**3GPP TSG-SA3 Meeting #101-e *draft\_S3-203211-r1***

**e-meeting, 9th - 20th November 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **33.535** | **CR** | **0053** | **rev** | **-** | **Current version:** | **16.1.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Update of the reference point interface names of AKMA | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | AKMA | | | | |  | ***Date:*** | | | 2020-10-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The reference point interface names in the TS 33.535 had tentative names until they were confirmed by SA2. SA3 sent an LS to SA2 for this issue and SA2 proposed the interface names in a LS reply to SA3 (S3-202847, S2-2008003) | | | | | | | | |
| ***.*** | |  | | | | | | | | |
| ***Summary of change:*** | | Change the reference point interface names of AKMA according to SA2 proposal. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Potentially conflicting interface names for AKMA and existing or future SA2 specifications. | | | | | | | | |
|  | |  | | | | | | | | |
| ***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:*** | |  | | | | | | | | |

\*\*\* 1st CHANGE\*\*\*

# 4 Architecture for AKMA

## 4.1 Reference model

Figure 4.1-1 shows a fundamental network model of AKMA, as well as the interfaces between them.



Figure 4.1-1: Fundamental Network Model for AKMA

NOTE: Figure 4.1-1 shows the case where AAnF is deployed as a standalone function. Deployments can choose to collocate AAnF with AUSF or with NEF according to operators' deployment scenarios.

Figure 4.1-X shows the AKMA architecture using the reference point representation.



Figure 4.1-X: AKMA Architecture in reference point representation for (a) internal AFs and (b) external AFs

The AKMA service requires a new logical entity, called the AKMA Anchor Function (AAnF).

The AAnF is the anchor function in the HPLMN that generates the key material to be used between the UE and the Application Function (AF and maintains UE AKMA contexts.

\*\*\* 2nd CHANGE\*\*\*

### 4.3.1 Void

## 4.X AKMA Reference points

The AKMA architecture reuses the following reference point from the 5GC for the execution of the primary authentication procedure:

**N1:** Reference point between the UE and the AMF.

**N2:** Reference point between the (R)AN and the AMF.

**N12:** Reference point between AMF and AUSF.

**N13:** Reference point between the UDM and the AUSF.

**N33:** Reference point between NEF and an external AF.

The AKMA architecture defines the following reference points:

**N61**: Reference point between the AAnF and the AUSF.

**N62**: Reference point between the AAnF and an internal AF.

**N63**: Reference point between the AAnF and NEF.

**Ua\***: Reference point between the UE and an AF.

NOTE: The reference point Ua\* carries the application protocol, which is secured using the key material agreed between UE and AAnF as a result of successful AKMA procedures.

\*\*\* END OF CHANGES\*\*\*