**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** | | | | | | | | |
|  | | | | | | | | |
|  | **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 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-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 channel  Adding 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 | | | | | | | | |
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|  | | **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:*** | |  | | | | | | | | |

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| 1. Change |

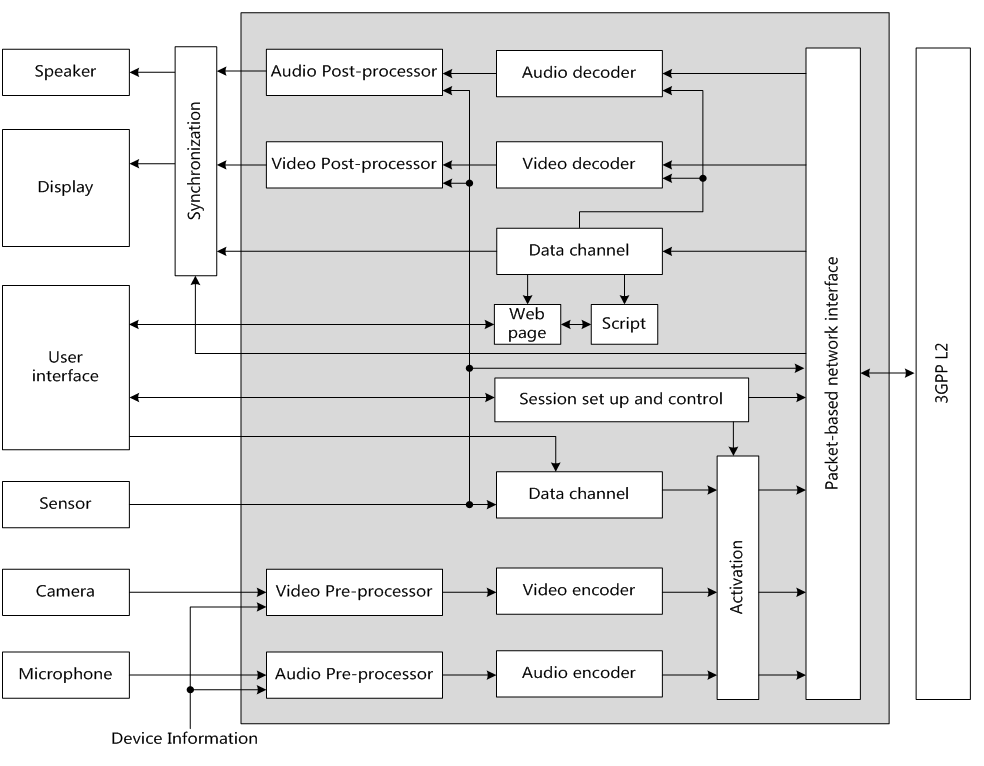
## 4.2 Terminal architecture

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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| 1. Change |