



Information & Communication Technologies Authority

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**DECISION ON AUTHORISING FIXED BROADBAND INTERNET
SERVICES THROUGH NON-GEOSTATIONARY SATELLITE ORBIT
(NGSO) NETWORKS**

22 May 2025

1.0 PREAMBLE

Satellites are used to receive and transmit a wide range of data and information. They support various services, including remote sensing and imaging, mobile communications, broadband connectivity, emergency and disaster relief, broadcasting, fixed satellite service among others. Traditionally, these services have been delivered through satellites in the Geostationary Satellite Orbit (GSO).

In recent years, Non-Geostationary Satellite Orbit (NGSO) constellations have significantly transformed the satellite communications landscape. Their growing importance stems from key advantages such as low latency, global coverage, increased bandwidth demand, and the need for high-speed internet access.

NGSO constellations are capable of delivering global connectivity, including in remote and underserved regions. Unlike traditional infrastructure-dependent systems, NGSO services often operate without requiring physical infrastructure within a country. Instead, they rely on a limited number of strategically located gateway stations worldwide. This allows them to provide broadband internet access across national borders, sometimes bypassing local regulations due to the absence of a physical presence in the country.

The broadband internet population penetration rate in Mauritius is presently reported at 153%¹, suggesting a very healthy broadband internet take up within the territory. Nevertheless, the Authority acknowledges the potential of NGSO services to enhance connectivity in Mauritius, especially in certain niche market segments and for the connectivity of its outer islands, while also recognizing that the inherent nature of NGSO operations brings its own set of challenges in relation to compliance with the existing regulatory and licensing framework. Accordingly, this decision aims to bring clarity and regulatory certainty on the provision and use of NGSO services in Mauritius, in alignment with the Information and Communication Technologies Act 2001 (hereafter referred as the 'ICT Act') and other relevant laws, to ensure the protection and benefit of consumers.

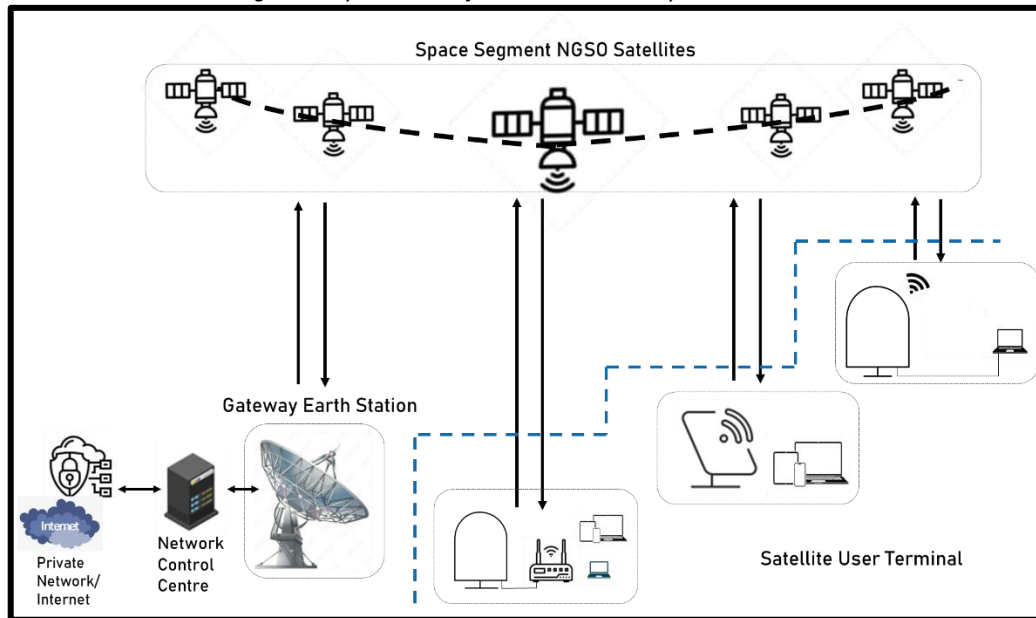
¹ Figures for year ended 2023, published by ICT Observatory at <https://www.icta.mu/observatory-internet/>, accessed 19 May 2025

2.0 GENERIC SYSTEM DESCRIPTION

Global telecommunications landscape witnessed a paradigm shift with the emergence of NGSO satellite networks.

