3GPP TSG|WG-SA4 Meeting #119-e S4-**220675**

Online, 11-20 May 2022

**Source:** **China Mobile，SenseTime，ZTE**

**Title:** **Draft SID on XR Service Collaboration Extension** **in the Network Media Layer**

**Document for: Discussion and Agreement**

**Agenda Item: 9.9**

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: Draft SID on XR Service Collaboration Extension in the Network Media Layer

Acronym: FS\_XRCollab

Unique identifier:

Potential target Release: Rel-18

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X |  | X |  |
| No | X |  | X |  |  |
| Don't know |  |  |  |  | X |

# 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 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) |
|  |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 810006 | FS\_5GXR( Extended Reality (XR) in 5G) | Study on various approaches to extend the reality, such as VR, AR, or MR |
| 880011 | FS\_5GSTAR (Study on 5G Glass-type AR/MR Devices) | Study of the use cases and service scenario for glass-type AR/MR devices.  |
| 820002 | 5GMSA(Media streaming architecture) |  |
|  |  |  |

**Dependency on non-3GPP (draft) specification:**

N/A

# 3 Justification

5GMS has defined the architecture and interface to implement different deployment schemes according to the integration degree of operators and content providers. And TS26.501 describes a set of collaboration scenarios and deployment options of the 5G Media Streaming architecture.

For XR service, However, it can be seen that in addition to encode/decode and content hosting, there are more requirements that traditional 2D media need not define, such as spatial localization and mapping, pose tracking, rendering, etc.. It is generally accepted that these functions require network assistance, which will put forward more requirements on cloud/edge or network.

In order to provide high-quality and secure user experience, on the one hand, it is necessary to form XR service collaboration mode in terms of unified requirement for resources, content and capabilities, and on the other hand, 5G network capabilities like network c omputation capability and deterministic network capabilities can support XR service development.

In particular, with the development of multi-type terminals, cloud-edge collaboration and enabling platforms, there are more requirements for collaboration modes supporting deployment of XR service.

This study item is proposed to study XR service deployment collaboration scenario extension between MNO and OTT in the media/application layer to promote the development of 5G XR service and identify commercialization interests.

# 4 Objective

The work item will have the following objectives:

1. Study the use case of XR service collaboration between MNO and OTT , and extract extension collaboration requirements and scenarios

2 Investigate the enhancement of AF/AS functions in trust DN and external DN, .especially localization and mapping function to support XR content anchoring and sharing

3.Study the identification of different collaboration models and interfaces for reliable storage and distribution of service data and XR content .

4.Investigate new requirements for QoE and related QoS of XR extension collaboration modes and potential network capabilities to support XR service collaboration like uplink and locating capabilities.

# 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 |
| TR | 26.XXX | XR Service Collaboration in the Network Media Layer |  |  | *Yujian Yin**(yinyujian@chinamobile.com)* |
|  |  |  |  |  |  |

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

# 6 Work item Rapporteur(s)

*Yujian Yin, China Mobile, yinyujian@chinamobile.com*

# 7 Work item leadership

SA4

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| **China Mobile Com. Corporation** |
| **SenseTime Technology Co.,Ltd** |
| **[ZTE Corporation](https://portal.etsi.org/webapp/TelDir/QueryOrgaInfo.asp?OrgaId=12634" \t "https://portal.3gpp.org/Home.aspx" \l "/_blank)** |
|  |
|  |
|  |
|  |