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A Consultative Document

Framework for the Authorisation of Amateur Radio Services (Draft)

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Table of Contents

TABLE OF CONTENTS	3
1 INTRODUCTION	4
1.1 RELEVANT LEGISLATION	4
1.2 FRAMEWORK OBJECTIVES.....	5
1.3 REVIEW CYCLE	5
1.4 THE CONSULTATION PROCESS	5
1.5 OTHER RELEVANT DOCUMENTATION	6
1.6 DEFINITIONS	6
2 BACKGROUND	7
3 AMATEUR RADIO SERVICES REGIME IN TRINIDAD AND TOBAGO PRIOR TO THE TELECOMMUNICATIONS ACT 2001	9
3.1 PROCEDURES UNDER THE PREVIOUS REGIME.....	9
3.2 CONSIDERATIONS.....	10
4 DEVISING A NEW FRAMEWORK FOR AMATEUR RADIO SERVICES IN TRINIDAD & TOBAGO	12
4.1 TYPES OF AMATEUR RADIO SERVICE LICENCES	12
4.2 CERTIFICATION CRITERIA FOR AMATEUR RADIO LICENSING.....	13
4.2.1 <i>Amateur Radio certification for licensing</i>	13
4.2.2 <i>Minimum certification requirement</i>	13
4.2.3 <i>Local Certification Bodies</i>	15
4.3 AMATEUR RADIO LICENCE TERM	15
4.4 RENEWAL OF AMATEUR RADIO LICENCES	16
4.5 RECIPROCAL AMATEUR RADIO LICENCES.....	16
4.5.1 <i>Reciprocal Licence</i>	16
4.5.2 <i>Reciprocal Licence Term</i>	17
4.6 CALL-SIGNS	17

1 Introduction

1.1 Relevant Legislation

The Authority is empowered by the provisions of the Telecommunications Act (2001), namely section 36(1), to licence any radio communication service and/or radio transmitting equipment, which states:

No person shall-

- (a) establish, operate or use a radio-communication service;*
- (b) install, operate or use any radiotransmitting equipment; or*
- (c) establish, operate or use any radio-communication service on board any ship, aircraft, or other vessel in the territorial waters or territorial airspace of Trinidad and Tobago, other than a ship of war or a military or satellite registered in Trinidad and Tobago*

without a licence granted by the Authority

Section 27 (2) of the *draft* Radio Spectrum Regulations states, inter alia:

(2) An applicant for an Amateur Station Licence shall, unless exempted by the Authority –

- (a) have passed the Radio Amateur Examination set by the Authority or any other Body recognised by the Authority for this purpose; or*
- (b) be in possession of an Amateur Radio Certificate acceptable to the Authority*
- (c) must, in order to qualify for a general licence, provide evidence of proficiency in sending and receiving of Morse code at 13 words per minute.*

1.2 Framework Objectives

The primary objectives of this framework are to:

- provide an effective regulatory framework for the licensing of Amateur Radio Services (ARS) in Trinidad and Tobago;
- stipulate the requirements for ARS applicants to be feasible;
- allocate call-signs in an efficient, effective and transparent manner;
- align the country's policy on ARS with international requirement, obligations and recommendations.

1.3 Review Cycle

This framework will be modified as deemed necessary by the Authority in order to adapt to the needs of the amateur radio industry and to meet changing circumstances and international trends/ standards. When the need for modification is identified, the Authority will announce its intention to review the document.

Questions or concerns regarding the maintenance of this document may be directed to the Authority via email at policy@tatt.org.tt.

1.4 The Consultation Process

The Authority will seek the views and opinions of the general public and other stakeholders regarding the proposals made in this document, in accordance with the Authority's *Procedures for Consultations in the Telecommunications Sector of Trinidad and Tobago*.

This draft framework will be made available for consultation for a period to be prescribed by the Authority.

