



**UGANDA
COMMUNICATIONS
COMMISSION**

**THE UGANDA COMMUNICATIONS
COMMISSION FRAMEWORK FOR SATELLITE
COMMUNICATION**

SEPTEMBER 2022

TABLE OF CONTENT

TABLE OF CONTENT	i
LIST OF TABLES.....	iv
CHAPTER-1	1
INTRODUCTION	1
CHAPTER-2	3
GENERAL PROVISIONS	3
2.0. BACKGROUND	3
2.1 AMENDMENT	3
2.2 OBJECTIVES.....	3
2.3 INTERPRETATION	4
2.4 APPLICABLE LEGISLATIONS AND REGULATIONS	7
2.5 SCOPE.....	7
2.6 APPLICABILITY AND EXCEPTIONS.....	7
2.7 AUTHORISATION FOR SATELLITE COMMUNICATIONS.....	7
2.8 ELIGIBILITY	9
2.9 LICENSE ISSUANCE.....	10
2.10 LICENSE RENEWAL	10
2.11 SUSPENSION AND WITHDRAWAL.....	11
2.12 KEY CONDITIONS FOR LICENCING AND AUTHORISATION	11
2.13 REPORTING REQUIREMENTS.....	13
2.14 STAKEHOLDER RESPONSIBILITY	13
2.15 LAWFUL INTERCEPTION	14
2.16 TRANSFERS AND CHANGE OF NAME.....	14
2.17 ENFORCEMENT AND REMEDIAL ACTIONS	15
CHAPTER-3	16
EARTH STATIONS	16
3.0. INTERPRETATIONS	16
3.1 AUTHORISATION PROCESS	16
3.2. NATIONAL AND INTERNATIONAL COORDINATION	19
3.3. AUTHORISATION FEES	20
3.4. AUTHORISATION TENURE	20
CHAPTER 4	21
VERY SMALL APERTURE TERMINAL (VSAT)	21
4.0. INTERPRETATIONS	21

4.1. LICENSING/ AUTHORISATION PROCESS	21
4.2 LICENCE/AUTHORIZATION FEES.....	24
4.3 LICENSE/AUTHORIZATION TENURE.....	25
CHAPTER 5	26
GLOBAL MOBILE PERSONAL COMMUNICATIONS BY SATELLITE (GMPCS)	26
5.0. INTERPRETATIONS	26
5.1. LICENSING/ AUTHORISATION PROCESS	27
5.2 LICENCE/AUTHORIZATION FEES.....	31
5.3 LICENSE/AUTHORIZATION TENURE.....	31
CHAPTER 6	32
EARTH STATION IN MOTION (ESIMS)	32
6.0. INTERPRETATIONS	32
6.1. ESIMS OVERVIEW	32
6.2. LICENSING/ AUTHORIZATION PROCESS	33
6.3 LICENCE/AUTHORIZATION FEES.....	36
6.4 LICENCE/AUTHORIZATION TENURE.....	36
CHAPTER 7	37
SMALL SATELLITES	37
7.0. INTERPRETATIONS	37
7.1. LICENSING / AUTHORISATION PROCESS	37
7.1.2 NGSO Where Coordination is Not required	38
7.1.3 NGSO Where Coordination is required.....	40
7.2 LICENCE/AUTHORIZATION FEES.....	41
7.2.1 ITU Fees	41
7.2.2. Commission Fees.....	41
7.3 LICENSE TENURE.....	41
CHAPTER 8	42
SPACE SEGMENT.....	42
8.0. INTERPRETATIONS	42
8.1. SATELLITE FILING	42
8.2. DUE DILIGENCE	45
8.3. COMPLIANCE WITH INTERNATIONAL TREATIES.....	45
8.4. LICENCE FEES	45
8.4.1. ITU Fees.	45
8.4.2. Commission Fees.....	45
8.5 LICENSING PROCESS	46
8.5.1 Satellite Operator.....	46
CHAPTER 9	47
LANDING RIGHTS.....	47

9.0. REGULATORY PROVISIONS	47
9.1. LICENSING/ AUTHORISATION PROCESS	47
9.2. LICENCE FEES	49
9.3. LICENSE TENURE.....	50
CHAPTER 10	51
MANAGEMENT OF UGANDA’S BSS AND FSS ENTRY PLANS	51
10.0. INTERPRETATIONS	51
10.1. COMMISSION’S ROLE	51
Annex1: Satellite Application form/Space Segment.....	53
Annex 2: Satellite application forms/Terrestrial segment.....	58
Annex 3: Type Approval application Form.....	61
Annex 4: Landing Rights application Form	62

LIST OF TABLES

Table 1: ITU Appendix 30/30A/30B Frequency Plan51
Table 2: Commenting procedures on Special Sections.....52

CHAPTER-1

INTRODUCTION

Space communication is any radiocommunication involving the use of one or more space stations or the use of one or more reflecting satellites or other objects in space. A satellite is basically a body that orbits around another body in space.

Satellite communication is one of the mediums traditionally used by different industries to address communications aspects in the provision of various services. These man-made or artificial satellites act as relay stations in space for the transmission of voice, video, and data communications. Unlike terrestrial communication systems, satellites do have the advantage of ubiquitously communicating and collecting data. They are thus used by governments, academia, commercial organizations, and others in various aspects or applications including but not limited to:

- a)* Broadcasting (television & radio);
- b)* Remote Sensing & Imaging to facilitate meteorology, earth exploration, and other government uses;
- c)* Mobile communications and broadband connectivity – extending voice and data services to users almost anywhere, far beyond the coverage provided by cellular or terrestrial networks. This also includes Satellite-based connectivity for low-data rate communications with remote Internet of Things (IoT) devices;
- d)* Global Positioning System (GPS) & Navigation – providing location-based services for navigation applications in various sectors or industries;
- e)* Emergency Response & Disaster Relief;
- f)* Scientific purposes e.g. space physics exploration, astronomy, and microgravity experiments.

Developments in the satellite industry have, once again, re-ignited the attractiveness of satellites as an alternative to addressing communications needs in various countries.

However, satellite operations involve spectrum and orbital slots that are both valuable and scarce resources. These resources must therefore be well planned, managed, and protected at both the international and national level to ensure effective and efficient use while mitigating interference to the extent possible.

The international nature of satellite services necessitates that the management of the satellite orbits and spectrum takes place within a framework of international rules, which are administered by the International Telecommunication Union (ITU), as further described herein.

The right to use orbital and spectrum resources for a satellite network or system does involve the respective national government bodies assigning frequencies and orbital requirements, based on the appropriate procedures (with international coordination and recording) for the space segment and earth stations of their networks (governmental, scientific, public, and private).

The Commission thus undertakes the development of this framework to facilitate the effective management of satellite resources and operations in Uganda to realize, among others, the Vision 2040 whose achievement necessitates strengthening essential national information and communications technologies (ICTs) infrastructure.

The authority to develop this framework is derived from among others, Sections 5(1)(c), (d) and 25(1)(b) of the Uganda Communications Act, 2013 (the “Act”), the Uganda Communications (Licensing) Regulations concerning radio communication services and installation and operation of radio communications services’ equipment.

CHAPTER-2

GENERAL PROVISIONS

2.0. BACKGROUND

- a) The Commission is cognisant that all satellites networks comprise of three segments communicating using radio waves:
- i)* space systems involving part or all of one or more satellites;
 - ii)* ground segment or earth stations including Telemetry Tracking & Command, hubs, gateways to control and manage payload and satellite platforms;
 - iii)* user segment (fixed and/or mobile users).
- b) The Commission also recognizes that a satellite network requires spectrum for the uplink (Earth to space direction) from the stations to the satellites as well as the downlink (space-to-Earth direction) path from the satellite to the stations in the respective service areas. An orbital position in space is also required for the operation of the satellite.

2.1 AMENDMENT

This framework shall be subjected to periodic reviews to enable the inclusion of any new developments due to the evolution of the space communication including satellite communication and/or communications industry, changes in policy and regulations as well as emerging international best practices.

2.2 OBJECTIVES

The objectives of this Framework are to;

- a)* guide and facilitate the harnessing of space communication including satellite technology in Uganda;
- b)* improve coordination of satellite networks and preserve the allocated national satellite frequencies and orbital resources under the International Telecommunication Union (ITU) space services plan;
- c)* promote innovation in the space communication including satellite communication industry.

2.3 INTERPRETATION

The terms in this framework shall carry the interpretation used in the ITU Radio Regulations 2020 (RR20), Uganda Communications Act 2013 (the Act 2013), and regulations issued thereunder unless otherwise defined below.

“An agent” any person (natural or legal person) authorized to act or perform services on behalf of a applicant/licensee or to represent and bind the applicant/licensee in dealings with the Commission or a third person;

“Amateur-satellite service” A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service;

“Administration” shall refer to governmental department or service responsible for discharging the obligations undertaken in the Constitution of the ITU, in the Convention of the ITU, and in the Administrative Regulations. In Uganda, the Administration is Uganda Communications Commission;

“Broadcasting-satellite service (BSS)” A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the public;

“Coordination” as described in Section II, Article 9 of Radio Regulations, is a formal regulatory obligation both for an administration seeking recognition of a frequency assignment for its network and for an administration whose existing or planned services may be affected by that assignment.

“Earth Exploration Satellite service” is a radio communication service between earth stations and one or more space stations, which may include links between space stations in which: -

- i)* information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from active sensors or passive sensors on Earth satellites;
- ii)* similar information is collected from airborne or Earth-based platforms;
- iii)* such information may be distributed to earth stations within the system concerned;
- iv)* platform interrogation may be included.

This service may also include feeder links necessary for its operation.

“Earth Station” means either a station located on the earth’s surface or within the major portion of the earth’s atmosphere and intended for communication:

- v)* with one or more space stations, or
- vi)* with one or more stations of the same kind by means of one or more reflecting satellites or other objects in space.

“Earth Station Provider” means the owner of an Earth Station

“EIRP (Effective Isotropic Radiated Power)” is the product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (absolute or isotropic gain).

“End User Terminal” means an end user device/apparatus with capabilities to transmit and/or receive signals directly from the satellite.

“Fixed-satellite service (FSS)” A radiocommunication service between earth stations at given positions, when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases, this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service; the fixed-satellite service may also include feeder links for other space radiocommunication services.

“Geo-Stationary Orbit (GSO) satellite” means a satellite that occupies an orbital location at 36,000 km above earth whose circular and direct orbit lies in the plane of the Earth's equator and remains in a stationary position relative to the Earth itself due to the satellite having a period of revolution equal to the period of rotation of the Earth about its axis.

“International Telecommunication Union (ITU)” is the specialized agency of the United Nations (UN) for information and communication technologies.

“Global Mobile Personal Communications Systems (GMPCS)” is a personal communication system providing transnational, regional, or global coverage from a constellation of satellites accessible with small and easily transportable terminals;

“Landing right” the authorisation granted to a foreign-licensed satellite operator to transmit signals to and/or from the territory of Uganda.

“Licensee” is a holder of a license, or an authorization granted under the Uganda Communications Act of 2013 for the establishment and provision of satellite services

“Master International Frequency Register (MIFR)” is an ITU database in which all satellite network fillings and terrestrial frequency assignments are registered for international recognition and interference protection. It consists of lists set out by every administration indicating its coordinated frequencies, its assigned preferential frequencies, its shared frequencies, its frequencies coordinated for planned radiocommunication networks, and its frequencies used based on geographical network plans.

“Non-Geo-Stationary Orbit (NGSO) satellite” means a satellite that does not maintain a stationary position but instead moves in relation to the Earth's surface. These occupy a range of orbital positions with Low Earth Orbit (LEO) satellites are located between 700km-1,500km from the Earth and Medium Earth Orbit (MEO) satellites are located at 10,000km from the Earth);

“Radio Regulations (RR)” are part of the Administrative Regulations of the legal framework of ITU that govern the global use of radio-frequency spectrum and satellite orbits. These have international treaty status and are thus binding on the ITU Member States

“Satellite communications station (Station)” is a station used to transmit, receive, or transmit and receive messages by means of satellite communication. This includes earth stations and portable satellite communication terminals.

