3GPP TSG SA WG5 Meeting #157 S5-245904

Hyderabad, India, 14 - 18 October 2024

**Source: China Mobile**

**Title: TR 28.853 Add solution for charging with UAV Identifier**

**Document for: Approval**

**Agenda Item: 7.5.4**

# 1 Decision/action requested

***This is a pCR to add solution for charging with UAV Identifier in TR 28.853.***

# 2 References

[1] 3GPP TR 28.853: "Charging management; Study on charging aspects of uncrewed aerial systems".

# 3 Rationale

This contribution proposes to add solution for charging with UAV Identifier in TR 28.853.

# 4 Detailed proposal

The following changes are proposed to be incorporated into TR 28.853 [1].

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| **First change** |

# 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 22.125: "Unmanned Aerial System (UAS) support in 3GPP".

[3] 3GPP TS 23.256: "Support of Uncrewed Aerial Systems (UAS) connectivity, identification and tracking; Stage 2".

[4] 3GPP TS 23.501: "System architecture for the 5G System (5GS)".

[5] 3GPP TS 23.502: "Procedures for the 5G System (5GS)".

[6] 3GPP TS 23.503: "Policy and charging control framework for the 5G System (5GS); Stage 2".

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

[8] 3GPP TS 32.256: "5G connection and mobility domain charging".

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| **Next change** |

### 5.1.4 Possible solutions

#### 5.1.4.1 Solution #1.1: Data Connectivity Charging between SMF and CHF

##### 5.1.4.1.1 General description

This solution #1.1 which relying on 5G data connectivity converged charging architecture defined in TS 32.255[7], with the extension of including UAV indication, addressing the Key Issue#1a.

In order to distinguish the UAV from other 3GPP UEs for charging differentiation, the UAV indication can be involved to support UAV charging, which is not applicable to UAVC.

##### 5.1.4.1.2 Procedures description

The message flows for the PDU session establishment, PDU session modification, PDU session release of 5G data connectivity charging in non-roaming scenarios, Home routed scenarios and Local breakout scenarios would be the same as in clauses 5.2.2.2, clauses 5.2.2.12 and clause 5.2.2.18 of TS 32.255 [7], with:

- UAV indication added in charging data request messages.

#### 5.1.4.2 Solution #1.2: Connection and Mobility Charging between AMF and CHF

##### 5.1.4.2.1 General description

This solution #1.2 which relying on 5G connection and mobility converged charging architecture defined in TS 32.256[8], with the extension of including UAV indication, addressing the Key Issue#1a.

In order to distinguish the UAV from other 3GPP UEs for charging differentiation, the UAV indication can be involved to support UAV charging, which is not applicable to UAVC.

##### 5.1.4.2.2 Procedures description

The message flows for the 5G connection and mobility converged charging would be the same as in clauses 5.2.2 of TS 32.256 [8], with:

- UAV indication added in charging data request messages.

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| **End of changes** |