**3GPP TSG-SA5 Meeting #148e *S5-233309***

Electronic meeting, Online, 17 -25 April 2023

**Source: Ericsson LM, Huawei**

**Title: Rel-18 pCR 28.827 Adding conclusion in clause 7.1**

**Document for: Approval**

**Agenda Item: 7.5.2**

# 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

Updating the evaluation and adding conclusion for Charging in visited MNO for wholesale charging towards home MNO.

# 4 Detailed proposal

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| **First change** |

### 7.1.5 Evaluation

Solutions #1.1, #1.3, and #1.9 all solves key issue #1a.

- Solution #1.1 has CDRs for the interconnect charging generated in the visited MNO using V-SMF to V-CHF. The CDR will only be generated in the visited network. This is currently supported, but not described.

- Solution #1.3 has CDRs for the interconnect charging generated in the visited MNO using V-SMF to V-CHF and requires retail charging in the home using V-SMF to H-CHF. This is currently supported.

- Solution #1.9 has CDRs for the interconnect charging generated in the visited MNO using V-SMF to V-CHF and requires retail charging in the home using V-SMF via the V-CHF to H-CHF.

The main difference from an interconnect perspective is that solutions #1.3 and #1.9 requires a V-SMF to H-CHF interaction while solution #1.1 don’t.

Solutions #1.2 and #1.6 both solves key issue #1b.

- Solution #1.2 has CDRs for the interconnect charging generated in the visited MNO using AMF to V-CHF. The CDR will only be generated in the visited network. This is currently supported, but not described.

- Solution #1.6 has CDRs for the interconnect charging generated in the visited MNO using AMF to V-CHF and requires retail charging in the home using AMF to H-CHF. This is currently supported.

The main difference from an interconnect perspective is that solution #1.6 requires a V-SMF to H-CHF interaction while solution #1.2 don’t.

Solution #1.5 solves key issue #1c.

- Solution #1.5 has CDRs for the interconnect charging generated in the visited MNO using V-SMSF to V-CHF.

Solution #1.8 solves key issue #1d.

- Solution #1.8 allows for negotiation of roaming charging profile with triggers for QBC

Solution #1.11 solve key issue #1e.

- Solution #1.11 aims to clarify the QBC triggers mechanism on QoS flow level as specified in TS 32.255 [4] and have the QBC triggers common for all QFIs and applies individually to each QFI.

Solutions #1.10 and #1.12 both solve key issue #1f.

- Solution #1.10 have separate PDU session level triggers for FBC and QBC. Requires new information elements and can require separate charging data requests for QBC and FBC.

- Solution #1.12 have common PDU session level triggers for FBC and QBC. Reuses the current information elements and will use the same charging data requests for QBC and FBC.

Solutions #1.1, #1.4 and #1.7 all solve key issue #1g.

- Solution #1.1 would require solution #1.7 to solve the key issue since there is no connection to the home NMO.

- Solution #1.4 aims to clarify the trigger for reporting updates in roaming charging profile for 5G data connectivity during PDU session establishment and roaming home routed PDU session with inter-PLMN V-SMF change as specified in TS 32.255 [4]and would require solution #1.3 or #1.9 since there is a need to have a connection to the home NMO. This is a detailing of the usage of the current information elements.

- Solution #1.7 aims to clarify the roaming charging profile for 5G data connectivity during PDU session establishment and roaming home routed PDU session as specified in TS 32.255 [4]and is currently supported but not described in detail the specifications.

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| **Second change** |

### 7.1.x Conclusion

For the key issues #1a, #1b, and #1c, the possibility for the visited MNO to only interact with the V-CHF in the case of local breakout i.e., all the solutions #1.1, #1.2, #1.5 should be taken into normative work, in addition to solutions implying interaction with H-CHF.

For the key issue #1d there is only one solution proposed without FBC trigger i.e., solution #1.8 should be supported.

For key issues #1e there is only one solution proposed with applied individually to each QFI is to be taken into normative work i.e., this means solution #1.11.

For key issues #1g both solutions are to detail the current solutions i.e., solutions #1.4 and #1.7.

Editor’s note: Further conclusions are FFS.

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| **End of changes** |