“Satellite link” is a radio link between a transmitting earth station and a receiving earth station through one satellite

“Satellite operator” means the legal person that operates a space station to provide satellite transmission capacity or satellite facilities

“Satellite system” A space system using one or more artificial earth satellites.

“Space object” is any object launched into outer space or orbit from Earth including satellites (and components of the satellite orbiting the earth, or any other celestial body), rockets launched into space as well as component parts of the rockets, and objects constructed in space,

“Space research service” is a radio communication service in which spacecraft or other objects in space are used for scientific or technological research purposes.

“Satellite Service Provider” shall refer to any natural or legal person licensed by the Commission to provide Satellite Services within the territory of Uganda.

“Space station” is a station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.

“Satellite Capacity Provider” any natural or legal person that leases a space segment or proportion of the satellite's bandwidth (capacity) from a satellite operator and resells it to the satellite service providers, government and other authorised satellite users

“Transponder” refers collectively to a transmitter-receiver subsystem on board the satellite that processes, amplifies, and retransmits a range of frequencies (the transponder bandwidth) to another location/terminal/antenna on the earth.

“vendor” shall refer to a natural or legal person engaged in the sale and distribution of satellite communication equipment and devices in Uganda.

2.4 APPLICABLE LEGISLATIONS AND REGULATIONS

The following treaty documents, statutory instruments, and regulatory provisions shall apply to the implementation of this framework:

- a) ITU Radio Regulations (RR);
- b) The Uganda Communications Act 2013;
- c) Regulation of Interception of Communication Act, 2010;
- d) Uganda Communications (Licensing) Regulations 2019;
- e) Uganda Communications Commission Spectrum Management Guidelines 2017;
- f) Uganda Communications Commission Spectrum Assignment Framework 2019;
- g) Uganda Communications Commission Spectrum Variation and Withdrawal Guidelines 2020.

2.5 SCOPE

This framework outlines principles, best practices, and procedures that shall guide the administration and the use of satellite communications in Uganda.

The provisions of this framework cover authorization requirements, and obligations for the satellite operators, service providers, vendors, agents; the authorization of earth or ground station facilities; and the authorization of users of satellite services. The specific provisions for the respective satellite operations/segments are outlined in the subsequent chapters.

2.6 APPLICABILITY AND EXCEPTIONS

This framework shall apply to all space communication networks, service users (as applicable), equipment vendors, operators, and/or agents in Uganda.

2.7 AUTHORISATION FOR SATELLITE COMMUNICATIONS

- 2.7.1 No person shall use or operate any apparatus for the transmission of energy or communications or signals by satellite communications in the territory of Uganda except under, and in accordance with, an appropriate licence or authorization granted by the Commission.
- 2.7.2 For avoidance of doubt in 2.7.1 above, all persons wishing to establish a terrestrial communication infrastructure in the national geographical territory of Uganda shall be required to obtain a public infrastructure provider and a public service provider licenses for provision of communications services directly to the end users in accordance with the provisions of the licensing regime as defined in the Uganda Communications (Licensing) Regulations, 2019.

2.7.3 The Commission shall issue a radiocommunication authorization and/or a communications license, for the following;

- a) space activities including;
 - i) the launching of a GSO/NGSO space object (*including parts of a space object, its launch vehicle, and parts thereof*) into space,
 - ii) command and control of objects in space, and;
 - iii) the returning of a space object to earth (as applicable);
- b) non-commercial use or operation of small satellites including research or amateur usage;
- c) Landing rights to satellite operators to exploit the capability of emission and/or reception of signals and the frequency bands associated to foreign satellite systems to provide satellite capacity within the territory of Uganda, directly or through a third party;
- d) For the operation of one or more gateway stations or network control stations (hubs), fixed satellite earth stations, and mobile satellite earth stations mounted on vehicles, aircraft, water vessels, or trains. These include large antenna earth stations diameter that are five (5) meters or more and small antenna earth stations that are less than five (5) meters operating within the network. This also includes registration of operators of earth stations used to receive, process, and transmit broadcasting video and sound signals between the earth and satellites in space. Receive-only devices and earth stations shall be exempted from licensing/authorization may be registered with the Commission depending on whether these are operated and maintained by a licensed service provider;
- e) individual use or end-users of complementary ground components of mobile satellite systems and satellite terminals, small-fixed Earth Stations (e.g., Very Small Aperture Terminal - VSATs), and Land Mobile Terminals (e.g. Satellite phones, GMPCS);

2.7.4 The licenses and/or authorisations applicable to the various satellite services are highlighted in the table below.

CATEGORIES OF OPERATION					
<i>Requirement</i>	<i>Ugandan Satellite operator</i>	<i>Foreign-licensed Satellite operators</i>	<i>Satellite Service Provider that is not a satellite operator</i>	<i>End-user terminal</i>	<i>Earth Stations (Gateways, VSATs etc,)</i>
Space Licence	Yes	No	No	No	No
Land Right	No	Yes	No	No	No

PSP	Yes (if engaging in provision of satellite communications services)	Yes (if engaging in provision of satellite communications services)	Yes for communications services	No	No
PIP	Yes (if installing terrestrial communication infrastructure)	Yes (if installing terrestrial communication infrastructure)	Yes (if installing terrestrial communication Infrastructure)	No	No
Spectrum Authorization	No	Yes (as applicable)	Yes (as applicable)	Yes with mutual recognition for a short stay.	Yes, including receive-only earth stations that require protection.

2.8 ELIGIBILITY

- 2.8.1 Applicants must be eligible to hold a license as per the eligibility criteria set out in sections 2 and 38 of the Uganda Communications Act 2013;
- 2.8.2 A radio frequency spectrum authorization to facilitate Space communication activities or needs shall only be granted to a company duly incorporated in Uganda or a statutory body established under the laws of Uganda, and in accordance with sections 21, 25 and 26 of the Uganda Communications Act 2013;
- 2.8.3 An authorization for a ground-based satellite communication station may be issued to an individual, company, or organization as applicable, such as those listed below:
 - a) Broadcast satellite service providers,
 - b) Government ministries, departments, and agencies for fulfilling their own communication needs,
 - c) Telecommunications public service providers,
 - d) Foreign missions and embassies,
 - e) Universities,
 - f) others as shall be specified
- 2.8.4 Satellite operations in the licensed-exempted bands and/or amateur satellite bands consistent with Article 5 of the Radio Regulation as well as the Uganda National Table of Frequency Allocation shall not be required to apply for spectrum

authorization. This exemption is conditional on the subject satellite network having undergone coordination with the relevant regional and international organizations including among others the ITU, and the international amateur radio Union (IARU) in the case of the amateur satellite operations in the very high frequency (VHF) or ultra-high frequency (UHF), or other bands commonly used by small satellites operating in the non-geosynchronous (NGSO) orbit in contrast to the legacy spectrum bands or ranges in the L, S, C, Ku, and Ka bands used by high capacity satellites.

2.9 LICENSE ISSUANCE

- 2.9.1 A successful applicant shall be granted a license and/or authorization as applicable stipulating rights, terms, and obligations.
- 2.9.2 A radio frequency spectrum authorization shall be granted to facilitate the operation or communications by one or more space stations that communicate with ground satellite communication stations.
- 2.9.3 Landing rights shall be granted to foreign-owned and registered satellites to provide satellite capacity in Uganda. The establishment of a local office or designation of a local representative in Uganda is a mandatory requirement.
- 2.9.4 An authorization shall be issued to install and operate satellite communications station(s) in a specified frequency band, between specific points on the earth surface as the case may be, for communications through earth-orbiting satellites.
- 2.9.5 Consideration of applications shall be on a first come first served basis in accordance with the key conditions under licensing and authorisation in section 2.12.
- 2.9.6 Where the satellite operator provides connectivity or communication services directly to end-users in Uganda (*other than through a wholesale arrangement with an operator licensed in Uganda*), a National Public Service Provider license shall be required in addition to Landing Rights or space licence.

2.10 LICENSE RENEWAL

- 2.10.1 The Commission may renew a license or authorization subject to the necessary renewal conditions being met.

2.10.2 Before the expiry of the running license/authorization, the licensee shall apply to the Commission for renewal of the same, if they wish to renew.

A renewal application may be declined where:

- a) a breach of license and/or authorization conditions occurred;
- b) a fundamental reallocation of spectrum to a new service is required;
or;
- c) an overriding policy need arises.

2.11 SUSPENSION AND WITHDRAWAL

The Commission may suspend or withdraw a license or authorization where:

- a) the licensee fails to meet any condition of the license/authorization,
- b) the licensee breaches the Uganda Communications Act 2013, the Regulations issued thereunder, or directives issued by the Commission, or
- c) the Commission changes a frequency allocation or spectrum use policy.

2.12 KEY CONDITIONS FOR LICENCING AND AUTHORISATION

- 2.12.1 Before operating any space, station or providing any satellite services, the technical details of the serving satellite(s) must have been duly notified to ITU and coordinated with other satellite networks and/or countries as per the respective ITU frameworks;
- 2.12.2 Licensees shall be required to conform to all conditions that shall be specified in the respective license and/or authorization, and the directives issued by the Commission;
- 2.12.3 A licensee shall ensure that their installations, equipment, and operations do not cause harmful radio interference to other satellite networks and terrestrial services or unduly impose any constraint on their future development;
- 2.12.4 Satellite operators shall, upon request by the Commission and by the licensed earth stations authorized to transmit to their satellites, provide the information needed to avoid or mitigate unacceptable interference to other users. This may include the polarization angles for proper illumination of a given transponder.

- 2.12.5 The licensee shall comply with any inspections or requests for information that the Commission may from time to time make, in accordance with its powers under the law.
- 2.12.6 The Licensee shall comply with the applicable radiation and/or emission standards prescribed by the International Commission for Non-Ionizing Radiation Protection (ICNIRP), other internationally recognized standards, or any other applicable standards that may be specified by national laws or by the Commission;
- 2.12.7 Where the authorized area of operation is adjacent to a neighboring country, the Licensee shall ensure that the radio emissions from its apparatus and equipment do not go beyond the national territory of Uganda without prior approval of the administration of the affected country.
- 2.12.8 The Licensee shall not permit or cause any unauthorized person to operate the stations or have access to the stations and equipment contained therein. The Licensee shall ensure that persons authorized to operate the stations observe the conditions of the license and or authorization at all times.
- 2.12.9 The Licensee shall maintain up-to-date records of the list of the stations, including the installation location of the stations, name of the equipment manufacturer, model, serial number of the equipment, frequency(s), output power, date of purchase, and date of disposal of the equipment. This list shall be made available for inspection by Commission as and when requested.
- 2.12.10 Every Licensee and persons authorized by the Licensee to operate the stations shall ensure that the stations and the equipment comprised therein are not used for any unlawful purposes or misused in any way. A failure to comply with this condition amounts to an offense under the Uganda Communications Act 2013 and other relevant national laws.
- 2.12.11 In cases where the licensee is not the satellite operator, the licensee must have a valid arrangement in place with the operator of the satellite network, or its representative, to use the satellite capacity for the provision of services in Uganda.
- 2.12.12 Satellite operators and/or associated satellite service providers shall ensure that all the associated end-user equipment meet all applicable Uganda communications equipment standards and is duly type approved by the Commission before importation, installation, and use in Uganda;
- 2.12.13 Any end-user satellite communications equipment brought into Uganda by visitors for use while temporarily located in Uganda must:

- a)* meet any applicable Uganda radio equipment and communications standards and be registered by the Commission for use in Uganda; or
- b)* be type-approved by an administration that is a signatory to the Global Mobile Personal Communications by Satellite Memorandum of Understanding (GMPCS-MoU) and must carry the GMPCS-MoU mark.

