**3GPP TSG-SA4 Meeting #115 S4-211051**

**Electronic Meeting, 18th – 27th Aug 2021**

**Source: Tencent**

**Title: New WID on 5GMS content preparation extensions (COPE)**

**Document for: Approval**

**Agenda Item: 9.10**

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 New WID on 5GMS content preparation extensions

## Acronym: COPE

## Unique identifier:

Potential target Release: Rel-17

## 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 …

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

### 2.2 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 Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 820002 | 5GMSA 5G Media streaming architecture | Developed the initial architecture for 5G Media Streaming and documented in TS 26.501. |
| 840001 | 5GMS3 5G Media Streaming stage 3 | Addressed stage-3 in 5G Media Streaming by updating TS 26.247 as well as new specs in TS 26.511, TS 26.512, and TS 26.117. |
| 900029 | Study on 5G media streaming extensions | Studying exposure of 5GMS-related events to NWDAF and/or to the 5GMS Application Provider. |

## 3 Justification

Network-based media processing is a key feature of the 5G Media Streaming architecture. It allows media to be processed before distribution, after uplink streaming from the device, or even after uplink and before the distribution.

While the 5GMS architecture defines a Content Preparation Template to configure such processing, the use of this feature is not possible due to inadequate specification. The recent FS\_5GMS\_EXT feasibility study has explored this topic and has identified several gaps. This study explored three deployment scenarios for content preparation:

1. Content preparation before downlink distribution.

2. Content preparation after uplink streaming.

3. Content preparation between uplink streaming and downlink distribution.

The call flows for all three deployment scenarios are defined along with a gap analysis of TS 26.512 in addressing those scenarios.

As this study shows, the use of the Content Preparation Template is not explained adequately in TS 26.501. Furthermore, TS 26.512 needs several extensions to make the use of the Content Preparation Template interoperable in the 5GMS architecture.

## 4 Objective

The work item will have the following objectives:

1. Develop content preparation deployment scenarios and associated call flows.

2. Develop a Content Preparation Template format that addresses generic media processing on the network, or at the least enables mainstream use cases such as adaptive media streaming.

3. Develop the signalling between uplink and downlink streaming, when content preparation is used to prepare uplink streams for redistribution in the same 5GMS System.

4. Develop a URL translation scheme as part of content preparation to cater for sophisticated downlink streaming distribution cases where the content is being pulled from an upstream server.

## 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 |
| TS 26.501 | Document content preparation deployment scenarios and associated call flows. | 94 |  |
| TS 26.512 | Specify a Content Preparation Template format.  Specify signalling between uplink and downlink streaming.  Specify URL translation mechanism. | 95 |  |

## 6 Work item Rapporteur(s)

*Iraj Sodagar, Tencent, irajs@live.com.*

## 7 Work item leadership

*SA4*

## 8 Aspects that involve other WGs

None.

## 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| Tencent |
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