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

Electronic meeting, Online, 17 -25 April 2023

**Source: Ericsson LM**

**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, without the FBC triggers.  
Negotiation of roaming charging profile in this context is that the home MNO can control the triggers used for QBC in both home and visited MNO, controlling the triggers will imply that that the home MNO can control the wholesale charges from the visited MNO.

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 to have both the visited MNO to only interact with the V-CHF and to interact with H-CHF in the case of local breakout i.e., all the solutions #1.1, #1.2, #1.3, #1.5 should be taken into normative work.

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 #1f having the PDU session level triggers common for FBC and QBC is currently supported, and needs to be described. Adding separate triggers for PDU session for QBC and FBC is not required. This means solution #1.12 should be taken into normative work.

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** |