**3GPP TSG-SA WG6 Meeting #68 S6-253106**

**Gothenburg, Sweden 25th – 29th August 2025 (revision of S6-253xxx)**

**Source: Huawei, Hisilicon**

**Title: New WID on 3GPP level reference architecture and specification enhancement including SEAL**

**Document for: Approval**

**Agenda Item: 12**

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: WID on 3GPP exposure system specification enhancement including SEAL

Acronym: 3GPP\_EXP\_APP

Unique identifier:

Potential target Release: Rel-20

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (server and terminal software) |
| 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 …

|  |  |
| --- | --- |
|  | 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) |
| SEAL\_Ph3 | SA6 | 980131 | Service enabler architecture layer for vertical phase 3 |
| FS\_SEAL\_Ph4 | SA6 | 1050034 | Study on Service Enabler Architecture Layer (SEAL) Phase 4 |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 1010006 | SEAL DD (Data Delivery) Phase 2 | Rel-19 SEALDD work |
| 1040075 | Application enablement for AI/ML services | SEAL services to support AI/ML |
| 1040074 | Application enablement for XRM Services Phase 2 | Application enablement for XRM Services |
| 1040077 |  Application enablement for satellite access Phase 3  | SEAL enhancement for XR |
| 1040076 |  Application enablement for mobile metaverse services  | SEAL enhancement for mobile metaverse service |
| 1040072 | Enhanced application layer support for location services  | location services enhancement WID |

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

# 3 Justification

There are different 3GPP capabilities exposure related functions and services defined within 3GPP among different WGs. Those functions and services can work together to support a complete exposure system for 3GPP MNOs to expose their services based on different type of capabilities from different domains(Including Core network, OAM，and service layer). However, A about how to put them together to form a complete system. It is not only important internal, but also helpful for improving external ecosystem partners understanding different part of the 3GPP exposure systemHowever, there is no normative standard covering the overall reference architecture to guide ecosystem partners to understand 3GPP network exposure system as a whole yet.

 the mentioned 3GPP level exposure architecture It can work as the inputproduce 3GPP level exposure reference

In addition to above, the FS on Service Enabler Architecture Layer (SEAL) Phase 4 studies how to make technical enhancement for advance the easy-to-use aspects and add non-technical contents to assist ecosystem partners to understand SEAL services as the following:

- Roles and responsibilities of SEAL services layer within the complete 3GPP system perspective

- Layered representation of whole 3GPP network exposure system including SEAL layer

- Mapping the SEAL layer to consumer’s ecosystem

- Capturing use cases and values of each SEAL services

-

- Providing SEAL services design guidelines ensure all SEAL layer services are defined in the aligned manner.

- Capturing deployment models of the SEAL services considering SEAL client(s) role.

- Clarification on what entities can consume SEAL services

- Identifying the missing aspects in existing of SEAL services considering the needs of the consumers, e.g., IoT low power specific.

The above outputs from FS\_SEAL\_Ph4 study could be captured as the basis for normative work about improving the usability and adoption of 3GPP exposed services.

# 4 Objective

Objectives of this WID include the following：

1. Improve existing SEAL technical specifications based on the conclusion of 3GPP TR 23.700-35:

- Providing enhancements to the existing API design guidelines in 3GPP TS 23.222 for the purpose of design easy-to-use APIs.

- Technical enhancements to SEAL specifications (e. 3GPP TS 23.433/23.434/23.435/23.436/23.437/23.438) for improving SEAL API services from easy-to-use perspectives

2. Specify External TR to capture the contents for improving the adoption of the 3GPP APIs by other SDOs e.g., to understand how to consume SEAL services to improve their applications.

3. Specify a short TS for 3GPP level system exposure reference architecture, including an outline of components and general principles for services design.

# 5 Expected Output and Time scale

***{If this WID covers both stage 2 and stage 3, clearly indicate the different completion dates.}***

|  |
| --- |
| 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 |
|  External TR | 23.XXX  | External TR for SEAL services usage guidance  | TSG#111 | TSG #112 | {<FamilyName>, <GivenName>, <Company>, <email address>. See Note 2} |
| TS | 23.XXX | Overall 3GPP exposure system Architecture description | TSG#111 | TSG #112 | {<FamilyName>, <GivenName>, <Company>, <email address>. See Note 2} |

|  |
| --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TS23.433 | CRs based on conclusion of SEAL\_Ph4 study.  | TSG#111 |  |
| TS23.434 | CRs based on conclusion of SEAL\_Ph4 study | TSG#111 |  |
| TS23.435 | CRs based on conclusion of SEAL\_Ph4 study | TSG#111 |  |
| TS23.436 | CRs based on conclusion of SEAL\_Ph4 study | TSG#111 |  |
| TS23.437 | CRs based on conclusion of SEAL\_Ph4 study | TSG#111 |  |
| TS23.438 | CRs based on conclusion of SEAL\_Ph4 study | TSG#111 |  |

# 6 Work item Rapporteur(s)

Yang, Yanmei, Huawei Technologies Co. Ltd. <yangyanmei@huawei.com>

# 7 Work item leadership

SA6

{Secondary responsible Working Group(s) are possible. In this case, list them here}

# 8 Aspects that involve other WGs

 The involvement and coronation with SA2, SA3, SA4, SA5 may be required.

# 9 Supporting Individual Members

{At least 4 supporting Individual Members are needed. There is an expectation that these companies will provide resources to progress the work. Note that having 4 supporting companies is a necessary but not sufficient condition: the usual TSG approval process by consensus is needed for the WID approval}

|  |
| --- |
| Supporting IM name |
| Huawei |
| Hisilicon |
| China telecom |
| CMCC? |
| ZTE |
| Lenovo? |
| Samsung? |
| CATT |
| Apple? |