**3GPP TSG-SA3 Meeting #100e *S3-201977-r1***

**e-meeting, 17 -28 August 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **33.501** | **CR** | **0937** | **rev** | **1**  | **Current version:** | **16.3.0** |  |
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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 | **X** | Core Network |  |

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| ***Title:***  | Allocation of FC values for KIAB derivation function |
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| ***Source to WG:*** | Samsung |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** | IAB |  | ***Date:*** | 03-08-2020 |
|  |  |  |  |  |
| ***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 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | Allocation of a Function Code value for KIAB key derivation function is needed to derive cryptographically unique keys.  |
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| ***Summary of change:*** | Allocation of FC value for KIAB key derivation function. |
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| ***Consequences if not approved:*** | Possible allocation of a FC value to more than one key derivation function which breaks the desired security property. |
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| ***Clauses affected:*** | A.23 |
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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 should only be approved if the related CR (S3-20xxxx) is approved |
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| ***This CR's revision history:*** | Rev 1: revised the FC value from 0x80 to 0x83 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Changes\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

A.23 KIAB generation function

This input string is used when the IAB-node and the IAB-donor derive KIAB (PSK) for establishment of secure F1 interface. The following parameters shall be used to form the input S to the KDF:

- FC = 0x83,

- P0 = IAB-donor-CU IP address,

- L0 = length of IAB-donor-CU IP address,

- P1 = IAB-node DU IP address,

- L1 = length of IAB-node DU IP address.

The input key KEY shall be KgNB, if the key KgNB is in possession of the IAB-UE functionality in the IAB-node and in the IAB-donor-CU, after the IAB-UE setup procedure (Phase-1).

The input key KEY shall be S-KgNB, if the key S-KgNB is in possession of the IAB-UE functionality in the IAB-node and in the IAB-donor-CU, after dual connectivity procedure.

The entire output of the KDF (256 bits) is used as the KIAB.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Changes\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*