**33GPP TSG-SA4 Meeting #S4-231803**

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| *CR-Form-v12.2* | | | | | | | | |
| **PSEUDO CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.119** | **CR** | pseudo | **rev** |  | **Current version:** | **0.3.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | [MeCAR] Device capabilities signaling | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Tencent Cloud | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MeCAR | | | | |  | ***Date:*** | | | 2023-11-03 |
|  |  | | | |  | |  | | |  |
| ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Adds the metadata to convey the device capabilities to the network | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * + A JSON object that includes the following parameters:  1. The device profile if available   Optionally/in addition/instead of the above:   1. Media decoding capabilities    1. Audio    2. Video    3. Graphics    4. Decoding interface features/concurrent decoding 2. Media encoding capabilities    1. Audio    2. Video    3. Graphics    4. Encoding interface features/concurrent encoding 3. Metadata format 4. XR runtime capabilities 5. Scene manager capabiliies 6. Presentation engine capabilities 7. XR Source Management capabilities | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | As indicated in the PD clause 10.1, one of the remaining items to solve is:   * Capability exchange mechanisms to support edge provisioning   Draft 26.119 clause 6.2 describes the metadata formats. One of these formats needs to be the provide the capability description.  A simple approach is that the device conforms to a MeCAR device profile and the profile identifier is signaled for capability exchange.  Alternatively, or in addition to the above, the list of the detailed capabilities of the devices can be signaled. Both approaches and the combination is encouraged since the high-level profile signaling simplifies the signaling of the baseline capabilities and the optional detailed capabilities signaling allows devices with more advanced feature yet take advantage of their capabilities. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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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| **1st Change** |

## 6.2 Metadata formats

### 6.2.1 General

This clause provides the resources for signaling the metadata between the XR Client and the network. The network protocol used for signaling is out of the scope of this document.

### 6.2.2 Device capabilities

The device capabilities shall be in JSON format. It shall have the following information.

Table 6.2.2-1: Device capabilities resource

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Cardinality** | **Description** |
| splitRenderingProfile | URL | 0..N | Device profile identifier. The profile identifiers are listed in Annex X. |
| videoCapabilities | Object | 0..1 | Describes the device's video capabilities. |
| videoDecoding | Object | 1 | Video decoding capabilities. |
| decoder | Array (object) | 1 | List of supported decoders |
| decoderInterface | Object | 1 | Decoder interface capabilities |
| videoEncoding | Object | 1 | Video encoding capabilities. |
| encoder | Array (object) | 1 | List of supported encoders |
| eccoderInterface | Object | 1 | Encoder interface capabilities |
| audioCapabilities | Object | 0..1 | Describes the device's audio capabilities. |
| audioDecoding | Object | 1 | Audio decoding capabilities. |
| decoder | Array (object) | 1 | List of supported decoders |
| decoderInterface | Object | 1 | Decoder interface capabilities |
| audioEncoding | Object | 1 | Audio encoding capabilities. |
| encoder | Array (object) | 1 | List of supported encoders |
| encoderInterface | Object | 1 | Encoder interface capabilities |
| xrRuntime | Object | 0..1 | Capabilities of the device XR runtime |
| sceneManager | Object | 0..1 | Capabilities of the device scene manager |
| presEngine | Object | 0..1 | Capabilities of the device presentation engine |
| xrSourceManagment | Object | 0..1 | Capabilities of the device XR source management |

### 6.2.3 Pose prediction format