**3GPP TSG-SA4 Meeting #**

**Sophia-Antipolis, FR, 29 Jan - 02 Feb 2024**

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| *CR-Form-v12.2* |
| **PSEUDO CHANGE REQUEST** |
|  |
|  | **119** | **CR** |  0058 | **rev** |  | **Current version:** | 1.0.0 |  |
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| *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:***  | Capability Exchange |
|  |  |
| ***Source to WG:*** | Tencent Cloud |
| ***Source to TSG:*** | S4 |
|  |  |
| ***Work item code:*** | MeCAR |  | ***Date:*** | 1-20-2024 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***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:*** | Clause 7.4 capability exchange is empty. |
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| ***Summary of change:*** | 1. 6.2.5: The device capability data object to carry the device capabilities
2. 7.4: How the device uses the capability data object to communicate its capabilities
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| ***Consequences if not approved:*** | Lack of discovery of the UE capabilities by the network services and other UEs |
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| ***Clauses affected:*** | 6.2.5 (new), 7.4 (new) |
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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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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| **1st Change** |

## 6.2.5 Device capabilities signalling

The device capabilities shall be signalled using the format defined in Table 6.2.5-1.

Table 6.2.5-1 – Devie capabilities exchange format

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| **Name** | **Cardinality** | **Description** |
| deviceCapabilities | 0..1 | Device capabilities including the supported device profiles and optionally the detailed capabilities |
| deviceType | 1..N | Device type identifier. The device type identifiers are listed in Annex X |
| deviceDetailedCapabilities | 0..1 | Device detailed capabilities in addition to the capabilities included in the supported deviceType |
|  videoDecoding | 1 | Additional video decoding capabilities. |
|  decoder | 0..N | List of supported profiles and levels |
|  id | 1 | Unique identifier for the profile and level. |
|  concurrent\_instances | 1 | Number of concurrent instances |
|  decoderInterface | 1 | Interface capabilities |
|  videoEncoding | 1 | Additional video encoding capabilities. |
|  encoder | 1 | List of supported profiles and levels |
|  id | 1 | Unique identifier for the profile and level |
|  concurrent\_instances | 1 | Number of concurrent instances |
|  audioDecoding | 0..N | Additional audio decoding capabilities. |
|  decoder | 1 | List of additional supported profiles and levels |
|  id | 1 | Unique identifier for the profile and level |
|  concurrent\_instances | 1 | Number of concurrent instances |
|  decoderInterface | 1 | Interface capabilities |
|  audioEncoding | 1 | Additional audio encoding capabilities |
|  encoder | 0..N | List of supported profile and levels |
|  id | 1 | Unique identifier for the profile and level |
|  concurrent\_instances | 1 | Number of concurrent instances |
| xrRuntime | 0..1 | Capabilities of the device XR runtime |
|  profile | 0..N | URI for additional supported features. |
|  extensions | 0..N | List of the additional supported extension |
| sceneManager | 0..1 | Additional capabilities of the device scene manager |
|  profile | 0..N | URI for supported features  |

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| **2nd Change** |

## 7.4 Capability exchange

The capabilities of the device is captured in the data structure defined in 6.2.5 and is communicated with the network.