1.5 Other Relevant Documentation

The licensing of Amateur Radio Services is consistent with other policies, plans and regulations prepared by the Authority including the following:-

- Framework for the Authorization of Telecommunications Networks and Services and Broadcasting Services in Trinidad and Tobago
- Radio Spectrum Regulations
- National Frequency Allocation Table
- Spectrum Management Policy

1.6 Definitions

“Amateur Radio Operator” or “Radio Amateur” means a person who is duly qualified and licensed to use an Amateur Station.

“Amateur Service” means a radiocommunication service for the purpose of self-training, interconnection and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest(ITU rr. 53)

“Amateur Station” means a station in the Amateur Service.

2 Background

Internationally, amateur radio operators have been allocated radio spectrum in various frequency bands to undertake non-commercial radiocommunications activity including experimental work. Many of the allocations are on a secondary basis and may be shared with other users.

The benefits of amateur radio include fostering technical radio skills that may be of subsequent value to the commercial or state sectors, as well as having a potential emergency response role.

Amateur and Amateur-satellite are fully recognized radiocommunication services defined in the Radio Regulations of the International Telecommunication Union (ITU). The Amateur service is the oldest radio service and pre-dates regulation of radiocommunications.

Today, the Amateur service retains relatively narrow bands within the radio spectrum from 1.8 MHz through 250 GHz. These bands provide the whole range of radio wave propagation mechanisms and, through experimentation, amateurs have greatly contributed to the understanding of propagation.

Radio Amateurs have made significant technical contributions to the field of radio propagation, high frequency single sideband radio, HF data communication systems, packet radio protocols and communication satellite design.

Amateur Radio continues to play an important role in disaster communications. It has a unique ability to provide radiocommunications independent of the telephone network or other radio services particularly in the first few days before relief agencies are at the scene and have set up disaster telecommunications services.

The amateur and amateur satellite services include self-training as an important purpose. This includes training of young people in radiocommunications. Radio amateurs have the opportunity of planning, designing, building, operating and maintaining a complete radio station which contributes to the telecommunications human resource of the country.

Today there are approximately three (3) million Amateur stations in operation worldwide. There are about twenty-five (25) Amateur Radio Satellites in orbit with an Amateur Radio Repeater and digital radio station in operation on board the International Space Station (ISS).

In Trinidad and Tobago there are approximately three to four hundred (300 – 400) licensed Amateur Radio Operators.

3 Amateur Radio Services Regime in Trinidad and Tobago prior to the Telecommunications Act 2001

Prior to the proclamation of the Telecommunications Act on 30th June 2004, the applicable legal instrument for the licensing of radiocommunication equipment was the *Wireless and Telegraphy Ordinance* (WTO) of 1936.

Under the WTO, a licence was required for the use of any ‘wireless apparatus’ and as such, the licensing framework was driven by the equipment or “apparatus” used in the provision of the radiocommunication service.

The regulatory function was performed under the Ministry responsible for Telecommunications and licences were granted by the Minister.

3.1 Procedures under the previous regime

Under the Wireless Telegraphy Ordinance (WTO) **one** type of Amateur Radio Services licence was issued. This licence was called a Wireless Experimental Licence and was granted to Amateur Radio Operators in Trinidad & Tobago. It was renewable on the anniversary date of the licence.

The following criteria were used for the certification of Amateur Radio Operators in Trinidad and Tobago:

- (1) Nationals or Residents holding City & Guilds Certificate in the Radio Amateurs Examination.

- (2) Nationals or Residents completing Morse Code Examination at thirteen (13) words per minute. This examination was conducted by the then

Telecommunications Division under the relevant Ministry in Trinidad and Tobago.

A person successfully completing the criteria at (1) and (2) above would be granted a Wireless Experimental (Amateur Radio) licence. These applicants were issued call-signs with the prefix '9Y4'.

In 1990 another licence was introduced under the WTO called an Amateur Radio Grade 2 Licence. This was issued to applicants with the City & Guilds Certificate in Radio Amateurs Examination only. That is to say, these persons only satisfied (1) above and did not do a Morse code examination. Successful applicants were issued call-signs with the prefix '9Z4'.

