SA WG2 Meeting #143E (e-meeting) S2-21xxxxx

Elbonia, Feb 24 – Mar 9, 2021

**Source: Qualcomm Incorporated**

**Title: Adding clause 4.3.2 on 5G DDNMF to TS 23.304**

**Document for: Discussion/Approval**

**Agenda Item: 8.8.2**

**Work Item / Release: 5G\_ProSe/Rel-17**

*Abstract of the contribution: This contribution adds the description of 5G DDNMF to TS 23.304 as clause 4.3.2.*

# Discussion

According to the work plan, this contribution adds the description of 5G DDNMF to TS 23.304 as clause 4.3.2.

# Text Proposal

It is proposed to add the following to TS 23.304.

**>>>>Start Changes<<<<**

4.3.2 5G DDNMF

4.3.2.1 General

The 5G DDNMF is the logical function handling network related actions required for dynamic ProSe Direct Discovery. In this version of the specification, it is assumed that there is only one logical 5G DDNMF in each PLMN that supports ProSe Direct Discovery service.

NOTE: If multiple 5G DDNMFs are deployed within the same PLMN (e.g., for load reasons), the method to locate the 5G DDNMF that has allocated a specific ProSe Application Code or ProSe Restricted Code (e.g. through a database lookup, etc.) is not defined in this version of the specification.

The 5G DDNMF interacts with the ProSe capable UE using procedures over PC3 reference point defined in clause 6.3.1 to allocate and resolve the mapping of ProSe Applications IDs and ProSe Application Codes used in ProSe Direct Discovery. It uses ProSe related subscriber data stored in UDM for the authorisation of each discovery request. It also provides the UE with the necessary security material in order to protect discovery messages transmitted over the air. In restricted ProSe Direct Discovery, it also interacts with the Application Server via PC2 reference points or Nddnmf interface for the authorization of the discovery requests.

The ProSe capable UE use procedure defined in clause 4.3.2.2 to discovery the 5G DDNMF in the HPLMN. Based on the UE Local Configuration or URSP as defined in TS 23.503 [x], an existing PDU session is selected or a new PDU session is established, to carry the control signalling between the UE and the 5G DDNMF in the HPLMN.

The 5G DDNMF provides the necessary charging functionality for the usage of Proximity Services and may interact with CHF or CEF.

The 5G DDNMF in the HPLMN may interact with the 5G DDNMF in a VPLMN or Local PLMN in order to manage the ProSe Direct Discovery service. The 5G DDNMF uses the NRF to discovery these 5G DDNMFs in other PLMNs.

4.3.2.2 5G DDNMF Discovery

The 5G DDNMF of HPLMN is discovered through interaction with the Domain Name Service function. The FQDN of a 5G DDNMF in the Home PLMN may either be pre-configured on the UE or provisioned by the network or self-constructed by the UE, e.g. derived from PLMN ID of the HPLMN. The IP address of a 5G DDNMF in the Home PLMN may also be provisioned to the UE.

**>>>>End Changes<<<<**