2.12.14 All individual satellite communications subscribers or end users including visiting portable satellite terminal users shall comply with the subscriber registration requirement in accordance with the Regulation of Interception of Communications Act 2010, to use the services within the national territory of Uganda.

2.13 REPORTING REQUIREMENTS

The licensee shall submit an annual report for each year of operation in accordance with section 44 of the Uganda Communications Act 2013, including:

- a)* a statement indicating continued compliance with all licence/authorization conditions;
- b)* an update on the provision of satellite services, including the expansion of these services;
- c)* an update on the satellites used for the provision of the services, the spectrum bands used, and the number of satellite communication stations operating within Uganda.

2.14 STAKEHOLDER RESPONSIBILITY

The following are the primary stakeholders and the respective responsibilities under this framework;

1 Uganda Communication Commission

- a)* Amend and update the framework and National Table of Frequency Allocations periodically;
- b)* Assess and process applications for licences and authorizations for space communications services,
- c)* Monitor and enforce compliance on the use of this framework,
- d)* Interpretation of the provisions of this Framework.

2.14.2 Operators, Vendors, Service Providers, and Users

- a)* Apply for a licence(s) and or authorization(s) prior to operation, use, and/or provision of satellite communication services;

- b)* The licensee/authorized person must ensure compliance with the conditions contained in the licence and/or authorization. In addition, it is the responsibility of the licensee/authorized person to ensure that his/her licence and authorization details with the Commission remain valid and are updated;
- c)* Adhere to the provision of this framework and of the licence or authorization terms and conditions/obligations;
- d)* Ensure operations comply with the provisions of the applicable national laws, ITU radio regulations, and international best practices;
- e)* The satellite operator will solely be responsible for meeting all the obligations and interference management requests arising from its filing in accordance with the provisions of the ITU Radio Regulations;
- f)* A satellite operator, vendor, or service provider shall be individually and/or collectively held liable for any unlawful sale, purchase, installation, operation, transmission, information sharing, and engagement in any forms of unlawful satellite communication operations other than those authorized by the Commission, and in actions that constitute a threat to national security;
- g)* Space station licensees are responsible for maintaining complete and accurate technical details of current and planned transmissions over their satellites and shall require that authorized users of transponders on their satellites, whether by tariff or contract, provide any necessary technical information in this regard including that required by the Commission;
- h)* A licensee shall seek the necessary clearance from the other relevant authorities in Uganda concerning the setting up of any earth station facilities. These authorities may include but are not limited to the respective local government authorities, national security agencies.

2.15 LAWFUL INTERCEPTION

A licensee shall provide and maintain lawful interception capabilities to facilitate the implementation of the Regulation of Interception of Communications Act (RICA) 2010.

2.16 TRANSFERS AND CHANGE OF NAME

- 2.16.1 Licences and authorizations may not be transferred or assigned without a full review of the request and approval by the Commission in accordance with section 42 of the Uganda Communications Act 2013.
- 2.16.2 Without limiting the generality of 2.16.1, “transfer” includes any leasing, sub-leasing, or other disposition of the rights and obligations of the licence, and also includes any change that would have a material effect on the ownership or control in fact of the licensee.

2.17 ENFORCEMENT AND REMEDIAL ACTIONS

This framework shall be enforced in accordance with the provisions of the Uganda Communications Act 2013, and the Regulations issued thereunder.

CHAPTER-3

EARTH STATIONS

3.0. INTERPRETATIONS

- a) **“Fixed Earth Station”** is an earth station that is installed and operating at a single specified or fixed location on the earth’s surface in order to carry out the communications between specified fixed points using one or more satellites; or as a feeder link for mobile communication satellites; or for the broadcast of satellite signals.
- b) **“Mobile Earth Station”** is an earth station containing satellite mobile terminal equipment or one that is not installed at a fixed location to enable mobile communications.
- c) **“Transportable Earth Station”** is a fixed earth station that is transportable, operating at varying locations but remains in a fixed location during operation.

3.1 AUTHORISATION PROCESS

The authorization for earth stations recognizes their differentiation based on the following:

- i. functionality - transmit-and-receive, receive-only, or transmit-only stations;
- ii. size (diameter of the antenna) – very small, small, medium, and large terminals (*less than 2.4 meters or 2.4 meters and above*);
- iii. portability – fixed, transportable, or mobile earth stations
- iv. type of service - Fixed Satellite Service (FSS), Broadcast Satellite Service (BSS), or Mobile Satellite Service (MSS) Earth Stations;
- v. usage - single function stations (*e.g. receive-only terminals used at a television broadcast station to pick up contribution feeds*), gateway stations (*-serving as an interface between the satellites and the terrestrial networks and also as transit points between satellites*), teleports (*functions as a hub that connects a satellite or geocentric orbital network with a terrestrial telecommunications network*), or end user terminals;
- vi. frequency band(s) in which they operate such as the L, S, C, Ku, or Ka-Band;
- vii. duration of use – permanent from a fixed location, occasional use from different locations or temporary for a set time-bound event;
- viii. satellite orbital system – operating with Non-Geostationary or Geostationary Satellites.
- ix. Ownership arrangements – earth stations operated and maintained as customer terminals by a licensed satellite service provider or individually or independently operated as a private network by end user

3.1.1. Technical and Regulatory Requirements

The following technical requirements shall apply to the fixed and transportable earth stations;

- a)* All transmissions to the satellite must be authorized by the satellite operator, which must also be consistent with Uganda's National Table of Frequency Allocation;
- b)* Earth station antennae shall not be employed for transmission at elevation angles of less than ten (10) degrees measured from the horizontal plane to the direction of maximum radiation. This requirement is aimed at protecting terrestrial services from potential interference emanating from earth stations;
- c)* The Earth Station must not be situated within 100 meters of a radio installation operating within ± 250 MHz of the Earth Station carrier frequency;
- d)* The component of effective isotropic radiated power directed towards the horizon and the minimum elevation angle above the horizontal, must comply with ITU Radio Regulations and not exceed those limits specified by Radio Regulations RR Nos. 21.8 – 21.15;
- e)* The earth station must obtain satisfactory site clearance and coordination for operation at the specified location prior to commencing operation;
- f)* The deployment of satellite earth stations in areas around certain airports shall be in coordination with the Uganda Civil Aviation Authority (UCAA) to protect aircraft from earth stations operating near airports;
- g)* The serving satellite shall have undergone the relevant ITU-R coordination requirement (as applicable);
- h)* All earth stations associated with the satellite network in f) above shall comply with the obtained coordination agreement for the subject satellite and/or other satellite networks with which the relevant Earth station is associated;
- i)* All transmissions in the fixed-satellite service must be terminated prior to any change of location as the transportable earth station unless an exemption or waiver is granted by the Commission;

- j)* Licensees must ensure that their apparatus (i.e., equipment with antennae) meets national and international safety standards. To this end, all equipment shall be required to type-approve with the Commission before use;
- k)* The antenna radiation pattern shall be required to meet the minimum performance specified by ITU Recommendation ITU-R S.580 or ITU-R S.465 or both;
- l)* Earth stations shall only be authorized to transmit to and receive from the satellite which is specified in the respective earth station authorization;
- m)* Satellite operator or a satellite service provider shall be required to notify the Commission of any planned or pending relocation of its transportable earth station, fifteen working days prior to deployment;
- n)* all the provisions above shall not apply to earth stations that do not have transmitting capabilities.

3.1.2. Application Requirement

A person seeking to install and operate a fixed earth station or transportable earth station shall be required to submit a written application letter addressed to the Executive Director of Uganda Communications Commission, and provide the following information;

- a)* copy of company profile including; a certificate of registration issued under the Uganda Company Act 2012 (applicable to local companies), or
- b)* a copy of the certificate of registration of a designated representative of a foreign company or its subsidiary in Uganda issued under the Uganda Company Act 2012;
- c)* duly completed copy of technical application forms in annex-1 and annex-2 to this Framework;
- d)* copies of technical specifications of all equipment planned for deployment as provided for by the equipment manufacturer;
- e)* a brief description of the network architecture and underlying technologies (where applicable or as shall be specified);
- f)* completed equipment type approval forms in annex-3 to this framework;
- g)* provide passport copies or the national identity card of the proprietors.

Where the earth station is to access a non-Ugandan licensed space station, the application shall include all the technical information required for a Space

License application, unless the space station has been granted landing rights by the Commission under provisions herein.

3.1.3. Evaluation of Applications

- a) Applications shall be processed on a first-come, first-served basis, with each application evaluated based on the following criteria:
 - i) the eligibility of the applicant against among others, the relevant provisions of this framework;
 - ii) completeness of the technical submission;
 - iii) efficient use of the spectrum;
 - iv) minimum radio and antenna equipment requirements;
 - v) compliance with international obligations.
- b) Where the applicant does not qualify, a response will be provided within fourteen (14) working days;
- c) Where the submitted information is found to be inadequate, the applicant will be requested to provide the additional missing information;
- d) where the applicant qualifies, the respective authorization will be processed within sixty working days;
- e) Should international coordination be required, the applicant shall be notified of the outstanding requirement;
- f) The Commission shall trigger the coordination process on behalf of the applicant in accordance with Article 9 of the ITU Radio Regulations.

3.1.4. Exemption of Receive only Earth Stations

The deployment of receive-only earth stations in Uganda need not obtain an earth station authorisation to receive transmissions from Ugandan licensed space stations or foreign licensed space stations that have been granted satellite landing rights, provided the space station operator and earth station user comply with all the applicable rules highlighted in this framework and prescribed by the Commission for the respective satellite service. An authorisation may be sought where the earth station user/operator seeks to have protection against harmful interference.

3.2. NATIONAL AND INTERNATIONAL COORDINATION

Article 18.1 of the ITU Radio Regulations states that *“no transmitting station may be established or operated by a private person or by any enterprise without a license issued in an appropriate form and in conformity with the provisions of*

Radio Regulations by or on behalf of the government of the country to which the station in question is subject.”

- a) Uganda Communications Commission reserves the right for coordination and shall on behalf of satellite and/or Earth Station operators, coordinate all earth stations with the ITU to ensure adherence with international obligations in accordance with coordination procedures in Article 9, Appendix 7, and Appendix 4 of the ITU Radio Regulations.
- b) In cases where the Earth Station is using a shared frequency band and the coverage contour extends into the neighbouring Administration's territories, international coordination shall be obtained before authorizations for use are granted. For coverage contours within the national boundary, national coordination shall be obtained for shared frequency bands;
- c) Coordination between the Earth Station and terrestrial services shall apply depending on the location of the Earth station, antenna radiation patterns, emitted power, receiver sensitivity, assigned frequency, and consequently the resulting coordination distance. This shall be mandatory where the earth station is to use shared frequencies with terrestrial radiocommunications services;
- d) For international coordination;
 - i) Earth Station operator through the Commission shall request for coordination with the identified Administrations and submit appropriate information listed in Appendix 4 to the ITU Radio Regulation;
 - ii) the relevant ITU software used for Space Services coordination shall be used to capture the information required for coordination and this shall be sent to the affected administrations;
 - iii) The information shall then be converted into a notification file and submitted to the Bureau including coordination agreements obtained thus far.

3.3. AUTHORISATION FEES

The authorization fees shall be charged in accordance with the provisions of Uganda Communication (fees and fines) Regulations 2019 (as amended) or as shall be guided by the Commission from time to time.

3.4. AUTHORISATION TENURE

The authorization tenure for Earth Stations shall be one year renewable, subject to continued compliance with the terms and conditions/obligations that shall be specified in the license or authorization.

CHAPTER 4

VERY SMALL APERTURE TERMINAL (VSAT)

4.0. INTERPRETATIONS

"Very Small Aperture Terminal (VSAT)" refers to any fixed earth station used to link to satellites operating in C, Ku, and Ka bands and whose antenna diameter shall not exceed 2.4 meters. Technical and operational characteristics of the VSATs shall be in line with recommendation ITU-R S.725 for VSATs.

