**3GPP TSG-SA4 Meeting # 127S4-240370**

**Revision of S4-240161**

**Sophia-Antipolis, FR, 29th Jan - 2nd Feb 2024**

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| *CR-Form-v12.2* |
| **PSEUDO CHANGE REQUEST** |
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|  | **64** | **CR** | pseudo | **rev** | **-** | **Current version:** |  |  |
|  |
| *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 | **X** |

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| ***Title:***  | pCR on terminal architecture |
|  |  |
| ***Source to WG:*** | ZTE |
| ***Source to TSG:*** | S4 |
|  |  |
| ***Work item code:*** | IBACS |  | ***Date:*** | 1-2-2024 |
|  |  |  |  |  |
| ***Category:*** | **C** |  | ***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 canbe 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | Improve AR-MTSI architecture and corresponding description. |
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| ***Summary of change:*** | Updating the figure of AR-MTSI based terminal architecture referring to XR baseline client defined in TS 26.119 for AR communication.- adding arrow between audio post-processor and decoder- adding XR runtime as a key function component- simplifying pre-processor and post-processor, and adding new path between them- adding new path from sensor to data channelAdding some text for key function components corresponding to the updated figure. |
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| ***Consequences if not approved:*** | AR-MTSI architecture is not complete, and some information is missing |
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| ***Clauses affected:*** | 4.2 |
|  |  |
|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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## 4.2 Terminal architecture

The detailed XR client architecture is not in the scope of this specification. The functional components of an AR-MTSI client in terminal with AR capabilities are shown in Figure 4.2.1. The XR baseline client architecture can be found in [3]. The pre/post-processor component in terminal provides AR capabilities for processing output of peripherals and the input/output of encoders/decoders, which may include:

* XR runtime
* Scene manager
* Presentation engine
* XR source management

 The AR-MTSI client has XR Runtime capabilities for rendering AR experience, e.g., spatial localization and mapping, etc., and can support local AR rendering and network-assisted split-rendering based on client’s capabilities. A UE may support multiple microphones, cameras or sensors.

An AR-MTSI client supports the protocol stack of a basic MTSI client as described in clause 4.2 of [2]. For the specific AR communication instance, AR-MTSI client can select different IMS media channel to delivery AR data to IMS network or peer UE. In general, AR media components with real-time characteristics are transported via RTP session and AR metadata is transported via data channel or RTP session with AR media.



**Figure 4.2.1: Functional components of an AR-MTSI client in terminal**

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