**3GPP TSG-WG SA4 Meeting #119E e-meeting  *S4-220659***

**Elbonia, May 11th– 19th, 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **Pseudo CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.806** | **CR** | **-** | **rev** | **-** | **Current version:** | **0.0.1** |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network |  | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | pCR Summary of WLAR work in Rel-17 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | SA4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FS\_SmarTAR | | | | |  | ***Date:*** | | | 2022-05-04 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In the Motivation and Background part, the summary of WLAR work in Rel-17 is missing for FS\_SmarTAR. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add summary of WLAR work in Rel-17 as the background for this report. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The report is not complete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

# 4 Motivation and Background

## 4.1 Wireless Tethered AR in Rel-17

The 5G WireLess Tethered AR UE is introduced in [2] as one functional structural device type. It is further spilited into two sub-types, Type 3a: 5G Split Rendering WireLess Tethered AR UE and Type 3b: 5G Relay WireLess Tethered AR UE. For Type 3a, the tehering 5G Phone provides both the network connectivity and the rendering/pre-rendering assistant functionalities to the AR glasss. For Type 3b, the tethering 5G Phone only provides the IP network connectivity to the AR glasss.

Note: The 5G Phone, as a tethering device, initiates the “tether” action to an AR glass which belongs to the tethered device.

Table 1 Functionality splitting for Wireless Tethered AR glass device

|  |  |  |
| --- | --- | --- |
| Functionality spliting | Type 3a: Split Rendering WLAR UE | Type 3b: Relay WLAR UE |
| 5G connectivity | Tethering device | Tethering device |
| Media Access Function  User Plane (Media Client) | Tethering device | AR Glass |
| Media Access Function  Control Plane (MSH) | Tethering device | Tethering device |
| AR runtime | Local and uses from sensors, audio inputs or video inputs, but may be assisted by functionalities on tethering devices. | Local and uses from sensors, audio inputs or video inputs. |
| Media Processing | May be done on the AR glasses and energy intensive AR/MR media processing may be done on the AR/MR tethering device or split. | Either done on the glass device or it is split with the network. |

Editor’s Note: The Media Processing, including spatial computing and scene rendering, may be split among AR glasses, tethering 5G Phone and Edge AS in the network. How the media processing is splitted is FFS.

Different from other types of AR UE, the end-to-end path includes one more wireless/wireline tethering link between AR glass and the tethering 5G Phone. In order to fulfill the end-to-end QoS requirements for the AR session, the AR UE need to acquire the tethering link status via measurement tests or emperical values, and takes it into account when determining the QoS for the 5G system link. With the tethering link status, the Media Access Function may communicate with AF for dynamic QoS policy adjustment accordingly.

\* \* \* \* End of changes \* \* \* \*