**3GPP TSG-SA3 Meeting #116** **S3-242616-r1**

Jeju, South Korea, 20th - 24th May 2024

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **33.503** | **CR** | **0188** | **rev** | **1** | **Current version:** | **18.2.0** |  |
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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 |  |

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| ***Title:***  | Security of 5G ProSe PC5 communication without network assistance - correction |
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| ***Source to WG:*** | Philips International B.V. |
| ***Source to TSG:*** | S3 |
|  |  |
| ***Work item code:*** | 5G\_ProSe\_Ph2 |  | ***Date:*** | 2024-05-20 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | The Direct Communication Accept (DCA) message from the UE-to-UE Relay UE to the Source End UE should only be sent after a Direct Communication Accept message is received by the UE-to-UE relay UE from the Target End UE. Although security establishment between Target end UE and UE-to-UE relay UE may be succesfully completed, there is still a chance that UE-to-UE relay UE does not receive a DCA from Target end UE e.g., due to Target end UE moving away from the UE-to-UE relay UE’s  |
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| ***Summary of change:*** | Conditions under which a UE-to-UE relay UE sends a Direct Communication Accept message to Source end UE include UE-to-UE relay UE receiving a Direct Communication Accept message from Target end UE.  |
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| ***Consequences if not approved:*** | May potentially lead to implementation issues. |
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| ***Clauses affected:*** | 6.6.3.2 |
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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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

#### 6.6.3.2 Security of 5G ProSe PC5 Communication for 5G ProSe Layer-3 UE-to-UE Relay without network assistance

The security procedure in clause 6.2 is used to establish a secure PC5 link between the End UE and the 5G ProSe Layer-3 UE-to-UE Relay without network assistance with the following modifications.

- The RSC is included in the DCR message.

- The DCR message is protected based on the security mechanism defined in clause 6.3.5 with a modification that the length of the UP-PRUK ID/CP-PRUK ID is set to zero in clause 6.3.5.2.

- The Direct Communication Accept message is sent to the Source End UE after the 5G ProSe Layer-3 UE-to-UE Relay receives a Direct Communication Accept message from the Target End UE.