Additionally, persons with other qualifications which satisfied the International Telecommunications Union (ITU) recommendations for the issue of Amateur Radio Operator Licences were also eligible for licences. These persons included telecommunication or electronic engineers with a minimum of five years experience in the operation of transmitters.

3.2 Considerations

City & Guilds Institute of London, United Kingdom was the accepted and approved institution offering a Radio Amateur Examination and the accompanying certificate(s), which was required to qualify for an amateur licence in Trinidad and Tobago.

In 2004, the City and Guilds Institute discontinued the Radio Amateur Examination. As a result, persons desirous of becoming amateur radio operators were no longer able to pursue the accepted and approved course of study to become amateur radio operators.

In the absence of the City and Guilds examination, the Radio Society of Great Britain (RSGB) introduced and now administers an examination for the certification of Radio

Amateurs in the United Kingdom. This is done in conjunction with OFCOM (the regulator and competition authority for the UK communications industries) who together with the RSGB act as the certifying bodies for Radio Amateurs in the U.K.

In order to facilitate the other countries that relied on the City & Guilds examination, the RSGB also developed an international edition of their Radio Amateur Examination with an equivalent syllabus to the former City & Guilds examination.

In the United States the Amateur Radio Relay League (ARRL) administers the Amateur Radio Examination and issues a certificate which is accepted by the Federal Communications Commission (FCC) who is responsible for issuing Amateur Radio licences and call-signs.

Due to the discontinuation of the City and Guilds Radio Amateur Examination in Trinidad and Tobago, nationals and residents have sought, and taken, the RSGB or ARRL examination in an attempt to become amateur radio operators.

Consequently a number of persons holding amateur radio certificates from either the RSGB or ARRL have applied to the Authority seeking amateur radio licences.

Despite these new applications no person has been licensed as an amateur radio operator since the discontinuance of the City and Guilds examination due to the lack of a framework and/or policy for addressing the issue of acceptable certification.

4 Devising a New Framework for Amateur Radio Services in Trinidad & Tobago

The Telecommunications Authority of Trinidad and Tobago (TATT), as part of its mandate to liberalize and regulate the telecommunications sector, have begun the establishment of a regulatory framework that will be used to regulate the telecommunications industry and specifically Amateur Radio services.

The *draft* Radio Spectrum Regulations which forms part of this regulatory framework categorically states that only Nationals and/ or residents of Trinidad and Tobago will be eligible for an Amateur Radio Licence from the Authority. This draft Framework for the Authorisation of Amateur Radio Services is consistent with these regulations and both documents together provide the complete set of requirements.

4.1 Types of Amateur Radio Service Licences

Based on Section 36 of the telecommunications Act (2001), a licence is required to **operate** a radio communication system and a licence is also required to **install** any radiotransmitting equipment. Given the fact that not everyone who is qualified to operate amateur radiotransmitting equipment will necessarily own and /or install the equipment, two mutually exclusive types of licences will be necessary.

Amateur Radio Services Framework Guideline

Two types Amateur Radio Licences will be issued:

- (1) An Amateur Radio Operator Licence will be required by those persons operating and using amateur radiotransmitting equipment only; and*
- (2) An Amateur Radio Station Licence will be required by those persons who own and install amateur radiotransmitting equipment.*

Therefore a person who owns and install, as well as use and operate amateur radiotransmitting equipment will require both an operator and a station licence.

4.2 Certification Criteria for Amateur Radio Licensing

4.2.1 Amateur Radio certification for licensing

Currently there are no local certification bodies for Amateur Radio Services in Trinidad and Tobago. In order to facilitate the licensing of Amateur Radio Services, the Authority will accept certification from certain foreign institutions.

Amateur Radio Services Framework Guideline

Nationals and/or residents who hold Amateur Radio certificates from foreign institutions, that meet TATT's approval may apply for a Trinidad and Tobago Amateur Radio Licence.