4.1. LICENSING/ AUTHORISATION PROCESS

The authorization requirements for persons who wish to establish VSAT networks and links shall be dependent on the purpose and precise scope of the VSAT network and links, as outlined below:

- a) VSAT networks and links for own or private use, including intra-corporate communication (i.e., between holding companies and subsidiaries); and communication between legally related companies, or;
- b) VSAT networks and links for the provision of telecommunication services to third parties.

4.1.1. VSAT Technical Requirement

a) Corporate Communication or Private Use

- i) Companies that wish to establish VSAT networks and links for their own use need to apply for a VSAT authorization. An annual individual authorization shall be issued for each VSAT station;
- ii) The VSAT links must be used for the conveyance of the authorized persons' own traffic only and not that between third parties, the provision of public telecommunication services via these VSAT links is strictly prohibited. While different authorized persons may share the use of a VSAT dish, each individual authorized person must gain access via different space segments as well as separate cabling to and from the shared VSAT antennae;
- iii) The authorized person is allowed to receive telecommunication signals from a satellite to a VSAT satellite dish in Uganda (downlink) and/or to transmit signals from a VSAT satellite dish in Uganda to the same satellite or a different satellite (uplink). The scope of service

- covers the reception and/or transmission of telecommunication signals only;
- iv)* The reception and/or transmission of publicly subscribed satellite television and/or sound broadcast signals through the VSAT system is not covered by this authorization;
 - v)* The authorized person shall provide information as requested by the Commission from time to time in connection with this authorization or other obligations as shall be specified;
 - vi)* The authorized person shall be obliged to comply with the technical standards set by ITU as well as national standards which shall include ensuring that the VSAT facility does not interfere with other communication systems or services in the national territory of Uganda or those of its neighbours;
 - vii)* For cross-border communication using VSATs, the applicant should obtain and submit evidence of the necessary approvals and consent from the relevant authorities at the respective destination countries. The Licensee shall be solely liable for any damage/loss resulting from the termination of the VSAT link(s) if any from neighboring administrations;
 - viii)* The applicant shall seek the necessary clearance from other relevant authorities in Uganda concerning the setting up of earth station facilities. These authorities may include, but are not limited to the respective local government authorities, national security agencies, and others as shall be deemed necessary from time to time by the Commission;
 - ix)* Evidence of relevant approvals obtained from the relevant authorities, including authorization of companies in the VSAT network outside of Uganda, must be obtained prior to applying for a VSAT Authorization to the Commission for consideration. Subject to the respective jurisdiction, such approvals may include but are not limited to, operating licenses and radio frequency spectrum authorisations, type-approval, health and safety clearance, environmental protection clearances, a no-objection letter or clearance from security, etc.
 - x)* The applicant is responsible for making sure that the location proposed for the VSAT satellite dish is suitable for the operation of the facility and meets all the safety requirements and standards including the ICNIRP and other national standards that shall be specified by the Commission from time to time or by the laws of Uganda;
 - xi)* Applicants are advised to take appropriate measures such as installing filters in their receiver system to mitigate potential interference to or from other services;

xii) License/Authorization fees paid shall not be refunded (whether on a pro-rated basis or any other basis) if the authorization is cancelled by the Commission either on the authorized persons' request for variation or termination of its authorization, or other, in accordance with the relevant provisions of the Uganda Communications Act 2013 and Regulations issued thereunder.

b) For Provision of Telecommunication Services to Third Parties

- i)* Companies that wish to use the VSAT networks and/or links for the provision of telecommunication services to third parties would need to apply for a public service provider (PSP) license in addition to annual authorisation for each VSAT station or node. The PSP license will allow Licensees to use the VSAT links to provide telecommunication services to customers and carry third-party traffic;
- ii)* Licensees shall also peer and interconnect to public telecommunication networks. This shall however be subject to the Uganda Communications (Interconnection and Access) Regulations of 2019;
- iii)* Provision **4.1.1** (a) (*iv*) - (*xi*) shall also apply.

c) Architectural description

- i)* The Licensee shall maintain and operate a system comprising; a VSAT satellite dish, the VSAT station, and associated equipment;
- ii)* The Licensee shall only purchase their space segments from satellite operators licensed/authorized to beam signals in the national territory of Uganda.

4.1.2. Application Requirements

A person seeking to install and operate a VSAT station shall be required to submit a written application letter addressed to the Executive Director of the Uganda Communications Commission and provide the following information;

- a)* copies of company profile including; a certificate of registration issued under the Uganda Company Act 2012 (applicable to local companies), or
- b)* a copy of the certificate of registration of a designated representative of a foreign company or its subsidiary in Uganda issued under the Uganda Company Act 2012;
- c)* dully completed technical application forms in *annex-1* and *annex-2* to this Framework;

- d) copies of technical specifications of all equipment planned for deployment as provided by the equipment manufacturer;
- e) a brief description of the network architecture and underlying technologies (where applicable or as shall be required);
- f) completed equipment type approval forms in *annex-3* to this framework;
- g) provide either passport copies or national identity card of the proprietors;
- h) other requirements that shall be specified from time to time;

4.1.3. Evaluation of the Applications

Applications shall be processed on a first-come, first-served basis, with each application evaluated based on the following criteria;

- a) applications shall be processed on a first-come, first-served basis, with each application evaluated based on the following criteria:
 - i) the eligibility of the applicant against among others, the relevant provisions of this framework,
 - ii) completeness of the technical submission,
 - iii) efficient use of the spectrum,
 - iv) minimum radio and antenna equipment requirements,
 - v) successful coordination between Administrations and between users,
 - vi) compliance with international obligations;
- b) where the applicant does not qualify, a response will be provided within fourteen (14) working days;
- c) Where the submitted information is found to be inadequate, the applicant will be requested to provide the additional missing information;
- d) Should international coordination be required, the applicant shall be notified of the outstanding requirement;
- e) The Commission shall trigger the coordination process on behalf of the applicant in accordance with Article 9 of the ITU Radio Regulations.

4.2 LICENCE/AUTHORIZATION FEES

The license/authorization fees shall be charged in accordance with the provisions of Uganda Communication (fees and fines) Regulations, 2019 (as amended) or as shall be guided by the Commission from time to time.

4.3 LICENSE/AUTHORIZATION TENURE

- a)* The License/authorization tenure for a VSAT authorization corporate or private use shall be for one year renewable subject to continued compliance with the license terms and conditions;
- b)* For the use of VSAT networks and links for the provision of telecommunication services to third parties, the validity of the VSAT authorization shall be paged to that of the associated Public Service Provider license.

CHAPTER 5

GLOBAL MOBILE PERSONAL COMMUNICATIONS BY SATELLITE (GMPCS)

5.0. INTERPRETATIONS

- a) **“GMPCS system”** is a personal communication system providing transnational, regional, or global coverage from a constellation of satellites accessible with small and easily transportable terminals including Satellite phones, and broadband global area networks (BGANs), Amateur Radios, among others.
- b) **“GMPCS services”** shall include two-way voice, fax, messaging, data, broadband, and multimedia provided through direct links to satellite constellations or through interconnection with already existing terrestrial networks.
- c) **“GMPCS system operator”** shall refer to the person authorized by the ITU to use particular space segments and radio frequencies and responsible for the management, administration, and operation of a GMPCS system;
- d) **“GMPCS country operator”** shall refer to the local licensee offering GMPCS services in Uganda.
- e) **“GMPCS user terminal equipment”** shall include ITU registered GMPCS terminals including, handheld, vehicle-mounted, vessel mounted, fixed or mobile private, and any other terminals that may be used to send or receive telecommunication traffic via satellites.
- f) **“GMPCS earth station”** means a land-based facility used to establish, maintain, validate, and control communication between the space segment of a GMPCS system.
- g) **“GMPCS Gateway station”** means an earth station used to allow voice or data calls originating or terminating on the GMPCS network to interconnect with other telecommunication networks within or out of Uganda.
- h) **“GMPCS satellite systems”** geostationary or non-geostationary, fixed, or mobile, broadband, or narrowband, global, or regional, provide telecommunication services directly to end-users;
- i) **“Global Mobile Personal Communications Service Provider”** means the person licensed by the Commission to provide Global Mobile Personal Communications Services to the Public in accordance with the Uganda Communications Act 2013.

5.1. LICENSING/ AUTHORISATION PROCESS

5.1.1. Technical and Regulatory Requirements

- a) All operations of GMPCS in Uganda shall require a license and/or authorization.
- b) All GMPCS terminals shall need to be type approved by the Commission before they can be sold for local use in Uganda.
- c) Where a GMPCS system operator requires to set up a gateway in Uganda, this shall necessitate the prior acquisition of an earth station authorisation.
 - i) Operations of GMPCS shall be in accordance with the national and international standards including;
 - ITU RR Resolution 25 (WRC-03) which highlights provisions for the operation of global Satellite Systems for personal communication;
 - ITU-R Recommendations M.1343 and M.1480 which provide the essential technical requirements that should be used by Administrations as a common technical basis for facilitating the global circulation and use of such GMPCS terminals in conformity with these Recommendations;
 - ii) Subscriber radio equipment must meet all applicable national radio equipment standards including, but not limited to the type-approval requirement.

a) GMPCS USER

- i) Individuals who purchase GMPCS terminals from overseas for local use shall need to have their terminals individually registered by the locally licensed service providers.
- ii) GMPCS terminals brought in by foreign visitors shall be.
- iii) Personal GMPCS subscriber radio equipment brought into Uganda by visitors for use while on short stay shall;
 - a. declare the GMPCS or satellite phone prior (not less than 48 hours before) entry to the national territory of Uganda and registered by the licensed service providers;
 - b. ensure that the subject GMPCS equipment meets the relevant applicable national radio equipment standards, or;

- c. be type-approved by an administration that is a signatory to the Global Mobile Personal Communications by Satellite-Memorandum of Understanding (GMPCS-MoU) and must carry the GMPCS-MoU mark.

b) GMPCS Service Provider

- i) GMPCS operators who wish to offer both domestic and transborder mobile telephone services can either:
 - a. Acquire landing rights and then enter into an agreement with a licensed Public Service Provider in Uganda to offer the services through the latter, or;
 - b. Enter into an agreement with a licensed Public infrastructure Provider (where terrestrial spectrum is required to be used) and a licensed Public Service Provider; or
 - c. Apply for the relevant operator licenses (NTO, PSP or PIP) to provide the services themselves.
- ii) GMPCS service provision obligations include but are not limited to the following;
 - a. the licensee shall be required to acquire authorizations for each satellite communications station (including the GMPCS gateways, and user terminal) situated in Uganda;
 - b. The Licensee shall provide maintain information on the GPMCS subscribers and the associated user equipment technical details in Uganda in accordance with the Regulation of Interception of Communications Act;
 - c. The licensee shall provide technical ability in regard to equipment and networks through which security monitoring equipment can be interconnected to these networks. The licensee shall also provide technical support and access to facilitate security monitoring and investigations;
 - d. the Licensee shall grant access and the use of its network by the relevant Government departments or agencies in times of emergencies or disaster;
 - e. the Licensee shall comply with all the applicable international telecommunication union (ITU) relevant recommendations and ITU Radio Regulations (RR) including but not limited to;

- ITU RR Resolution 25 (WRC-03) which provides provisions for the operation of global Satellite Systems for personal communication;
 - ITU-R Recommendations M.1343 and M.1480 which provide the essential technical requirements that should be used by Administrations as a common technical basis for facilitating the global circulation and use of such GMPCS terminals in conformity with these Recommendations;
- f. The Licensee shall establish the necessary techniques and procedures for the monitoring and Reporting of System Performance and Quality of Service;
- g. The Licensee shall provide periodical reports to the Commission and shall provide any other information requested by the Commission. The licensee must submit an annual operational report including:
- 1) a statement highlighting continued compliance with all license terms and conditions/obligations as applicable to the national regulations;
 - 2) an update on the provision of mobile satellite service, including the expansion of the services provided;
 - 3) an update on the satellites used for the provision of the service, the spectrum bands used, and the number of subscriber stations/nodes operating within the national territory of Uganda;
 - 4) a statement indicating the annual gross operating revenues from the service provider and the annual adjusted gross revenues resulting from the use of the subject license.
- iii)* The licensee has the right to enter into contracts with the local distributors for the provision of the service, provided that the licensee be fully responsible and liable for those distributors with whom it has contracted. Any violation committed by any of those distributors will fall on the licensee.

