**SA WG2 Meeting #S2-146E S2-2106286**

**Aug 16 – 27, 2021, Electronic meeting**

**Source: China Mobile, AT&T, Vodafone, CATT, Tencent, Deutsche Telekom, SK Telecom, Sandvine**

**Title: New SID: Study on UPF enhancement for control and SBA**

**Document for: Approval**

**Agenda Item: 9.1.3**

3GPP™ Work Item Description

For guidance, see [3GPP Working Procedures](http://www.3gpp.org/About/WP.htm), article 39; and [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm).
Comprehensive instructions can be found at <http://www.3gpp.org/Work-Items>

# Title: Study on UPF enhancement for control and SBA

## Acronym: FS\_UPCAS

## Unique identifier:

## 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **Yes** |  |  |  | X |  |
| **No** | X | 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 …

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

### 2.2 Parent and child Work Items

|  |
| --- |
| Parent and child Work Items  |
| Unique ID | Title | Nature of relationship |
|  |  |  |

### 2.3 Other related Work Items and dependencies

*{List here other Work Items which relate to the proposed one but are not part of the hierarchical structure.}*

|  |
| --- |
| Other related Work Items (if any) |
| Unique ID | Title | Nature of relationship |
| TR 23.742 | Study on Enhancements to the Service-Based Architecture(Release 16) | Study of extending SBA to user plane but without standardization |

## 3 Justification

1. Improve ease for exposure for reporting of information by the UPF:

Saving duplicate data transfer and reducing transmission path

* + Example 1: PCF services can directly subscribe/unsubscribe on UPF services for QoS monitoring latency report

Retrieving original status or real-time service flow information from UPF:

* + Example 2: NWDAF services can subscribe/unsubscribe to UPF for retrieving real-time service flow information e., to help big-data collection and analysis considering efficient sampling intervals for the different services

UPF event exposure:

* + Example 3: 5G IoT solutions would require interfacing of UPF to NEF/Local NEF for network information exposure to 3rd party.

## 4 Objective

The study item will consider Generic mechanisms to support efficient SBA based data exposure by the UPF:

The study shall address generic UPF data exposure mechanisms while the definition of actual UPF data to expose via SBA based mechanisms or the study of the impacts to other features (like NWDAF) should be defined in other SID(s) (e.g. R18 ENA).

The Study will consider (Study and evaluate):

Exposure from UPF exposure service consumed by other NFs

- Relevant Event IDs

UPF

-

NOTE 2: SMF is responsible for controlling UPF packet processing

NOTE 3: The performance of UP traffic handling shall not be degraded due to mechanisms defined in this study.

This study shall maintain the Rel-17 backward compatibility on the N3, N6, N9 interfaces.

The time for this study item is about 3TUs

## 5 Expected Output and Time scale

|  |
| --- |
| **New specifications** *{One line per specification. Create/delete lines as needed}* |
| Proposed Spec no. or series | Type (see note 1)  | Rapporteur(s)(see note 2) | For info at TSG#  | For approval at TSG# | Remarks |
| *New TR 23.7xy* | *Internal TR* | *Dan Wang (wangdanyjy@chinamobile.com)* |  |  | *Including the study outputs on key issues, solutions and architecture impacts.* |

Note 1: Only TSs may contain normative provisions. Study Items shall create or impact only TRs.
“Internal TR” is intended for 3GPP internal use only whereas “External TR” may be transposed by Ops.

Note 2: The first listed Rapporteur is the specification primary Rapporteur. Secondary Rapporteur(s) are possible for particular aspect(s) of the TS/TR. In this case, their responsibility has to be provided as “Remarks”.

|  |
| --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* |
| TS/TR No. | Description of change  | Target completion plenary# |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 6 Work item Rapporteur(s)

TBD

## 7 Work item leadership

SA2

## 8 Aspects that involve other WGs

 Charing aspect (if any) will be addressed by SA5

## 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| AT&T |
| CATT |
| Deutsche Telekom |
| Sandvine |
| SK Telecom |
| Tencent |
| Vodafone |
| Matrixx |
| Charter Communications |
| Orange |

form change history:

2013-12-06 v1.14.1 modified §11 to read: <FamilyName>, <GivenName>, (If the person is new to 3GPP work, give full contact coordinates, in particular, email address.)

2013-10-03 v1.14.0 removal of embedded help text

v1.13.2: adds tdoc header

v1.13.1: minor changes resulting from discussions at CT#41 & SA#41

v1.13.0: mods to enforce linkage amongst stages 1, 2, 3

draft mods Scarrone-Meredith 2008-07 ff

v1.12.1: removes revision marks following approval at SP-29
v1.12.0: includes provision for Study Items (SP-29)

v1.11.0: includes those changes from v1.8.0 agreed at SP-25.

 v1.10.0: full circle

v1.9.0: a clean sheet

v1.8.0: includes comments from SA#24

v1.7.0: includes comments from RAN, CN and T #24; also includes “early implementation” data

v1.6.0: includes comments made during review period prior to TSGs#24

v1.5.0: includes comments made at TSGs#23 (Phoenix)

v1.4.0: offered to SA#23 for approval

v1.3.0: offered to CN#23, RAN#23 and T#23 for comments

DRAFT4 v1.3.0: 2004-03-09: Incorporation of comments from Leaders list

DRAFT3 v1.3.0: 2004-02-19: Incorporation of comments from MCC members

DRAFT2 v1.3.0: 2004-01-29: Complete redraft:

v1.2.0: 2002-07-04: "USIM" box changed to "UICC apps"

2003-05-28: spelling of “rapporteur” corrected

2002-07-04: "USIM" box changed to "UICC apps"