**3GPP TSG SA WG5 Meeting #158 S5-246772**

**Orlando, USA, 18– 22 November, 2024**

**Source: CATT**

**Title: Add conclusion for store and forward satellite operation charging**

**Document for: Approval**

**Agenda Item: 7.5.1**

# 1 Decision

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

# 2 References

[1] 3GPP TR 28.846: " Study on charging aspects of satellite access Phase 3 ".

# 3 Rationale

This pCR proposes to add conclusion for S&F operation charging.

# 4 Detailed proposal

The following changes are proposed to be incorporated into the new TR.

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| **1st Modified Section** |

## 6.1 Topic 1: Charging scenarios for store and forward satellite operation

### 6.1.1 Use cases

#### 6.1.1.1 Use Case #1.1: SMNO charges SCC

This use case focuses on SCC and SMNO business scenario.

An SCC has a subscription with an SMNO which rents the satellite from an SSP, to allow SMNO to provide S&F operation to its subscribers.

The charging party and charged party can be:

- Charged party: the SCC identified by the UE.

- Charging party: SMNO.

The SMNO charges the subscribers based on the usage of satellites to provide the S&F operation service.

Potential charging requirements: REQ-CH\_ SAT\_PH3-01, REQ-CH\_ SAT\_PH3-02 and REQ-CH\_ SAT\_PH3-03.

#### 6.1.1.2 Use Case #1.2: SMNO charged by SSP

This use case focuses on SMNO and SSP business scenario.

An MNO has a wholesale agreement to use the satellite from an SSP for the deployment of eNB and NFs.

The charging party and charged party can be:

- Charged party: SMNO.

- Charging party: SSP

The SSP charges SMNO based on the usage of satellites to deploy the eNB and NFs.

Potential charging requirements: REQ-CH\_ SAT\_PH3-01, REQ-CH\_ SAT\_PH3-02 and REQ-CH\_ SAT\_PH3-03.

### 6.1.2 Potential charging requirements

The following are potential high-level charging requirements for satellite in 5GS, derived from the requirements in TS 23.401 [5].

**REQ-** **CH\_ SAT\_PH3-01**: The 5GS should support collecting charging information for S&F operation with SMS service.

**REQ-** **CH\_ SAT\_PH3-02**: The 5GS should support collecting charging information for S&F operation with CP CIoT service.

**REQ-** **CH\_ SAT\_PH3-03**: The 5GS should support collecting charging information for S&F operation with UP CIoT service.

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| **2nd Modified Section** |

### 6.1.6 Conclusion

It is concluded that the solution #1.y is the feasible solution for the SMS service using the satellite access running in the S&F mode. New trigger events and new parameters need to be added for the S&F operation charging.

It is concluded that the solution #1.u is the feasible solution for the CP CIoT service using the satellite access running in the S&F mode. No enhancement for the CDRs is needed.

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| **End of Modified Sections** |