5.1.2. Application Requirements

A person seeking to provide GMPCS services and/or operate a GMPCS station shall be required to submit a written application letter addressed to the Executive Director of Uganda Communications Commission in addition to the following information;

- a) copies of company profile including; a certificate of registration issued under the Uganda Company Act 2012 (applicable to local GMPCS service provider company), or

- b)* a copy of the certificate of registration of a designated representative of a foreign GMPCS service provider company or its subsidiary in Uganda issued under the Uganda Company Act (as applicable);
- c)* duly completed technical application forms in annex-1 and annex-2 to this Framework;
- d)* copies of technical specifications of all equipment planned for deployment as provided for by the equipment manufacturer (applicable to GMPCS service provider);
- e)* a brief description of the network architecture and underlying technologies (where applicable or as shall be required);
- f)* completed equipment type approval forms in annex-3 to this framework;
- g)* provide passport copies or national identification of the proprietors (for applicants applying for GMPCS service provision) or registered GMPCS users;
- h)* An all-inclusive technical plan that includes a list of satellites and frequencies to be used, the quality of service provided, security arrangements, maintenance issues, customer service, and the technical solutions to face any emergency cases in addition to other technical aspects. This should include evidence of having undergone the necessary coordination process (if applicable) with the relevant administration under the ITU framework (applicable to GMPCS service providers);
- i)* seek Commission's approval for any joint venture with the licensed PSPs or Public Infrastructure Providers (PIPs);

5.1.3. Evaluation of the Applications

Applications shall be processed on a first-come, first-served basis, with each application evaluated based on the following criteria;

- a)* applications shall be processed on a first-come, first-served basis, with each application evaluated based on the following criteria:
 - i)* the eligibility of the applicant against among others, the relevant provisions of this framework,
 - ii)* completeness of the technical submission,
 - iii)* efficient use of the spectrum,
 - iv)* minimum radio and antenna equipment requirements,
 - v)* successful coordination between Administrations and between users,
 - vi)* compliance with international obligations,
- b)* where the applicant does not qualify, a response will be provided within fourteen (14) working days,

- c) Where the submitted information is found to be inadequate, the applicant will be requested to provide the additional missing information,
- d) Should international coordination be required, the applicant shall be notified of the outstanding requirement,
- e) The Commission shall trigger the coordination process on behalf of the applicant in accordance with Article 9 of the ITU Radio Regulations.

5.2 LICENCE/AUTHORIZATION FEES

The license/authorization fees shall be charged in accordance with the provisions of Uganda Communication (fees and licensing) regulations 2019 (as amended) or as shall be guided by the Commission from time to time.

5.3 LICENSE/AUTHORIZATION TENURE

The license and authorization tenures for GMPCS service provision and GMPCS terminals/nodes shall be five (5) years and one (1) year renewable respectively, subject to continued compliance with license and authorization terms and conditions/obligations.

CHAPTER 6

EARTH STATION IN MOTION (ESIMS)

6.0. INTERPRETATIONS

“Earth stations in motion (ESIM)” shall refer to earth stations that communicate with geostationary-satellite orbit (GSO) system(s) operating in the fixed-satellite service (FSS) and on platforms in motion in the frequency ranges 17.7-20.2 GHz and 27.5-30 GHz.

For the purpose of this framework, ESIMS shall be limited to Aeronautical (onboard aircraft, Maritime (onboard water-vessels), and Land (onboard land vehicles) earth stations.

6.1. ESIMS OVERVIEW

- a) ESIM may be operated on land-based vehicles or trains with a rooftop-mounted antenna, or onboard a vessel, and onboard an aircraft with an antenna mounted on top of the fuselage. ESIM provides broadband connectivity ubiquitously on Land (Land ESIM), pier-to-pier for maritime (Maritime ESIM), and gate-to-gate for aviation (Aeronautical ESIM) while communicating with space stations subject to respective authorizations or licenses granted by respective national administration;
- b) ESIMs which use the Ku band are also called Vehicle-Mounted Earth Stations (VMESs), Earth Stations on Vessels (ESVs), and Aeronautical Earth Stations (AES). Currently, most if not all earth stations used in motion are using Ku and Ka bands, however, the rules and spectrum use regimes for Ka-band and Ku band are different. This framework considers authorization provisions for the operation of ESIM in both bands;
- c) The framework considers only the use of the frequencies allocated to those parts of the fixed-satellite service under which operation of ESIMs is permitted by the ITU Radio Regulations. All spectrum-related aspects for the implementation and use of ESIM in the frequency bands under consideration for future WRC (WRC-23 and WRC-27) shall accordingly be incorporated upon the conclusion of the respective WRCs.
- d) Although Uganda encourages free circulation of foreign visiting ESIM, based on mutual recognition of authorizations issued by countries of origin, such mutual recognition is yet to be considered and adopted for implementation globally;
- e) The African Telecommunications Union (ATU) endorsed the principle of mutual license and type approval recognition framework for ESIMs. Based

on this principle, the subject is being considered at the sub-regional level, where there are requisite mandates/protocols for such frameworks. The Commission shall accordingly continue to support the development of this initiative for possible adoption to facilitate the free movement of land, aeronautical and maritime ESIM on the continent and beyond.

6.2. LICENSING/ AUTHORIZATION PROCESS

6.2.1. ESIMS Technical and Regulatory Requirements

a) Technical and Regulatory Provisions

- i)* The ESIM on land mobile platforms are authorized within the network of licensed satellite operators or satellite service providers in Uganda;
- ii)* The ESIM shall remain within the envelope of the coordination agreements of the satellite networks for which this Earth Station is associated or, in the absence of such agreements, comply with the off-axis effective radiated power (e.r.p.) density levels given in *Annex 1* of ITU-R Resolution 156;
- iii)* Maritime and aeronautical ESIMs operating in international waters and airspaces shall not cause harmful interference to any terrestrial systems operating in the frequency band 29.5-29.9 GHz;
- iv)* Upon receipt of a report of harmful interference with respect to any terrestrial systems, the ESIM transmission shall be immediately ceased;
- v)* The ESIM shall be subject to permanent monitoring and control by a network control and monitoring center or equivalent facility and be capable of receiving and acting upon at least “enable and/or disable transmission” commands from the network control and monitoring center located in Uganda or elsewhere;
- vi)* The ESIM shall employ techniques to track the associated GSO FSS Satellite and shall be resilient to capturing and tracking adjacent GSO Satellites;
- vii)* All foreign ESIM visiting the national territory of Uganda shall ensure that their continued operation in Uganda does not cause harmful interference to the existing terrestrial networks during their stay in Uganda;
- viii)* A person seeking authorization for ESIM may be required to demonstrate that appropriate interference management measures are

- in place for ubiquitous earth station deployment to be granted authorization (both fixed and ESIM);
- ix)* Prior to granting authorization, applicants may be required to demonstrate that ITU requirements for NGSO/GSO/BSS coordination have been met for earth stations on board vessels and aircraft;
 - x)* ESIMs Communicating with geostationary space stations in the fixed-satellite service operating in the frequency bands 17.7-19.7 GHz (E-S) and 27.5-29.5 GHz (E-S) shall be operated in accordance with the provisions of the Resolution 169 of the World Radio Conference 2019 (WRC-19);
 - xi)* ESIMs communicating with the geostationary space stations in the fixed-satellite service operating in the frequency bands 19.7-20.2GHz and 29.5-30.0 GHz shall operate in compliance with the provisions of Resolution 156 (WRC 2015);
 - xii)* A visiting foreign ESIMs complying with the relevant ITU regulations and staying for less than thirty (30) calendar days, shall be required to obtain authorization from the Commission prior to arrival in the national geographical territory of the Uganda but not later than 48 hours from the date of arrival. The application for authorisation shall include evidence of on-board equipment type-approval and the radiocommunication authorizations and/or licenses granted by the country of origin.
 - xiii)* in the absence of evidence of documentation in *xii)* above, ESIMs shall be required to apply for equipment type approval in Uganda to facilitate the continued operation in Uganda;
 - xiv)* use of the frequency bands 19.7-20.2 GHz (S-E) and 29.5- 30.0 GHz (E-S) by earth stations in motion communicating with geostationary space stations in the fixed-satellite service shall comply with the technical and regulatory conditions specified in Footnote **5.527A** and Resolution 156 (WRC- 15);
 - xv)* operation of ESIMs located onboard vessels which operate in fixed-satellite service networks in the uplink bands 5 925-6 425 MHz and 14-14.5 GHz shall comply with provisions of Resolutions 902 (WRC-03);
 - xvi)* technical and operational requirements for aircraft ESIMs of aeronautical mobile-satellite service including those using fixed-satellite service network transponders in the band 14-14.5 GHz (Earth-to-space) shall comply with the provisions of Recommendation ITU-R M.1643;
 - xvii)* technical characteristics of earth stations on board vessels operating in the frequency bands 5925-6425 MHz (E-S) and 14- 14.5 GHz (E-S)

which are allocated to the fixed-satellite service shall comply with the provisions of Recommendation ITU-R S.1587;

xviii) methodologies to estimate the off-axis effective isotropic radiated power (e.i.r.p) density levels and to assess the interference towards adjacent satellites resulting from pointing errors of vehicle-mounted earth stations in the 14 GHz frequency band shall be in accordance with Recommendation ITU-R S.1857;

xix) technical and operational requirements for ESIMs operating in non-GSO FSS systems in the frequency bands from 17.3 to 19.3 (S-E), 19.7 to 20.2 (S-E), 27 to 29.1 (E-S), and from 29.5 to 30.0 GHz (E-S) shall be in accordance with the specifications in Report ITU-R S.2261.

b) Application Requirements

A person seeking to provide ESIM services and/or operate an ESIM station shall be required to submit a written application letter addressed to the Executive Director of the Uganda Communications Commission in addition to the following information;

- i)* copies of company profile including; a certificate of registration issued under the Uganda Company Act 2012 (applicable to local ESIM service provider company), or
- ii)* a copy of the certificate of registration of a designated representative of a foreign ESIM service provider company or its subsidiary in Uganda issued under the Uganda Company Act 2012;
- iii)* fully completed technical application forms in *annex-1* and *annex-2* to this Framework;
- iv)* a brief description of the network architecture and underlying technologies (where applicable or as shall be required);
- v)* completed equipment type approval forms in *annex-3* to this framework;
- vi)* provide passport copies or national identification of the proprietor (applicable to applicants for GMPCS service provider) or GMPCS user
- vii)* copies of ESIM registration certificate from the country of origin (applicable to the foreign ESIM);
- viii)* copies of technical specifications of all equipment planned for deployment as provided for by the equipment manufacturer;
- ix)* a copy of the certificate of aircraft registration and worthiness (applicable to aeronautical ESIM);

- i)* a copy of the certificate of vessel registration issued by either Ministry of Works and Transport of Uganda (MoWT) (applicable to local water-vessel ESIMs) or by the relevant competent authority in the country of origin.

c) Evaluation of the Applications

Applications shall be processed on a first-come, first-served basis, with each application evaluated based on the following criteria;

- a)* applications shall be processed on a first-come, first-served basis, with each application evaluated based on the following criteria:
 - i)* the eligibility of the applicant against among others, the relevant provisions of this framework,
 - ii)* completeness of the technical submission,
 - iii)* efficient use of the spectrum,
 - iv)* minimum radio and antenna equipment requirements,
 - v)* successful coordination between Administrations and between users,
 - vi)* compliance with international obligations,
- b)* where the applicant does not qualify, a response will be provided within fourteen (14) working days,
- f)* Where the submitted information is found to be inadequate, the applicant will be requested to provide the additional missing information,
- g)* Should international coordination be required, the applicant shall be notified of the outstanding requirement,
The Commission shall trigger the coordination process on behalf of the applicant in accordance with Article 9 of the ITU Radio Regulations.

