**3GPP TSG-CT WG1 Meeting #136eC1-223935**

**E-Meeting, 12th – 20th May 2022**

**3GPP TSG-CT WG3 Meeting #122-eC3-223305**

**E-Meeting, 12th – 20th May 2022**

**Source: Huawei, HiSilicon**

**Title: New WID on Rel-18 Enhancements of 3GPP Northbound Interfaces and Application Layer APIs**

**Document for: Approval**

**Agenda Item: 18**

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: Rel-18 Enhancements of 3GPP Northbound and Application Layer interfaces and APIs

## Acronym: NBI18

## Unique identifier: XXXXXX

Potential target Release: Rel-18

## 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. |
| 920050 | Enhanced Service Enabler Architecture Layer for Verticals | Rel-17 enhancements to existing SEAL APIs and definition of new 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. |
| 920004 | CT Aspects of Application Layer Support for Uncrewed Aerial Systems (UAS) | Specification of UAE Server APIs. |
| 920013 | Rel-17 Enhancements of 3GPP Northbound Interfaces and Application Layer APIs | Rel-17 Enhancements of 3GPP Northbound Interfaces and Application Layer APIs. |
| 930004 | CT aspects for enabling MSGin5G Service | Specification of MSGin5G Servers APIs. |
| 910070 | Remote Identification of Uncrewed Aerial Systems | Specification of USS 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, 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 application layer interfaces and APIs (e.g. ProSe PC2 reference point defined in 3GPP TS 29.343, UAE Server APIs defined in 3GPP TS 29.257, EDGEAPP APIs defined in 3GPP TS 29.558, etc.) are also specified in 3GPP to enable the support and exposure of application layer frameworks/services and their interactions with the 3GPP network services.

There is a need to apply technical improvements and enhancements (e.g. improve the overall efficiency, increase the flexibility, enhance the reliability, improve the signaling efficiency, etc.) to these 3GPP Northbound and Application Layer interfaces and 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 and Application Layer interfaces and APIs (e.g. aligning with the principles and guidelines defined in 3GPP TS 29.500 and 3GPP TS 29.501 for 5GC APIs when relevant), which are not covered by other dedicated work items. For CT1 and CT3, this hence mainly includes:

* the consolidation of the common protocol aspects;
* protocol and interface enhancements and optimizations; and
* the corrections and/or changes missed in the previous 3GPP Releases, which do not fall under the scope of any other dedicated WI.

## 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 to the EDGEAPP APIs under CT1 responsibility. | CT#102 (Dec. 2023) | CT1 |
| 29.116 | Technical enhancements to xMB APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.122 | * Technical enhancements to the common protocol and interface aspects for 3GPP Northbound and Application Layer APIs. * Technical enhancements to SCEF/NEF northbound APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.222 | Technical enhancements to CAPIF APIs and the associated common framework for Northbound and Application Layer APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.255 | Technical enhancements to the USS APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.257 | Technical enhancements to the UAE Server APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.343 | Technical enhancements to ProSe PC2 interface. | CT#102 (Dec. 2023) | CT3 |
| 29.486 | Technical enhancements to the VAE Server APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.522 | Technical enhancements to the NEF Northbound APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.538 | Technical enhancements to MSGin5G Servers APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.549 | Technical enhancements to the SEAL APIs. | CT#102 (Dec. 2023) | CT3 |
| 29.558 | Technical enhancements to the EDGEAPP APIs under CT3 responsibility. | CT#102 (Dec. 2023) | CT3 |

## 6 Work item Rapporteur(s)

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## 7 Work item leadership

CT3

## 8 Aspects that involve other WGs

None

## 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Huawei |
| HiSilicon |
| KDDI |
| China Mobile |
| China Telecom |
| ZTE |
| Ericsson |
| Nokia |
| Nokia Shanghai Bell |
| Qualcomm Incorporated |
| China Unicom |
| Samsung |
| NTT |
| NTT DoCoMo |