The key elements of an NGSO satellite system are as shown in the figure below:

Figure i: Key elements of an NGSO Satellite System



Space segment

The Space segment consists of a constellation of satellites operating in Non-Geostationary Satellite Orbits commonly referred as Medium Earth Orbit (MEO) and Low Earth Orbit (LEO). These constellations typically consist of dozens to thousands of satellites that orbit the Earth in coordinated patterns so as to enable continuous and seamless global coverage.

Authorization requirements for the space segment are governed by the International Telecommunication Union (ITU). These requirements are adhered to by the NGSO and/or satellite operator's filing administration in accordance with the relevant procedures outlined in Articles 9 and 11 of the ITU Radio Regulations.

Gateway Earth Station

Gateway Earth Stations serve as critical hubs that connect the satellite network to the terrestrial internet backbone, private networks, and cloud services—mostly through submarine cables that provide high-capacity international connectivity. These stations are managed by the satellite network control centre and are strategically located in selected countries around the world to enable centralized management and control of the entire NGSO satellite network.

The provision of gateway earth station services for NGSO is restricted only to satellite operators that own and/or operate the whole satellite constellation. As a result, Gateway Earth Stations are not necessarily located within the countries where the satellite services are delivered.

Typically, administrations require a licence for the operation of a Gateway Earth Station.

Satellite User Terminal

A satellite user terminal (satellite terminal) comprises of antenna, modem, and associated electronics located at the user's premises. Like earth stations, satellite terminals are capable of tracking NGSO satellites to establish direct uplink and downlink communication channels with the satellite constellation, enabling internet access.

Some administrations require an individual licence for satellite terminals, while others categorize these terminals under a class licence.

Network Control Centre

The NGSO Network Control Centre is the ground-based facility responsible for managing the entire NGSO satellite network. It may be located in a single location, or geographically distributed in strategic places around the world for efficient management of the satellite network.

It performs key network functions such as device authentication and IP address allocation. It also oversees satellite tracking, network performance, data routing, and real-time coordination between satellites, satellite terminals, and gateway earth stations. The centre ensures service continuity, security, and optimal resource allocation across the fast-moving constellation.

The NGSO network control centre is usually setup in the same premises as Gateway Earth Stations.

3.0 REGULATORY CHALLENGES WITH NGSO

NGSO satellite services present several regulatory challenges, as is the case in many countries and in particular for Small Island Developing States such as Mauritius, due to their global, non-territorial nature:

1. **Bypassing National Infrastructure:** NGSO based internet allows users to access the internet directly via satellite, bypassing local Internet Service Providers and national gateways. This limits the ability of local authorities to regulate or restrict access to harmful or illegal online content.
2. **Data Protection and Jurisdiction:** The terrestrial infrastructure, such as gateway earth stations, is typically located outside the countries being served. This raises concerns over data protection, particularly regarding the transmission of personal or sensitive data beyond national jurisdictions.
3. **Traceability and Enforcement Issues:** NGSO systems can make it difficult for law enforcement to identify users and monitor how the service is used. This lack of traceability could facilitate unauthorized or illegal activities, including scams, cyberattacks, and organized crime.
4. **Market Disruption:** The entry of satellite-based internet providers could undermine local Internet Service Providers by offering services that bypass national regulations and pricing structures, potentially destabilizing the domestic telecommunications market.
5. **Regulatory Imbalance:** Terrestrial service providers are subject to various regulatory obligations, including contributions to the Universal Service Fund, interconnection mandates, licensing for spectrum, and provision of social tariffs. Satellite providers not subject to

equivalent obligations may be perceived as having an unfair advantage, creating an uneven playing field.

4.0 LICENSING REQUIREMENTS

Section 24(1) of the ICT Act states that no person shall operate an information and communication network or service including telecommunication network or service unless he holds a licence from the Authority.

A Category 1 (Commercial Licence), as outlined in the First Schedule of the ICT Act, is required for the provision of services to the public. Moreover, a Category 3 (Engineering Licence) is necessary when frequency spectrum or radio apparatus or devices are being used.

5.0 GMPCS-MoU

Mauritius is a signatory to the Global Mobile Personal Communications by Satellite Memorandum of Understanding (GMPCS-MoU), which is an international agreement coordinated by the ITU since 1998. The GMPCS-MoU primarily covers global mobile personal communications by satellite, it aims to facilitate the global provision and use of mobile satellite communication services via handheld or portable satellite terminals capable of functioning across borders.

The GMPCS-MoU provides mechanisms to facilitate arrangements for type approval, licensing, marking, provision of traffic data, and customs recommendations related to the free circulation of GMPCS terminals, particularly across national borders. These arrangements have been designed to promote the free circulation of GMPCS terminals internationally, while respecting national regulatory frameworks.

