**3GPP TSG-SA WG6 Meeting #48-e S6-220615**

**e-meeting, 5th – 14th April 2022 (revision of S6-22xxxx)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.289** | **CR** | **0052** | **rev** | **1** | **Current version:** | **18.1.0** |  |
|  | | | | | | | | |
| *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 | **x** | Radio Access Network |  | Core Network | **x** |

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| ***Title:*** | Requirements related to 5G ProSe Layer-3 relaying via N3IWF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MCOver5GProSe | | | | |  | ***Date:*** | | | 2022-04-05 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The introduced CR adds the requirements to be considered in order to relay traffic of a remote MC service UE via a 5G ProSe Layer-3 UE-to-network relay via the support of N3IWF, as described in 3GPP TS 23.304. | | | | | | | | |
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| ***Summary of change:*** | | * Identify the requirements to enable 5G ProSe Layer-3 UE-to-network relay via the support of N3IWF, as described in 3GPP TS 23.304. | | | | | | | | |
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| ***Consequences if not approved:*** | | 5G ProSe Layer-3 UE-to-network relay via the support of N3IWF is not included in 3GPP TS 23.289. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.8, 4.8.1, 4.8.2, and 7.6.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

## 4.8 Use of 5G ProSe UE-to-network relay

### 4.8.1 General

The MC service shall support the capabilities for 5G ProSe UE-to-network relay. For this matter, 5G ProSe Layer-2 and 5G ProSe Layer-3 UE-to-network relaying techniques can be utilized, as described in 3GPP TS 23.304 [17]. The 5G ProSe Layer-3 UE-to-Network relaying technique may be done with or without the support of N3IWF, as described in 3GPP TS 23.304 [17].A 5G ProSe UE-to-network relay supporting MC service UE provides means of connectivity and relaying of MC traffic to remote MC service UE(s). For this matter, the 5G ProSe UE-to-network Relay Discovery service allows the MC service remote UE to discover a potential UE-to-network relay UE supporting MC service in its proximity as described in 3GPP TS 23.304 [17]. Upon its discovery, the 5G ProSe Direct UE-to-network Relay Communication functionality is utilized to achieve communication to provide the MC service remote UE access to 5GS, and relay MC traffic via the UE-to-network relay UE over the NR PC5 reference point.

### 4.8.2 5G ProSe UE-to-network relay service requirements

In order to enable 5G ProSe UE-to-network relaying capabilities – whether based on Layer-3 or Layer-2 UE-to-network relaying techniques, the MC service system provides the appropriate parameters and configurations to the MC service UE(s).

As defined in 3GPP TS 32.304 [17], among these parameters are: Relay Service Code(s) (RSCs) which can be associated to a certain MC service group, User Info, ProSe Layer-2 Group ID and ProSe Group IP multicast address. Moreover, the MC service group ID is resolved to the ProSe Layer-2 Group ID and ProSe Group IP multicast address, which are utilized within the 5G ProSe Relay Discovery and 5G ProSe Direct Communication procedures, as described in 3GPP TS 23.304 [17]. Furthermore, the RSCs are utilized to restrict the necessary UE-to-network relay service and related procedures within members of a certain MC service group.

Moreover, in case of 5G ProSe Layer-3 UE-to-network relay with the support of N3IWF, the UE-to-network relay is provisioned with policies and parameters, among others suitable RSC(s), in order to support N3IWF access, as defined in 3GPP TS 23.304 [17].

\* \* \* \* Second change \* \* \* \*

#### 7.6.3.1 5G ProSe UE-to-network relay service authorization

The MC service shall support the capability for 5G ProSe UE-to-network relay to restrict the relayed group communication on a per group basis by using the relay service codes corresponding to the group.

5G ProSe (as specified in 3GPP TS 23.304 [17]) supports layer 2 UE-to-network relay and layer 3 UE-to-network relay. The procedure defined in clause 10.5 of 3GPP TS 23.280  [3] applies with the following differences:

- 5G ProSe UE-to-network relay is provisioned that each relay service code is offering layer 2 or layer 3 UE-to-Network Relay service.

- 5G ProSe remote UE is provisioned that each relay service code is offering layer 2 or layer 3 UE-to-Network Relay service.

- 5G ProSe Layer-3 UE-to-network relay is provisioned with suitable relay service codes to support access to N3IWF for the case of 5G ProSe Layer-3 UE-to-network relay with the support of N3IWF.

\* \* \* \* End of changes \* \* \* \*