6.3 LICENCE/AUTHORIZATION FEES

The license fees shall be charged in accordance with the provisions of Uganda Communication (fees and licensing) Regulations 2019 (as amended) or as shall be guided by the Commission from time to time.

6.4 LICENCE/AUTHORIZATION TENURE

The license and authorization tenures for ESIM service providers and ESIM terminals/nodes shall be five (5) years and one (1) year renewable respectively, subject to continued compliance with license and authorization terms and conditions/obligations.

CHAPTER 7

SMALL SATELLITES

7.0. INTERPRETATIONS

- a) **“Commercial missions”** are satellites used for commercial missions, i.e., delivering a certain service in certain areas of applications with a clear pecuniary interest e.g., Earth Observation or telecommunication.
- b) **“Educational and amateur radio missions”** are satellite missions with the sole aim of educating people about space, electronics, and all aspects of physics involved in space; as well as satellites used for amateur radio “self-training and communication”, with no pecuniary interest, as defined in Article 1 of the ITU Radio Regulations (RR);
- c) **“Experimental and research missions”** are satellite missions with one or more of the following purposes i.e., Space operation, space research, Earth exploration:
- To demonstrate a novel space technology in the space environment
 - To perform a proof-of-concept for a certain application involving one or more nanosatellites and picosatellites
 - To perform space research (Primarily earth-orbiting, but also lunar and deep space applications).
- d) **“Short duration missions”** are non-geostationary satellites that usually use the Low Earth Orbit and have a life span of not more than three (3) years. Services for small satellites shall include Educational and amateur radio, experimental and research, and commercial missions.
- e) **“Small satellites”** are satellites whose mass is less than 500kgs such as Minisatellites, Microsatellites, Nanosatellites and Picosatellites, and Femtosatellites (Report ITU-R SA.2312).

7.1. LICENSING / AUTHORISATION PROCESS

7.1.1 Technical and Regulatory Provisions

- a) The space segment authorization requirements for small satellite operators in NGSOs are similar to operators in GSOs. However, the coordination of satellites with the ITU for certain types of frequencies in NGSO do not require coordination. This significantly accelerates the authorization process and decreases the regulatory timeframe;
- b) A satellite operator wishing to provide connectivity directly to the end-users and/or satellite capacity/bandwidth to retailers or service providers in Uganda shall be required to apply for spectrum authorization and the applicable service (PSP and/or NTO) license to provide connectivity to end-users;

- c) The provision in *b)* above shall apply to all forms of satellite network configurations including but not limited to the constellation of NGSO providers wishing to partner with either licensed national telecommunication operators or broadcasters;
- d) Additionally, if a satellite operator places radio equipment on the market, such equipment shall be required to comply with the relevant national type-approval requirements.

7.1.2 NGSO Where Coordination is Not required

a) Technical and Regulatory Requirements

- i)* the provision of satellite communications services either directly to the end-users, through a licensed local service provider or telecommunication operator in Uganda using satellite constellations where frequency coordination is not required, shall be required to apply for a license;
- ii)* a person seeking to provide satellite services under this arrangement shall before applying for a license be required to complete the regulatory procedures detailed in Article 9 sub-section 1A of the ITU Radio Regulations, i.e. ;
 - submit the satellite filing request to the Uganda Communication Commission.
 - submit the advance publication information (API) in the format of Appendix 4 of the Radio Regulations to the ITU through the Uganda Communications Commission marking the start of the regulatory period;
 - provide completed coordination information to facilitate coordination with the International Amateur Radio Union (IARU) for small satellites operating in the amateur band;
 - the ITU shall then Publish the information in the special section API/A;
 - comments from administrations shall be received within four months and published in the API/B;
 - upon addressing the comments and resolving any raised difficulties, satellite notification will be submitted to the ITU through the Commission;
 - the satellite network shall then be registered in the MIFR once coordination is completed.
- iii)* systems identified as a short-duration mission not subject to Section II of Article 9 of the Radio Regulations shall follow the regulatory procedure described in Resolution 32 WRC 19;

- iv)* apply for relevant licenses or authorizations for the associated earth stations and/or end-user equipment if located in Uganda from the Commission.
- v)* The operator shall have the satellite gateway installed in Uganda.

b) Application procedure

To facilitate the licensing processing, the following information shall be provided in addition to a formal letter expressing interest to provide satellite communication services in Uganda addressed to the ED of the Uganda Communications Commission;

- i)* copies of company profile including; a certificate of registration issued under the Uganda Company Act 2012 (applicable to local small satellite service provider company), or
- ii)* a copy of the certificate of registration of a designated representative of a foreign small satellite service provider company or its subsidiary in Uganda issued under the Uganda Company Act 2012;
- iii)* fully completed technical application forms in *annex-1* and *annex-2* to this Framework;
- iv)* a brief description of the network architecture and underlying technologies (where applicable or as shall be required);
- v)* completed equipment type approval forms in annex-3 to this framework;
- vi)* provide passport copies or national identification of the proprietor (applicable to applicants for small satellite operators and service providers),
- vii)* copies of technical specifications of all equipment planned for deployment as provided for by the equipment manufacturer;
- viii)* provide the project design and maintenance description documents: this should include a detailed description for the satellite telecommunications networking framework diagram, satellite telecommunications networking operating method, signal transmitting method, development site, and other relevant information;
- ix)* A brief description of network interfaces anticipated interconnecting points and communications protocol for interlinking to the networks run by the licensed national telecommunications operators in Uganda.

7.1.3 NGSO Where Coordination is required

a) Technical and Regulatory Requirements

- i)* The provision of satellite communications services either directly to the end-users, a licensed local service provider, or telecommunication operator in Uganda using satellite constellations where frequency coordination is not required shall be required to apply for a license;
- ii)* A person seeking to provide satellite services under this arrangement shall before applying for a license for the service provision, be required to complete the regulatory procedure detailed in article 9 sub-section IIA of the ITU Radio Regulations; i.e.
 - submit satellite filing request to the Commission;
 - submit the Advance publication of information (API) as specified in Appendix 4 of the Radio Regulation to the ITU through the Uganda Communications Commission marking the start of the regulatory period;
 - Provide completed coordination information for coordination with International Amateur Radio Union (IARU) for small satellites using Amateur frequencies;
 - submit a request for coordination CR/C to the ITU within a maximum of two years from the date of API submission.
 - ITU will then publish the CR/C and/or API/C as received;
 - ITU establishes the list of administrations with whom coordination is to be effected in accordance with Appendix 5 of the Radio Regulations;
 - Within four (4) months of the publication of the CR/C, identified administrations shall be required to provide agreement or disagreement to the proposed satellite network;
 - Upon successful completion of coordination, Notification of the frequency assignment to the ITU is done in accordance with Article 11 of the Radio Regulations;
 - The ITU upon receiving the complete notification information records the frequency assignment into the master international frequency register (MIFR);
 - The frequency assignments are then brought into use.
- iii)* Apply for relevant licenses or authorizations from the Commission for the associated earth stations and/or end-user equipment if located in Uganda.

b) Application procedure

The application procedure of 7.1.1 b) shall apply.

7.2 LICENCE/AUTHORIZATION FEES

7.2.1 ITU Fees

In accordance with the provisions of ITU Council Decision 482, as amended, the ITU charges fees for processing satellite network filings on a cost recovery basis. Detailed arrangements for the implementation of these cost recovery charges are available on the ITU website. The ITU Finance Department shall raise its invoices for fees incurred in processing a satellite network filing either directly against the satellite network operator or to the coordinating administrations in either of situations; the satellite network operator/applicant shall bear the financial burden.

The ITU exempts one amateur satellite filling per year, from cost recovery. All subsequent amateur satellite fillings made in that same year are subject to cost recovery.

7.2.2. Commission Fees

The license fees shall be charged in accordance with the provisions of Uganda Communication (Fees and Fines) Regulations 2019 (as amended) or as shall be guided by the Commission from time to time.

7.3 LICENSE TENURE

The license tenure for small satellites shall be three (3) years, renewable on a case-by-case basis (as applicable) subject to continued compliance with license terms and conditions/obligations.

CHAPTER 8

SPACE SEGMENT

8.0. INTERPRETATIONS

- a) **“API”** characteristics of the proposed satellite network as defined in Appendix 4 of the Radio Regulations
- b) **“API/A”** is a special section of the BRIFIC that contains advance publication information on a planned satellite network, in accordance with the provisions of 9.2B and paragraph 7.1 of Article 7 of Appendices 30 and 30A.
- c) **“API/B”** is a special section of the BRIFIC that contains a list of administrations that have sent comments under No. 9.3 together with the report submitted by the administration responsible for the network under No. 9.4 if any.
- d) **“BRIFIC”**. The BR IFIC (Space services) is a service document in DVD-ROM format, published *once every two weeks* by the Bureau in accordance with provision Nos. **20.2** to **20.6** and No. **20.15** of the Radio Regulations (RR)
- e) **“Constellation”** refers to a group of artificial satellites working together as a system.
- f) **“CR/C”** is a special section of the BRIFIC that contains requests for coordination submitted under Nos. 9.7 to 9.14 and 9.21 of frequency assignments to a space station of a satellite network, published in accordance with provision 9.38.
- g) **“Space software tools”** refers to software designed by the ITU to help administrations prepare satellite electronic filings.

8.1. SATELLITE FILING

A satellite network filing can only be submitted to the ITU by an administration of an ITU Member State. As the notifying administration for Uganda, the Commission is also responsible for ensuring that any satellite networks established in Uganda comply with the provisions of the ITU Radio Regulations. Any person in Uganda thus wishing to establish a satellite network of one or more satellites shall undertake the licensing, notification and coordination process outlined below.

- a) Submit the following information;
 - i) A detailed description of the project which includes;

- the list of frequencies requested and the amount of spectrum in each band,
 - Orbital location and type of orbit,
 - radiocommunication service,
 - name of proposed satellite or constellation,
 - nature of services to be delivered to end-users,
 - intended service areas,
 - The overall capacity of the satellite is expressed in both Megahertz (MHz) and megabits per second (Mbps) for each frequency band,
 - proposed dates of entry into service,
 - the anticipated life expectancy of the satellite,
 - Minimum and maximum peak power,
 - coverage maps and beam patterns for service and support links.
- ii)* The satellite operator shall demonstrate to the satisfaction of the Commission, the plans in place to ensure that the satellite project progresses towards a successful commercial launch and operation;
- iii)* A complete technical description of the proposed satellite network according to the requirements of Appendix 4 of the Radio regulations in a format compatible with the ITU BR (Bureau) Space software tools, and;
- iv)* details of the location and operation of the primary satellite control center, which performs telemetry, tracking, and control of the satellite;
- v)* for hosted payloads, the applicant shall provide additional information about the host satellite such as commercial satellite name, licensing administration, and the ITU filing names;
- vi)* A brief description of how the proposed satellite network will serve the interest of Uganda;
- vii)* A detailed five-year business plan identifying the proposed investment, revenues, expenditures, and detailed financial forecasts.
- b)* The proposed satellite system shall be required to meet all the applicable technical requirements set out in the ITU RR Articles 5, 21, 22, Appendices 2 and 3, and any other relevant provisions;
- c)* After accepting the filing request, the Commission will proceed to submit the proposal for the satellite network to the ITU by submitting the Advanced Publication Information (API) for systems that are not subject to coordination and CR/C for systems that are subject to coordination with the ITU as provided by the applicant;
- d)* The API data shall be as specified in Appendix 4 of the ITU Radio Regulations and in accordance with the ITU BR Space software Tool's format. The date of receipt of the API by the ITU marks the start of the

regulatory period but does not establish the regulatory precedence of the network. Further details can be found in Article 9 of the Radio Regulations;

- e) The ITU then publishes the API in special section API/A of the International Frequency Information Circular (IFIC);
- f) After the publication, the ITU will examine the API information provided and identify any administration (RR No.9.27) with which coordination may be required and include them in the publication, other administrations may advise the commission of existing services that may be affected by the published satellite network;
- g) The Commission shall then initiate coordination in accordance with Article 9 of the Radio Regulations by filing a coordination request (CR filing with the ITU);
- h) The ITU will then publish the CR filing in the special section CR/C of the Space BR IFIC;
- i) If coordination is required, the Commission will assist the satellite applicant/operator to coordinate the published satellite network with existing networks of other administrations that may be affected by its operations;
- j) The Commission shall not submit notification data to the ITU BR unless coordination of the subject application has been completed;
- k) The Satellite operator will be required to submit a copy of the completed coordination agreements to the Commission for reference;
- l) Upon completion of Coordination, the Commission shall file a notification request with the ITU and shall seek inclusion of the new satellite network in the master information frequency register (MIFR);
- m) If the satellite network is brought into use without completing the coordination with affected satellite networks and causes harmful interference to these satellites, the subject network will need to eliminate that interference in accordance with Article 15 of the ITU RR;
- n) The subject satellite network will be required to be brought into use within seven (7) years from the date of receipt of the API;
- o) The Commission will conduct due diligence as stated in Annex-2 Resolution 49 to avoid the reservation of orbital resources without actual use.

