**3GPP TSG-SA4 Meeting # *S4-21xxxx***

**Online, 17 – 27 August 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **PSEUDO CHANGE REQUEST** | | | | | | | | |
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|  | **26.998** | **CR** |  | **rev** |  | **Current version:** | 0.8.0 |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

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| ***Title:*** | pCR on Updates to Generic Call Flow | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | Updates to the generic call flow. | | | | | | | | |
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| ***Summary of change:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **First Change** |

## 4.3 Basic Processes in an AR Session

In this clause, we provide basic processes and generic workflow description for setting up AR Media sessions. This generic basic process can be extended with some modifications. This call flow as shown in Figure 4.3-1 aligns with the STAR/EDGAR architecture and serves as a starting point for defining use-case specific call flows.



Figure 4.3-1: Basic workflow for AR media sessions

A description of the steps of the general workflow is provided as follows:

1. The application contacts the application provider to fetch the entry point for the content. The acquisition of the entry point may be performed in different ways and is considered out of scope. An entry point may for example be a URL to a scene description.

2. The application initializes the scene manager using the acquired entry point.

3. The scene manager retrieves the scene description from the scene provider based on the entry point information. It then establishes a scene session with the scene provider.

4. The scene manager parses the entry point and creates the immersive scene.

5. The scene manager requests the creation of a new AR/MR session from the AR Runtime.

6.

7. The scene manager will inform the MAF about its QoS and compute needs.

8. The MAF will request the Media Delivery Functions, such as AF, in the network to allocate the requested resources.

9. For each component or group of components of an object/node in the scene:

a. the scene manager triggers the MAF to fetch the related media

b. the MAF creates a dedicated media pipeline to process the input.

c. the MAF establishes a transport session for each component of the media object.

10. The application starts the media fetching and rendering loop

a. the MAF may receive updates to the scene description from the scene provider.

b. the MAF passes the scene update to the scene manager.

c. the scene manager updates the current scene.

d. The scene manager acquires the latest pose information and the user’s actions

e. The scene manager shares that information with the AR/MR application on the server

f. For each object:

i. The media pipeline fetches the media data. It could be static, segmented, or real-time media streams

ii. The media pipeline processes the media and makes it available in buffers

g. For each object to be rendered:

i. The scene manager gets processed media data from the media pipeline buffers

ii. The scene manager reconstructs and renders the object

h. The scene manager passes the rendered frame to the AR/MR Runtime for display on the user’s HMD.