**3GPP TSG-CT WG1 Meeting #130-eC1-213xyz**

**E-meeting, 20-28 May 2021**

**Source: Huawei, HiSilicon**

**Title: New WID on Rel-17 Enhancements of 3GPP Northbound Interfaces**

**Document for: Endorsement**

**Agenda Item: 17.1.1**

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)

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# Title: Rel-17 Enhancements of 3GPP Northbound Interfaces and Application Layer APIs

## Acronym: NBI17

## Unique identifier: XXXXXX

Potential target Release: Rel-17

## 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

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

### 2.2 Parent Work Item

Not applicable.

### 2.3 Other related Work Items and dependencies

|  |  |  |  |
| --- | --- | --- | --- |
| Other related Work Items (if any) | | | |
| Unique ID | Title | Nature of relationship |
| 760036 | CT aspects of Northbound APIs for SCEF – SCS/AS Interworking | Specification of SCEF T8 APIs. |
| 840013 | Enhancement of 3GPP Northbound APIs | Rel-16 enhancements to 3GPP Northbound APIs. |
| 790042 | Stage 3 of CAPIF | Specification of CAPIF APIs. |
| 740049 | Stage 3 of system architecture enhancements for TV service | Specification of xMB API. |
| 630206 | CT3 part of CT aspects of Proximity-based Services | Specification of ProSe PC2 interface. |
| 840076 | CT aspects of V2XAPP | Specification of VAE APIs. |
| 850050 | CT3 aspects of SEAL | Specification of SEAL APIs. |
| 750025 | CT aspects of 5G System - Phase 1 | Specification of NEF Northbound APIs. |
| 900006 | CT aspects for Enabling Edge Applications | Specification of EDGEAPP APIs |

## 3 Justification

The 3GPP Northbound Interfaces and APIs (e.g. SCEF Northbound APIs defined in 3GPP TS 29.122, NEF Northbound APIs defined in 3GPP TS 29.522, CAPIF APIs defined in 3GPP TS 29.222, ProSe PC2 reference point defined in 3GPP TS 29.343, xMB API defined in 3GPP TS 29.116, EDGEAPP APIs defined in 3GPP TS 29.558, etc.) are specified in 3GPP in order to enable external entities and third party Application Servers/Functions to access a set of exposed 3GPP network services and capabilities in a secure and controlled manner.

3GPP also specify the EDGE Application Layer APIs for the client in the UE to consume (i.e. EDGEAPP APIs defined in 3GPP TS 24.558), in order to expose the EDGE network services and capabilities by the EES and ECS to the EEC in a secure and controlled manner.

There is a need to apply technical improvements and enhancements (e.g. improve the efficiency, increase the flexibility, enhance the reliability, improve the signaling efficiency, etc.) to the 3GPP Northbound Interfaces and Application Layer APIs, as such enhancements may not be covered by the other dedicated work items.

## 4 Objective

The objective of this work item is to specify the technical enhancements and necessary changes to the 3GPP Northbound Interfaces and Application Layer APIs, following the principles in 3GPP TS 29.500 and 3GPP TS 29.501 when possible, which are not covered by other dedicated WIs. This hence includes:

* The consolidation of the common protocol aspects (e.g. support of more custom headers, redirection handling) applicable to 3GPP Northbound Interfaces and Application Layer APIs;
* Protocol and Interface enhancements and optimizations of 3GPP Northbound Interfaces and Application Layer APIs; and
* Corrections and/or changes missed in the previous 3GPP Releases, which do not fall under the scope of any other specific WIs.

## 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 |
| 24.558 | Technical enhancements of EDGEAPP APIs under CT1 responsibility. | CT#95 (March 2022) | CT1 |
| 29.116 | Technical enhancements of xMB APIs. | CT#95 (March 2022) | CT3 |
| 29.122 | Technical enhancements of the common protocol and interface aspects for 3GPP Northbound APIs.  Technical enhancements of SCEF/NEF northbound APIs. | CT#95 (March 2022) | CT3 |
| 29.222 | Technical enhancements of CAPIF APIs and the associated common framework for Northbound Interfaces. | CT#95 (March 2022) | CT3 |
| 29.343 | Potential technical enhancements of ProSe PC2 interface. | CT#95 (March 2022) | CT3 |
| 29.486 | Technical enhancements of VAE APIs. | CT#95 (March 2022) | CT3 |
| 29.522 | Technical enhancements of NEF Northbound APIs. | CT#95 (March 2022) | CT3 |
| 29.549 | Technical enhancements of SEAL APIs. | CT#95 (March 2022) | CT3 |
| 29.336 | Technical enhancements to service capability exposure. | CT#95 (March 2022) | CT4 |
| 29.272 | Technical enhancements to service capability exposure. | CT#95 (March 2022) | CT4 |
| 29.503 | Technical enhancements to service capability exposure. | CT#95 (March 2022) | CT4 |
| 29.518 | Technical enhancements to service capability exposure. | CT#95 (March 2022) | CT4 |
| 29.558 | Technical enhancements of EDGEAPP APIs under CT3 responsibility. | CT#95 (March 2022) | CT3 |
| 29.571 | Potential definition of some common data types. | CT#95 (March 2022) | CT4 |

## 6 Work item Rapporteur(s)

Yali Yan, Huawei, [yanyali@huawei.com](mailto:yanyali@huawei.com)

## 7 Work item leadership

CT3

## 8 Aspects that involve other WGs

None

## 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Huawei |
| HiSilicon |
| China Mobile |
| China Telecom |
| China Unicom |
| ZTE |
| KDDI |
| HAVELSAN |
| Nokia |
| Nokia Shanghai Bell |
| Ericsson |
| Samsung |
| NTT DOCOMO |
| NTT |
| Intel |