on MME and SGW which will break the principle that the support for ATSSS is transparent to MME and SGW. For Home-Routed scenario, if the MPQUIC-E is enabled, issues will be introduced when UE move between EPS and 5GS since for EPS, MQPUIC-E is not enabled. Therefore, considering the complexity and potential impacts, home-routed scenario is also not supported as well.  Therefore, further clarification is added.  In roaming scenarios and over 3GPP access in EPS scenarios, only ATSSS-LL functionality is enabled when the type of the MA PDU Session is Ethernet. | | | | | | | | |
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| ***Summary of change:*** | | If the MA PDU session of type Ethernet is established in home-routed roaming or is established with 3GPP access leg in EPS, only ATSSS-LL functionality is enabled. | | | | | | | | |
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| ***Consequences if not approved:*** | | Unspecified Network behaviour for MPQUIC-E in Home-routed MA PDU session and the MA PDU session which is established over 3GPP access in EPC. | | | | | | | | |
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| ***Clauses affected:*** | | 5.32.6.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

##### 5.32.6.3.1 ATSSS-LL Functionality

The ATSSS-LL functionality in the UE does not apply a specific protocol. It is a data switching function, which decides how to steer, switch and split the uplink traffic across 3GPP and non-3GPP accesses, based on the provisioned ATSSS rules and local conditions (e.g. signal loss conditions). The ATSSS-LL functionality in the UE may be applied to steer, switch and split all types of traffic, including TCP traffic, UDP traffic, Ethernet traffic, etc. The ATSSS-LL functionality does not support the Redundant Steering Mode.

The ATSSS-LL functionality may be enabled in the UE when the UE provides an "ATSSS-LL capability" during the PDU Session Establishment procedure.

The ATSSS-LL functionality or MPQUIC-E functionality is required in the UE for MA PDU Session of type Ethernet. If the MA PDU session of type Ethernet is established in home-routed roaming or is established with 3GPP access leg in EPS, only ATSSS-LL functionality is enabled.

In addition:

- When the UE neither supports the MPTCP functionality, nor the MPQUIC-UDP functionality, nor the MPQUIC-IP functionality, the ATSSS-LL functionality is mandatory in the UE for an MA PDU Session of type IP.

The network shall also support the ATSSS-LL functionality as defined for the UE. The ATSSS-LL functionality in the UPF is enabled for a MA PDU Session by ATSSS-LL functionality indication received in the Multi-Access Rules (MAR).

\* \* \* \* End of changes \* \* \* \*