In this context, GMPCS network operators duly registered at the ITU under the GMPCS-MoU are generally not subject to individual licensing requirements for service provision in Mauritius. However, GMPCS terminals registered in Mauritius, by virtue of being transmitting stations are subject to a Category 3 (Engineering licence) in accordance with the ICT Act.

By contrast, NGSO broadband internet systems, including satellite terminals operate in the Fixed Satellite Service frequency bands and are typically fixed rather than mobile in nature. As such, these fixed services and devices fall outside the scope of the GMPCS-MoU and are not covered by its provisions regarding terminal circulation, licensing exemptions and access to traffic data.

6.0 DECISION ISSUED UNDER SECTION 17(3) OF THE ICT ACT

The ICT Authority,

considering

- a) its object under section 16(c) of the ICT Act to licence and regulate the information and communication services;
- b) its object under section 16(d) of the ICT Act to ensure that information and communication services including telecommunication services are reasonably accessible at affordable cost

nationwide and are supplied as efficiently and economically as practicable and at performance standards that reasonably meet the social, educational, industrial, commercial and, other needs of Mauritius;

- c) its object under section 16(e) of the ICT Act to encourage the optimum use of information and communication technologies in business, industry and the country at large, the introduction of new technology and the investment in infrastructure and services;
- d) its function under section 18 (1) (b) of the ICT Act to provide economic and technical monitoring of the information and communication industry in accordance with recognized international standard practices, protocols and having regard to the convergence of technology;
- e) its function under section 18 (1) (c) of the ICT Act to promote and maintain effective competition, fair and efficient market conduct between entities engaged in the information and communication industry in Mauritius and to ensure that this Act is implemented with due regard to the public interest and so as to prevent any unfair or anti-competitive practices by licensees;
- f) its function under section 18 (1) (f) of the ICT Act to exercise licensing and regulatory functions, or grant such authorisation, approval or clearance, in respect of information and communication services in Mauritius including the determination of types and classes of licences and the regulation of tariffs and alterations thereto;
- g) its function under section 18(1)(n) of the ICT Act to ensure the safety and quality of every information and communication services including telecommunication service and, for that purpose, determine technical standards for telecommunication network, the connection of customer equipment to telecommunication networks;
- h) that under section 24(1) ICT Act, no person shall operate an information and communication network or service including telecommunication network or service unless he holds a licence from the Authority;
- i) that under the First Schedule of the ICT Act, provision of internet services to the public within the territory of the Republic of Mauritius is subject to an Internet Service licence;
- j) that NGSO satellite services, because of their non-territorial nature, present several regulatory challenges including: bypassing national infrastructure, data protection and jurisdiction, traceability and enforcement issues, market disruption and regulatory imbalance;
- k) that the operation of NGSO Gateway Earth Station, and satellite terminals within the territory of the Republic of Mauritius, being radio equipment that uses frequency spectrum are subject to an engineering licence and shall be type approved by the ICT Authority.
- l) that fixed satellite internet service and fixed satellite equipment using NGSO satellite systems fall outside the scope of the GMPCS-MoU;

- m) that under section 25(2)(b) of the ICT Act, an Authorised officer, designated by the ICT Board, may at all reasonable times inspect any installation, apparatus or premises relating to a licence;
- n) that under section 26 (b) and (c) of the ICT Act, every licensee shall maintain an installation, apparatus or premises relating to his licence in such condition as to enable him to provide a safe, adequate and efficient service and provide access thereto to an authorized officer;
- o) that in accordance with section 26 (d) of the ICT Act, every licensee shall furnish to the Authority such reports, accounts and other information relating to his operations as the Authority may require;
- p) that under section 5(1) of the Information and Communication Technologies (Clearance to Import ICT Equipment) Regulations 2019, no person shall import an ICT equipment unless he obtains clearance from the Authority for the importation of such equipment.

Considering further

- a) that Sections 28, 29, and 30 of the Cybersecurity and Cybercrime Act 2021, relating to Powers of Access, Search and Seizure for the Purpose of Investigation, Real-Time Collection of Traffic Data, and Interception of Content Data, empower an investigatory authority to apply for warrants to access, search, and seize relevant data, extend searches to other systems, collect real-time traffic and content data, and compel service providers to assist and maintain confidentiality in these actions for the purpose of investigation or prosecution of an offence.;

