**3GPP TSG-SA5 Meeting #155 *S5-242642***

Jeju, South Korea, 27 - 31 May 2024

**Source: CSCN**

**Title: DP on business scenarios and charging requirements for** **roaming from terrestrial operator network to satellite operator network**

**Document for: Endorsement**

**Agenda Item: 7.5.1**

# 1 Decision/action requested

Discuss and endorse the business scenarios and charging requirements for roaming from terrestrial operator network to satellite operator network

# 2 References

[1] 3GPP TS 23.501 V18.4.0 System architecture for the 5G System (5GS)

[2] 3GPP TR 28.844 V2.0.0 Study on charging aspects of satellite in the 5G System (5GS)

[3] S5-241672 Discussion on charging between satellite network operator and terrestrial network operator

[4] S5-241830 New Study on charging aspects of satellite access Phase 3

# 3 Rationale

3.1Business scenario for roaming from terrestrial operator network to satellite operator network

3.1.1General roaming

Users of terrestrial network operator can roam into satellite operator network.satellite network operator should be able to generate billing information based on data connectivity and mobility management (referred to TS 32.255 and TS 32.256).



3.1.2Data plan stacking

Terrestrial network operator adds a satellite data plan to their user’ plans, and the satellite data plan information needs to be synchronized to the satellite network operator. When users of terrestrial network operator roam into the satellite network, the satellite network operator should be able to generate billing information based on the satellite data plan.



# 4 Detailed proposal

Business scenario and Potential charging requirements for roaming should be written into R19 TR.

## 5.X Business scenario for roaming from terrestrial operator network to satellite operator network

Business scenario #la: General roaming. Subscriber of terrestrial network operator can roam into satellite operator network. Terrestrial network operator could be charged by Satellite network operator. Subscriber could be charged by terrestrial network operator.

Business scenario#lb: Terrestrial network operator sells satellite data plan. Terrestrial network operator can collaborate with SMNO to sell satellite network data plan to their own subscriber. Subscriber of terrestrial network operator can purchase an additional data plan for satellite network. The additional data plan can be a standalone data plan which contain quota or credit that can be used for satellite communication services. Based on this satellite data plan, subscriber of terrestrial network operator can roam into the satellite network.. Terrestrial network operator could be charged by Satellite network operator. Subscriber could be charged by terrestrial network operator.