8.2. DUE DILIGENCE

- i)* Submission of proposed satellite networks in the FSS, MSS, and BSS requires submission of due diligence information to the ITU BR in accordance with Annex 2 Resolution 49 of the Radio Regulations aimed at addressing the problem of reservation of the orbit and spectrum capacity without actual use;
- ii)* The proposed satellite network shall provide the required due diligence information to the Commission including contractual undertakings related to spacecraft manufacturer and launch service provider, contractual delivery window among others of the proposed satellite network.

8.3. COMPLIANCE WITH INTERNATIONAL TREATIES

Satellite networks for which the Commission is the notifying administration shall be operated in accordance with the relevant international UN treaties. i.e.

- a)* the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies;
- b)* the Convention on International Liability for Damage Caused by Space Objects;
- c)* the Convention on Registration of Objects Launched into Outer Space;
- d)* United Nations Space debris mitigation guidelines.

8.4. LICENCE FEES

The applicant will be solely responsible for paying all the associated ITU fees regardless of whether their application is approved or declined.

8.4.1. ITU Fees.

In accordance with the provisions of ITU Council Decision 482, as amended, the ITU charges fees for processing satellite network filings on a cost recovery basis. Detailed arrangements for the implementation of these cost recovery charges are available on the ITU website. The ITU Finance Department shall raise its invoices for fees incurred in processing a satellite network filing either directly against the satellite network operator or to the coordinating administrations in either of situations; the satellite network operator shall bear the financial burden.

8.4.2. Commission Fees

The license fees shall be charged in accordance with the provisions of Uganda Communication (Fees and Fines) Regulations, 2019 (as amended) or as shall be guided by the Commission from time to time.

8.5 LICENSING PROCESS

The license tenure for FSS, BSS, and MSS shall be up to fifteen (15) years subject to the continued compliance with licensing terms and conditions/obligations. Satellite operators may request for a short-term extension of the license in cases of a longer than expected satellite life for the GSO or continued operations of an NGSO constellation.

8.5.1 Satellite Operator

Satellite operators (space station operation owners/operators-Intelsat, Inmarsat, etc.) covering the territory of Uganda to which agreement was obtained through the international telecommunications union radio division (ITU-R) satellite coordination mechanism shall before providing services whether directly or indirectly in Uganda;

- a) seek authorization;
 - i) by obtaining landing rights from the Commission
 - ii) by providing the satellite technical information including but not exclusive to orbital position, frequency bands, and contour map;
 - iii) by ensuring that its transmissions are within the ITU limits as specified in Appendix 1, 2, and 3 of the ITU Radio Regulations;
 - iv) for any associated Earth station.

- b) Ensure that third parties; service providers through whom they will provide services are licensed entities in Uganda.

CHAPTER 9

LANDING RIGHTS

9.0. REGULATORY PROVISIONS

- a) satellite operators applying for Landing Rights to enter the Uganda market shall be required to provide a copy of the license from the home country in which the satellite is registered for launching and /or a copy of the satellite operator's space segment license (as applicable), as well as evidence of having successfully undergone and completed the satellite coordination process under the ITU framework;
- b) If satellite coordination is not required, then the proof of API filing with the ITU as well as other supporting documents indicating clearance from the ITU and/or the international amateur radio union should be provided as part of the "Landing Rights (authorization to beam satellite signal in the national territory of Uganda)" application. This is aimed at ensuring interference-free operations;
- c) In addition, a satellite operator shall provide the relevant documentation to prove that its activities are not only aligned with international space law or treaties but shall also comply with them. Such treaties include but are not limited to, the United Nations *Outer Space Treaty (which sets out that activities of non-governmental entities in outer space must be authorized and supervised by the responsible state)*, the *Space Liability Convention (The same treaty determines that the state launching an object and the territory from which it is launched could be liable for damages caused by the object)* and the *Registration convention (requires the responsible state to provide information to the Secretary-General of the UN for entry in the UN Register of Objects Launched into Outer Space. The state of registry retains jurisdiction and control over objects)*.

9.1. LICENSING/ AUTHORISATION PROCESS

- a) Safety, amateur satellite, meteorological satellite, earth exploration satellite, radio astronomy, radio navigation, and space research services (as defined in Article 1 of ITU Radio Regulations) shall be exempted from Landing Rights as long as the subject satellites have undergone coordination and obtained the necessary approvals from the affected administrations under the ITU satellite coordination framework and
- b) All other satellite operations not mentioned above shall be required to apply and obtain Landing Rights before these can be allowed to provide satellite services in Uganda. Additional licenses other than Landing Rights may apply depending on the proposed business case forwarded by the satellite operators;

- c) A person applying for Landing Rights shall be required to submit a written application letter addressed to the Executive Director of Uganda Communications Commission in addition to the following information;
- i) a written declaration that national and international regulation will be observed;
 - ii) completed landing rights application forms in annex 4;
 - iii) indication of the legal representative or local presence in Uganda;
 - iv) technical information on the satellite system including frequencies used, orbiting parameters, and coverage footprint as provided to the ITU or the country of satellite registration;
 - v) Supporting documentation that the subject satellite or constellations of satellites have undergone the relevant coordination with the ITU (if applicable), IARU, or affected administrations;
 - vi) A copy of the license issued by a competent Government authority or agency authorizing the launch and operation of subject satellites;
 - vii) a copy of the certificate of registration of a designated representative of a foreign satellite operator company or its subsidiary in Uganda issued under the Uganda Company Act 2012;
 - viii) fully completed technical application forms in annex-1 and annex-2 to this Framework;
 - ix) a brief description of the network architecture and underlying technologies (where applicable or as shall be required);
 - x) completed equipment type approval forms in annex-3 to this framework (as applicable);
 - xi) valid passport copies and/or national identification of the satellite company proprietor(s);
 - xii) copies of technical specifications of all equipment planned for deployment as provided for by the equipment manufacturer;
 - xiii) provide the project design and maintenance description documents: this should include a detailed description of the satellite telecommunications networking framework diagram, satellite telecommunications networking operating method, signal transmitting method, development site, and other relevant information;

- xiv)* A brief description of network interfaces anticipated interconnecting points and communications protocol for interlinking to the networks run by the licensed national telecommunications operators in Uganda;
 - xv)* A description of how the quality of service (QoS) shall be guaranteed for the intended service;
 - xvi)* Copies of memorandum of agreement (MoU/A) entered into with the national telecommunication operators (as applicable);
 - xvii)* Clearance from the relevant security agencies of the Government of Uganda;
- d)* the Commission may request additional information not specified herein on a case-by-case basis or as shall be deemed necessary;
- e)* assessment of an application for Landing Rights may be subjected to consultation with the relevant government agencies in Uganda as well as with those of the satellite home country (applicable to foreign satellites) in addition to the following;
- i)* verification of completeness of the submission;
 - ii)* assessment of the eligibility of the applicant against the provisions of this framework and those of the applicable national laws and regulations;
 - iii)* where the applicant does not qualify, a response will be provided within thirty (30) working days;
 - iv)* where the submitted information is found to be inadequate, the applicant will be requested to provide the additional missing information;
 - v)* should international coordination be required, the applicant shall be notified of the outstanding requirement. The Commission shall trigger the coordination process on behalf of the applicant in accordance with Article 9 of the ITU Radio Regulations.

9.2. LICENCE FEES

The license fees shall be charged in accordance with the provisions of Uganda Communication (Fees and Fines) Regulations, 2019 (as amended) or as shall be guided by the Commission from time to time.

9.3. LICENSE TENURE

The license tenure for landing rights shall be for up to five (5) years renewable subject to continued compliance with the license terms and conditions/obligations.

CHAPTER 10

MANAGEMENT OF UGANDA’S BSS AND FSS ENTRY PLANS

10.0. INTERPRETATIONS

“**Planned Bands**” means the specific frequency bands that have been comprehensively planned for administrations on the basis of equitable access to deploy individual satellite services at a specific orbital position. The requirements and procedures applicable to “planned bands” are as detailed in Appendices **30**, **30A**, and **30B** Plans of the ITU-R Radio Regulations, with an extract as shown in the table below.

10.1. COMMISSION’S ROLE

- a) It is the Commission’s obligation to ensure that the orbital positions and associated frequency bands reserved for Uganda as per Appendices **30**, **30A**, and **30B** Plans are adequately protected from foreign satellite filings even though Uganda does not operate any active satellite network occupying the respective orbital positions now;

Table 1: ITU Appendix 30/30A/30B Frequency Plan

	Region 1	Region 2	Region 3
Appendix 30 for BSS (downlink)	11.7-12.5 GHz	12.2-12.7 GHz	11.7-12.2 GHz
Appendix 30A for BSS feeder links (uplink)	17.3-18.1 GHz	14.5-14.8 GHz 17.3-17.8 GHz	14.5-14.8 GHz 17.3-18.1 GHz
Appendix 30B for FSS (up/downlink)	4 500-4 800 MHz, 6 725-7 025 MHz, 10.7-10.95 GHz, 11.2-11.45 GHz, 12.75-13.25 GHz		

- b) If a new foreign satellite filing includes frequency ranges within C-/Ku-band as detailed in Appendices **30**, **30A**, and **30B** Plans, and that the republic of Uganda is identified by the ITU Radio Bureau (BR) as affected, the Commission would request for Uganda to be excluded from the service area;
- c) Uganda’s entry PLAN consists of orbital and spectrum resources for fixed satellite services (FSS), broadcasting satellite services (BSS), and the associated Feeder-Link. The orbital slots of Uganda and the corresponding channels are contained in the ITU Radio Regulations Vol. 2.
- d) The following measures shall be taken to protect the entry Plan:
- i) Regularly check the BR-IFIC publications supplied every two weeks or directly from the Space Services database using specialized software “SpaceQry”;

UCC Framework for Satellite Communication-2022

ii) where Uganda (the administration) is identified as affected, the Commission shall comment to the notifying administration and the Bureau within four (4) months from the date of BR-IFIC publication;

iii) depending on the coordination requirement, responses or comments shall be provided utilizing the following resources;

- Using BR software SpaceCom (for network assessment)
- Correspondence (telefax, letter, email for conveyance of responses)
- Using the e-submissions system to submit comments to the space bureau.

iv)The *table-2* below summarizes commenting procedures on various special sections coordination requests.

