**3GPP TSG-SA WG6 Meeting #68 S6-253658**

**Gothenburg, Sweden 25th – 29th Aug 2025 (revision of S6-253282)**

**Source: CATT，China Telecom**

**Title:** **New KI on improving service performance over satellite access utilizing AI capabilities**

**Spec: 3GPP TR 23.700-02 v0.0.0**

**Agenda item: 9.12**

**Document for: Approval**

**Contact: Liping Wu <wuliping@cictmobile.com>**

**1. Introduction**

The contribution proposes a new KI on improving service performance over satellite access utilizing AI capabilities.

**2. Reason for Change**

In fact, besides the UE RAT connectivity analysis, the application enabled layer could obtain more satellite related data analysis to persistently optimize the performance of satellite access and satellite communication with the help of AI enablers/capabilities defined in SA6. For example, satellite related data analysis may provide available satellite information to the target UE in a certain area, the time/predicted time at which the target UE is moved in/out of the satellite coverage, etc. Thus it’s necessary to study how to enhance the satellite based data analysis to improve the service performance in the application enabled layer.

**3. Proposal**

It is proposed to agree the following changes for 3GPP TR 23.700-02 v0.0.0.

\* \* \* First Change \* \* \* \*

# 5 Key issues

## 5.x Key issue #x: Improve service performance over satellite access utilizing AI capabilities

### 5.x.1 Description

In Rel-19, the normative work on application enablement for satellite enabled 5G services has been specified which including usage of satellite access characteristics for the application enablement, edge computing on satellite, satellite access with discontinuous coverage, impact on MC service and so on. Especially there is a solution which defines a new analytics for the UE RAT connectivity and utilizing the ADAE server to provide a better service experience as specified in 3GPP TS 23.436 [23436].

In fact, besides the UE RAT connectivity analysis, the application enabled layer could obtain more satellite related data analysis to optimize the performance of satellite access and satellite communication with the help of AI enablers/capabilities defined in application enablement layer. For example, compared with defined ASCAI (Application Satellite Coverage Availability Information), satellite related data analysis may provide available satellite information to the target UE in a certain area, the time/predicted time at which the target UE is moved in/out of the satellite coverage, the preferred QoS/QoE when using the services over the satellite access, etc. to indicate the UE client on the application or the application server the related satellite information directly. Thus it’s necessary to study how to enhance the satellite based data analysis to improve the service performance in the application enabled layer.

### 5.x.2 Open Issues

Based on the above analysis, the following open issues need to be studied:

- Whether and how to provide/expose the preferred and/or predicated satellite related information to the consumer (e.g. UE, AF) when using the satellite access, utilizing the analytics (e.g from ADAES, AIMLE).

- Whether and how to provide/expose the preferred e.g. QoS/QoE to the consumer (e.g. UE, AF) for services over satellite access, utilizing the analytics (e.g from ADAES, AIMLE).

\* \* \* First Change \* \* \* \*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

 [23436] 3GPP TS 23.436: "Functional architecture and information flows for Application Data Analytics Enablement Service".

\* \* \* End of Change \* \* \* \*