**Source: Qualcomm Incorporated**

**Title: Draft New WID on Advanced 5G Media Streaming Architecture**

**Document for: Discussion and Agreement**

**Agenda Item: 10.8**

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: New WID on Advanced 5G Media Streaming Architecture

Acronym: 5GMS\_ADVANCED

Unique identifier:

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

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| --- |
| **Parent Work Items**  |
| **Unique ID** | **Title** |
|  |  |

2.3 Other related Work Items and dependencies

|  |
| --- |
| **Other related Work Items (if any)** |
| **Unique ID** | **Title** | **Nature of relationship** |
|  | 5GMS\_EXT |  |
|  | 5MBUSA |  |
|  | FS\_5GXR |  |
|  | FS\_5GSTAR |  |
|  |  |  |
|  |  |  |

3 Justification

Several study items in Rel-17 have been progressed and completed. However, not all recommendations are addressed in Rel-17 normative work.

TR26.802 recommends to document

- Relevant call flows and procedures to support 5GMS over 5MBS

- Relevant call flows and procedures to support 5GMS hybrid services (5MBS and 5GMS)

TR 26.804 recommends

Provide relevant extensions to the 5G Media Streaming architecture based on the conclusions in clause 6. Candidates for these extensions are:

* Content preparation deployment scenarios and associated call flows in Stage 2 according to clause 6.2
* Inclusion of collaboration scenarios and associated call flows in Stage 2 for uplink media streaming according to clause 6.5
* Inclusion and extensions of procedures and call flows for end-to-end low latency live streaming based on the conclusions in clause 6.11.

In TS 26.501 it is stated that an Edge-enabled 5GMS Client as defined clause X.X leverages the SA6 Edge Computing capabilities defined in TS 23.558. Other realizations are possible but are outside the scope of the present document. However, commercial deployments are nowadays operate independent of EDGEAPP, and hence 5GMS-based edge processing benefits also from the ability to operate independent of EDGEAPP.

TR 26.998 documents that AR glasses depend on cloud or edge-based pre-rendering. However, not only AR glasses benefit from such a functionality, also for VR, XR and gaming, as identified in TR 26.928 and TR 26.926, would benefit from split rendering approaches. Hence, a basic Media Service Enabler for split rendering is paramount, in particular in combination with 5G new radio and 5G System capabilities.

MBMS supports Hybrid DASH/HLS delivery based on CMAF content. This option is not supported in 5GMS which in itself results in limitations, but results in limitations when running 5GMS via eMBMS. Support for hybrid DASH/HLS is essential.

It is well justified to address the above objectives in a work item.

4 Objective

The work item addresses 5GMS architecture extensions, call flows and procedures for the following functionalities:

* 5GMS over 5MBS
* 5GMS hybrid services (5MBS and 5GMS)
* Content preparation deployment
* uplink media streaming
* end-to-end low latency live streaming
* Edge processing independent of EDGEAPP
* split rendering
* Hybrid DASH/HLS operation

The work is carried out in close collaboration with SA2 and other 3GPP groups.

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# | Remarks |
|  |  |  |  |  |  |

|  |
| --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| 26.501 | Advanced Features for 5G Media Streaming | *SA#99**(Mar 23)* |  |

6 Work item Rapporteur(s)

*Elvis Presley, elvis.presley@qti.qualcomm.com*

7 Work item leadership

*SA4*

8 Aspects that involve other WGs

*SA2 on architectural impacts*

9 Supporting Individual Members

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| **Supporting IM name** |
| Qualcomm Incorporated |
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