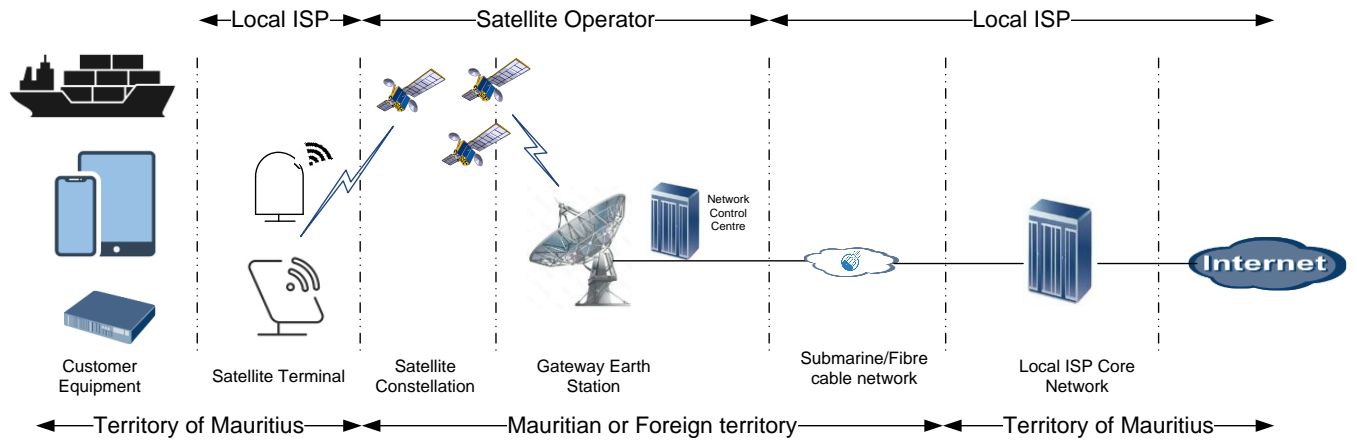
decides that:

1. NGSO satellite networks shall obtain prior authorization from the Authority, through an Internet Service Provider duly licensed under the ICT Act, to provide broadband internet services through fixed satellite terminals within the territory of the Republic of Mauritius;
2. NGSO Satellite networks seeking authorization under Decision 1, shall be duly registered with the ITU in accordance with relevant provisions of the ITU Radio Regulations and make use of frequencies coordinated by the ITU;
3. Operation of a satellite terminal shall be subject to an Earth Station (in a Fixed Satellite Service) licence issued by the ICT Authority or such other licence as may be prescribed;
4. Licensed Internet Service providers shall retain full ownership on the satellite terminals that they provide to their subscribers for accessing their services and the satellite equipment shall be collected from the subscriber once the services have been terminated;
5. All the provisions of the Internet Service licence including Guidelines, Directives and Decisions issued for Internet Service Providers shall be applicable to the internet service provided through the NGSO Satellite networks, similar to internet services provided through terrestrial mediums;
6. The Internet Access to the public shall be done exclusively through IP address blocks duly registered to and geo-located within the territory of Mauritius;

7. The Internet Service Provider shall maintain real time dashboards, at its premises, showing key satellite network information such as terminal status, terminal serial number, location and IP address of all its subscribers within the territory of Mauritius;
8. Internet Access to the public shall be provided through a Point of Presence, established and maintained within the territory of the Republic of Mauritius, which may either be:
 - a. the internet breakout point of the local Internet Service Provider Core Network, from which all traffic is routed to the internet, as depicted in **Scenario 1 in Annex 1**; or,
 - b. such network equipment, owned and installed by the local Internet Service Provider at the customer premises, which interfaces on one hand the private network of the customer and on the other hand the satellite terminal, as depicted in **Scenario 2 in Annex 1**. This network equipment shall be capable of being managed remotely from the Internet Service Provider Core Network located in Mauritius. The Internet Service Provider shall also be capable of implementing such filtering policy as may be directed by the Authority on the network equipment.
9. Satellite terminals shall be authenticated based on their geographic location, serial number, and assigned IP address prior to being registered on the network;
10. No person shall be authorised to use a satellite terminal without holding an appropriate subscription from an Internet Service Provider duly licensed by the Authority;
11. No person, other than a duly licensed Internet Service Provider, shall be granted clearance to import a satellite terminal or other related NGSO equipment;
12. Any licence/authorisation/clearance to be issued or granted for any NGSO satellite services will be subject to the Information and Communications Technologies Act and any other applicable laws in Mauritius.

Annex 1

Scenario 1: Internet traffic is routed through local ISP Point of Presence located in Mauritius



Scenario 2: Internet traffic cannot be routed through local ISP Point of Presence located in Mauritius

