**3GPP TSG-SA5 Meeting #144-e *S5-224205***

**e-meeting, 27 June - 1 July 2022**

**Source: Ericsson**

**Title: Adding solutions in clause 7.1 for VPLMN wholesale charging of HPLMN**

**Document for: Approval**

**Agenda Item: 7.5.3**

# 1 Decision/action requested

**Include the proposed changes in TR 28.827.**

# 2 References

[1] 3GPP TR 28.827: "Study on 5G charging for additional roaming scenarios and actors"

# 3 Rationale

Adding solutions in clause 7.1 for VPLMN wholesale charging of HPLMN of 5G connection and mobility, and SMS based on CDR generation in VPLMN.

# 4 Detailed proposal

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| **First change** |

#### 7.1.4.x Solution #1.x: Nchf to VPLMN for wholesale of 5G connection and mobility

##### 7.1.4.x.1 General

A possible solution for key issue #1b covering requirements REQ-CH\_VMNO-03 and REQ-CH\_VMNO-04, wholesale charging for 5G connection and mobility provided to the home MNO by the visited MNO. In this case there is also charging information generated in the home MNO for retail purposes, studied in clause 7.2.

##### 7.1.4.x.2 Reference architecture



Figure 7.1.4.x.2-1: Roaming 5G connection and mobility scenario in service-based interface representation



Figure 7.1.4.x.2-2: Roaming 5G connection and mobility scenario in reference point representation

##### 7.1.4.x.3 Message flows

The flows for 5G connection and mobility charging would be the same as in clause 5.2.2.5 of TS 32.256 [5],

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| **Second change** |

#### 7.1.4.y Solution #1.y: Nchf to VPLMN for wholesale of SMS

##### 7.1.4.y.1 General

A possible solution for key issue #1c covering requirements REQ-CH\_VMNO-06 and REQ-CH\_VMNO-07, wholesale charging for SMS provided to the home MNO by the visited MNO. In this case there is also charging information generated in the home MNO for retail purposes, studied in clause 7.2.

##### 7.1.4.y.2 Reference architecture



Figure 7.1.4.y.2-1: Roaming SMS scenario in service-based interface representation



Figure 7.1.4.y.2-2: Roaming SMS scenario in reference point representation

##### 7.1.4.y.3 Message flows

The flows for SMS charging would be the same as in clauses 5.2.2, 5.3.2, and 5.4.2 of TS 32.274 [8],

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| **End of changes** |