Table 2: Commenting procedures on Special Sections

Special Section	Region	Identification (provisions)	Comments submitted under	Identification R1 AP30/30A assign. / Impact on EPM	How to comment	Summary of comments (Special Section)	BR Assistance procedure
API/A	All	-	No.9.3	NO / NO	SpaceCom	API/B	-
CR/C	All	9.7, 9.7A, 9.7B	No.9.52	YES / NO	Corresp.	-	Nos.9.60-9.62
		AP30#7.1, AP30A#7.1 RS539, RS33#3					-
		9.11 9.11A (9.12, 9.12A, 9.13, 9.14) 9.21/A, 9.21/B, 9.21/C, RS33#2.1	No.9.52	NO / NO	SpaceCom	CR/D	-
		-	No.9.41	NO / NO	SpaceCom	CR/E	-
AP30/E (Part A) AP30A/E (Part A)	1 & 3	All	§ 4.1.7, 4.1.9, 4.1.10 of AP30/30A	YES / YES	Corresp.	-	§ 4.1.10a - 4.1.10d
AP30-30A/E (Part A)	2	All	§ 4.2.10, 4.2.13, 4.2.14 of AP30/30A	YES / NO	SpaceCom	AP30-30A/E (Part D)	-
AP30-30A/F/C	1 & 3	AP30#4.1.1D	§ 4.1.7, 4.1.9, 4.1.10 of AP30/30A	NO / NO	Corresp.	-	§ 4.1.10a - 4.1.10d
		9.7	No.9.52	YES / NO	Corresp.	-	Nos.9.60-9.62
		AP30#7.1, AP30A#7.1					-
AP30-30A/F/C	2	AP30#4.2.3D	§ 4.2.10, 4.2.13, 4.2.14 of AP30/30A	NO / NO	SpaceCom	AP30-30A/F/D	-
		9.7	No.9.52	YES / NO	Corresp.	-	Nos.9.60-9.62
		AP30#7.1, AP30A#7.1					-
AP30B/A6A	All	AP30B#6.5	§ 6.10 of AP30B	NO / NO	Corresp.	-	§ 6.13-6.15
		AP30B#6.6	-	NO / NO	Corresp.	-	-

Annex1: Satellite Application form/Space Segment

CAPTURE/VALIDATE satellite API (ARTICLE 9)/NOTIFICATION (ARTICLE 11) OF RADIO REGULATIONS Procedure: No.9.1 API

SECTION A: ADMINISTRATIVE INFORMATION		
Company		
Trade name:		
Contact:		
	Postal Address:	
	Physical Address:	
	City:	
	District:	
	Telephone Numbers:	
	Fax Number:	
	Email:	
Company / NGO Registration Number:		
Do you already have a license with UCC? Yes. <input type="checkbox"/> No. <input type="checkbox"/>		
If the answer to the above is yes, what is your Customer Number?		
Has any of your licences ever been canceled, suspended, or modified?		Yes. <input type="checkbox"/> No. <input type="checkbox"/>
If the answer to the above is yes, please explain why.		
SECTION B: CONTACTS		
	TECHNICAL	LEGAL
Name		
ID / TIN number		
Location		
Township		
City		
District		
Telephone Number		
Postal Address		
Email		
Fax No.		
Mobile		
SECTION C: DECLARATION		
<i>I, the undersigned, hereby declare that the information provided in the forms attached is true.</i>		
Name:		
Official Title:		

UCC Framework for Satellite Communication-2022

Date & Signature:	
SECTION D: FOR OFFICIAL USE ONLY	
Application Received on (Date):	Customer Number:
This application has been processed and the following action taken:	Approved <input type="checkbox"/>
	Additional Information Requested <input type="checkbox"/>
	Rejected <input type="checkbox"/>
Frequency License Number:	
Authorizing Officer/Title:	
Date & Signature:	

SECTION 1: NOTICE					
A1f1	Notifying Adm	Type of Station	Geostationary <input type="checkbox"/>	Non-Geostationary <input type="checkbox"/>	
SECTION 2: STATION					
A1a	Identity of the Satellite	A4b4		Orbital Information	
A4b1	Number of Orbital Planes			4a	Inclination Angle
A7b2	Reference Body			4b	Satellites in the Plane
A4b3a	Nbr of Satellite to NH			4c	Period
A4b3b	Nbr of Satellite to SH			4d	Apogee
				4e	Perigee
				4f	Minimum Altitude
SECTION 3: BEAM (RECEIVING)					
B1a/BR17	Beam Designation		B3a1	Max Isotropic Gain	
B2	EMI-RCP		B3c1	Co-polar antenna pattern (Pattern ID)	
			B4a	Orbit Link	
SECTION 4: GROUP					
A3a	Op. Agency		C4a	Class of Station	
A3b	Adm. Resp.		C4b	Nature of Service	
A2b	Period of Validity		C6a	Polarization Type	
C11a	Service Area		C5a	Receiving Noise Temperature	
SECTION 5: EMISSIONS					
C7a	Design of Emission		C8a1	Max Peak Power	
C7b	Carrier Frequency		C8a2	Max Power Density	
			C8c1	Min Peak Power	
			C8c3	Min Power Density	
			C8e1	C/N Objective	
SECTION 6: FREQUENCIES					

C1	Frequency Range			
C7b Carrier frequency of the emissions(100KG2D)				
SECTION 7: ASSOCIATE EARTH STATION				
C10b2	Type of Station		C10d3	Max Isotropic Gain
C10b1	Assoc. Earth Stn Name		C10d4	Beam width
C10d1	Class of Station		C10d5a1	Radiation Pattern ID (REC-465-5)
C10d2	Nature of Service			
C10c2	Country			
C10c1	Geo Coordinates			
SECTION 8: BEAM (TRANSMITTING)				
B1a/BR17	Beam Designation		B3a1	Max Isotropic Gain
B2	EMI-RCP		B3c1	Co-polar Antenna Pattern
B2bis	A Transmit Only when Visible		B4a	Orbit Link: The current Beam Operates with all Sat:
SECTION 9: GROUP				
A3a	Op. Agency		C4a	Class of Station
A3b	Adm Resp.		C4b	Nature of Service
A2b	Period of Validity		C6a	Polarization type
			C11a	Service Area
SECTION 10: EMISSION				
C7a	Design of Emission		C8a1	Max Peak Power
C7b	Carrier Frequency		C8a2	Max Power Density
			C8c1	Min Peak Power
			C8c3	Min Power Density
			C8e1	C/N Objective
SECTION 11: FREQUENCIES				
C1	Frequency Range			

SECTION 12: ASSOCIATE EARTH STATION					
C10b2	Type of Station		C10d4	Beam width	
C10b1	Assoc. Earth Stn Name		C10d5a1	Radiation Pattern ID (REC-465-5)	
C10d1	Class of Station		C10d6	Noise Temperature	
C10d2	Nature of Service				
C10c2	Country				
C10c1	Geo Coordinates				
C10d3	Max Isotropic Gain				

Annex 2: Satellite application forms/Terrestrial segment

**APPLICATION FORM FOR SATELLITE SERVICES
UCC4002-SM-ADM-01**

SECTION A: ADMINISTRATIVE INFORMATION		
Company		
Trade name:		
Contact:		
Postal Address:		
Physical Address:		
City:		
District:		
Telephone Numbers:		
Fax Number:		
Email:		
Company / NGO Registration Number:		
Do you already have a license with UCC?	Yes. <input type="checkbox"/>	No. <input type="checkbox"/>
If the answer to the above is yes, what is your Customer Number?		
Has any of your licenses ever been canceled, suspended, or modified?	Yes. <input type="checkbox"/>	No. <input type="checkbox"/>
If the answer to the above is yes, please explain why.		
SECTION B: CONTACTS		
	TECHNICAL	LEGAL
Name		
ID / TIN number		
Location		
Township		
City		
District		
Telephone Number		
Postal Address		
Email		
Fax No.		
Mobile		
SECTION C: DECLARATION		
<i>I, the undersigned, hereby declare that the information provided in the forms attached is true.</i>		
Name:		
Official Title:		
Date & Signature:		
SECTION D: FOR OFFICIAL USE		

UCC Framework for Satellite Communication-2022

ONLY	
Application Received on (Date):	Customer Number:
This application has been processed and the following action taken:	Approved <input type="checkbox"/>
	Additional Information Requested <input type="checkbox"/>
	Rejected <input type="checkbox"/>
Frequency License Number:	
Authorizing Officer/Title:	
Date & Signature:	

Uganda Communications Commission, UCC House, Plot 42/44 Spring Road, Bugolobi, P. O. Box 7376, Kampala. Tel: 41/31-339000 Fax: 41-348832/345278 Email: ucc@ucc.co.ug



**APPLICATION FORM FOR SATELLITE SERVICES
UCC4002-SM-SAT-04**

Physical Address of Satellite Service Station								
Site location:								
Township								
City/Town								
District								
Latitude								
Longitude								
Site Altitude								
Technical Specifications - Radio Equipment								
Make								
Model								
Equipment Serial No.								
Uplink Frequency (MHz)								
Downlink Frequency (MHz)								
Bandwidth (kHz)								
Output Power			Watts:			dBm:		
Emission Class								
Preferred Call sign								
Technical Specifications - Antenna								
Site Category:			Transmit: Receive: Host: Repeater:					
Type of Service								
Antenna Make								
Antenna Model								
Antenna Diameter (m)								
Antenna Gain (dB)								
EIRP (W)								
Polarization								
Beam Width V (deg)			H:		V:			
Antenna Height(m)								
Antenna Tilt Angle (deg)								
Main Lobe Azimuth (deg)								
Orbital Location								
Capacity of Links								
Frequency Band								
Required Frequencies / Range								
Satellite Site Type/ Satellite Provider	Inmarsat A	Inmarsat B Land	Inmarsat C	Inmarsat M Land	VSAT	Satellite Ground Earth Station	Satelli te Link	SNG

Uganda Communications Commission, UCC House, Plot 42/44
Spring Road, Bugolobi, P. O. Box 7376, Kampala. Tel: 41/31-
339000 Fax: 41-348832/345278 Email: ucc@ucc.co.ug

Annex 3: Type Approval application Form

This is provided for online via <https://eservices.ucc.co.ug>

Annex 4: Landing Rights application Form

SECTION A: ADMINISTRATIVE INFORMATION		
Company		
Trade name:		
Contact:		
	Postal Address:	
	Physical Address:	
	City:	
	District:	
	Telephone Numbers:	
	Fax Number:	
	Email:	
Company / NGO Registration Number:		
Do you already have a license with UCC? Yes. <input type="checkbox"/> No. <input type="checkbox"/>		
If the answer to the above is yes, what is your Customer Number?		
Has any of your licences ever been canceled, suspended, or modified?		Yes. <input type="checkbox"/> No. <input type="checkbox"/>
If the answer to the above is yes, please explain why.		
SECTION B: CONTACTS		
	TECHNICAL	LEGAL
Name		
ID / TIN number		
Location		
Township		
City		
District		
Telephone Number		
Postal Address		
Email		
Fax No.		
Mobile		
SECTION C: SATELLITE INFORMATION		
Name of Satellite		
Footprint/Beam		
Frequency Band		
Satellite longitude		
Nominal Elevation		

Minimal Elevation	
Azimuth	
Satellite Orbit	
Downlink Frequency	
Uplink Frequency	
Polarisation	
SECTION D: DECLARATION	
<i>I, the undersigned, hereby declare that the information provided in the forms attached is true.</i>	
Name:	
Official Title:	
Date & Signature:	
SECTION E: FOR OFFICIAL USE ONLY	
Application Received on (Date):	Customer Number:
This application has been processed and the following action taken:	Approved <input type="checkbox"/>
	Additional Information Requested <input type="checkbox"/>
	Rejected <input type="checkbox"/>
Frequency License Number:	
Authorizing Officer/Title:	
Date & Signature:	