**3GPP TSG-SA5 Meeting #152 *S5-23xxxx***

**Chicago, US, 13-17 November 2023**

**Source: CATT**

**Title: New WID on charging aspects of Satellite Backhaul in 5GS**

**Document for: Approval**

**Agenda Item: 7.2**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: Charging aspects of Satellite Backhaul in 5GS

Acronym: 5GSATB\_Ph2\_CH

Unique identifier:

Potential target Release: Rel-18

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  |  |  | X |  |
| No | X | X | X |  |  |
| Don't know |  |  |  |  | X |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
|  | Study |
|  | Normative – Stage 1 |
| X | Normative – Stage 2 |
| X | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| FS\_5GSAT\_CH | SA5 | 980028 | Study on charging aspects of Satellite in 5GS |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 890034 | Integration of satellite components in the 5G architecture | SA2 Rel-17 WID for the integration of satellite into 5GS |
| 940060 | Study on Support of Satellite Backhauling in 5GS | Antecedent study item (TR 23.700-27) |
| 970018 | 5G System with Satellite Backhaul | SA2 Rel-18 WID for 5G System with Satellite Backhaul |

# 3 Justification

SA5 has studied the charging aspects of 5GS for Satellite in TR 28.844, which identified the use cases and key issues, derived the corresponding business relationships (e.g. SSC, SSP, SMNO), potential requirements, and developed and evaluated the possible solutions for the following aspects for 5G satellite backhaul charging:

* Satellite backhaul charging
* Edge Computing with satellite backhaul charging, including subscriber charging and inter-provider charging;
* Satellite Service Customer(SSC)-to-SSC communications via satellite backhaul charging

As recommended in TR 28.844, normative work is required for 5G Satellite Backhaul Charging in Rel-18.

# 4 Objective

The objective of this work item is to specify the business relationships (e.g. SSC, SSP, SMNO), requirements and solutions for:

* Satellite backhaul charging
* Edge Computing with satellite backhaul charging, including

- subscriber charging; and

- inter-provider charging

* SSC-to-SSC communications via satellite backhaul charging

This work will be based on the corresponding conclusions documented in the TR 28.844;

# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New specifications {One line per specification. Create/delete lines as needed} | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| TS 32.255 | Enhancement of the 5G Data Connectivity to support the 5G Satellite backhaul service | TSG SA#102  (Dec 2023) |  |
| TS 32.256 | Enhancement of the 5G connection and mobility to support the 5G Satellite backhaul service | TSG SA#102  (Dec 2023) |  |
| TS 32.254 | Support of 5G satellite backhaul service for the 5G VN group management charging | TSG SA#102  (Dec 2023) |  |
| TS 32.257 | Enhancement of the Edge computing charging to support the 5G Satellite backhaul service | TSG SA#102  (Dec 2023) |  |
| TS 32.291 | Update Nchf\_ConvergedCharging service API with definitions that are specific to 5G Satellite backhaul charging | TSG SA#103  (Mar 2024) |  |
| TS 32.298 | 5G Satellite backhaul charging related Charging Data Record (CDR) description | TSG SA#103  (Mar 2024) |  |

# 6 Work item Rapporteur(s)

Yingying, Liu, CATT, liuyingying@cictmobile.com

# 7 Work item leadership

SA5

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| CATT |
|  |
|  |
|  |
|  |
|  |
|  |
|  |