**3GPP TSG-SA5 Meeting #134e *S5-206127rev1***

**e-meeting 16th - 25th November 2020**

**Source: CATT**

**Title: pCR Add architecture considerations for ProSe charging in 5GS**

**Document for: Approval**

**Agenda Item: 7.5.3**

# 1 Decision/action requested

***The group is asked to discuss and agree on the proposal.***

# 2 References

[1] 3GPP TR 32.846: “Study on charging aspects of Proximity-based Services in 5GS”.

# 3 Rationale

This pCR proposes architecture considerations.

# 4 Detailed proposal

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| **1st Modified Section** |

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.287: "Architecture enhancements for 5G System (5GS) to support Vehicle-to-Everything (V2X) services".

[3] 3GPP TR 23.752: “Study on system enhancement for Proximity based Services (ProSe) in the 5G System (5GS)”.

[4] 3GPP TS 32.277: "Proximity-based Services (ProSe) charging".

[5] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[6] 3GPP TS 32.240: "Telecommunication management; Charging management; Charging architecture and principles ".

[7] 3GPP TS 32.255: "Telecommunication management; Charging management; 5G data connectivity domain charging; Stage 2".

[8] 3GPP TS 32.256: "Telecommunication management; Charging management; 5G connection and mobility domain charging; Stage 2".

[9] 3GPP TS 32.290: "Telecommunication management; Charging management; 5G system; Services, operations and procedures of charging using Service Based Interface (SBI)"

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| **Next Modified Section** |

# 5 Architecture considerations

## 5.1 High level ProSe architecture

The scope of the present document is Proximity-based Service charging in 5GS, related to architecture reference as follows:

- Architecture reference model defined in TS 23.501 [5] are used as basis architecture for supporting ProSe in 5GS.

- Architecture reference models defined in TS 23.287 [2] (i.e. PC5 based eV2X architecture reference model) are used as reference architecture for supporting ProSe in 5GS.

Editor’s note: 5G ProSe architecture reference model proposed in TR 23.752 [3] is still FFS.

## 5.2 Potential converged charging architectures for ProSe

### 5.2.1 General

The converged charging architectures for ProSe in 5GS should support charging for the following services:

- ProSe Direct Discovery, including ProSe open Direct Discovery and restricted Direct Discovery, and

- ProSe UE-to-Network Relay Discovery and UE-to-UE Relay Discovery, and

- ProSe Direct communication, including Broadcast and Groupcast Direct Communication and Unicast Direct Communication, and

- ProSe Direct Communication via ProSe UE-to-Network Relay and UE-to-UE Relay.

Details on the interfaces and functions can be found in TS 32.240 [6] for the general architecture components Nchf is described in TS 32.290 [9].

### 5.2.2 ProSe Direct Discovery converged charging architecture

Editor’s Note: the charging architecture for ProSe Direct Discovery is FFS along with the related key issues.

### 5.2.3 ProSe Direct Communication converged charging architecture

Editor’s Note: the charging architecture for ProSe Direct communication is FFS along with the related key issues.

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| **End of Modified Sections** |