4.2.2 Minimum certification requirement

In order for a foreign institution to be considered acceptable by TATT, it must first meet the International Telecommunications Union's (ITU) minimum requirement from ITU-R M.1544. This recommendation was made during the World Radio Conference, 2003 (WRC 03) and was proposed by the International Amateur Radio Union (IARU) at the WRC 03 and was based on work that began since 1996.

The ITU-R M.1544 recommendation is as follows:

RECOMMENDATION ITU-R M.1544

Minimum qualifications of radio amateurs

(Question ITU-R 48/8)

(2001)

The ITU Radiocommunication Assembly,

considering

- a) that No. 1.56 of the Radio Regulations (RR) defines the amateur service as: “A *radiocommunication service* for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.”;
- b) that RR No. 1.57 defines the amateur-satellite service as: “A *radiocommunication service* using *space stations* on earth *satellites* for the same purposes as those of the *amateur service*.”;
- c) that certain minimum operator operational and technical qualifications are necessary for proper operation of an amateur or amateur-satellite station,

recommends

1 that administrations take such measures as they judge necessary to verify the operational and technical qualifications of any person wishing to operate an amateur station;

2 that any person seeking a licence to operate an amateur station should demonstrate theoretical knowledge of:

- Radio regulations
 - international
 - domestic
- Methods of radiocommunication
 - radiotelephony
 - radiotelegraphy
 - data and image
- Radio system theory
 - transmitters
 - receivers
 - antennas and propagation
 - measurements
- Radio emission safety
- Electromagnetic compatibility
- Avoidance and resolution of radio frequency interference.

Amateur Radio Services Framework Guideline

TATT will establish, maintain and publish on its website, a list of acceptable institutions that meet the ITU's minimum qualifications for Amateur Radio Licences. The Authority will continue to monitor recommendations made by the ITU and the IARU in respect of the minimum certification requirements for Amateur Radio Operators, and review its own licensing requirements accordingly.

4.2.3 Local Certification Bodies

Given the fact that there are currently no local amateur radio certification bodies in Trinidad and Tobago and based on the demand and interest in this field, the Authority recognises the need for a local examination.

Amateur Radio Services Framework Guideline

The Authority supports the establishment of a local certification body and the administration of the respective examination by a recognised institution(s) for Amateur Radio certification.

4.3 Amateur Radio Licence Term

Amateur Radio operator licences are essentially for those persons who use amateur radios, while the station licence is tied to the equipment. Therefore the term associated with the two types of amateur radio licences can differ. Since operators generally use the equipment often, their training will be reinforced and the term of their licence can be longer than a station licence which is generally for a term of one year.

Amateur Radio Services Framework Guideline

Save and except for reciprocal amateur radio licences, all amateur radio operator licences shall be valid for a period of five (5) years and all amateur radio station licences shall be valid for a period of one (1) year.

4.4 Renewal of Amateur Radio Licences

All amateur radio licence may be renewed by the Authority provided that all requirements are met.

Amateur Radio Services Framework Guideline

All Amateur Radio Licensees may apply for a renewal of their licence after 2/3 the period of the licence has passed, but no less than six (6) months, prior to its expiration.

4.5 Reciprocal Amateur Radio Licences

4.5.1 Reciprocal Licence

Many visitors and tourists are interested in maintaining their amateur radio connectivity when in Trinidad and Tobago. The Authority recognises the importance and necessity of reciprocal Amateur Radio and at the same wishes to maintain a certain minimum level of qualification for granting these licences.

Amateur Radio Services Framework Guideline

Non-nationals and non-residents of Trinidad and Tobago who have Amateur Radio Licences from a foreign administration recognised by the Authority, may apply for a reciprocal Amateur Radio Licence.

4.5.2 Reciprocal Licence Term

Since a reciprocal licence is a temporary licence the term of such a licence will be short term and based on the length of stay in Trinidad and Tobago with a maximum period.

Amateur Radio Services Framework Guideline

The term of a reciprocal amateur radio licence will generally be thirty (30) days or less. Applicants seeking a reciprocal amateur radio licence for a period in excess of thirty (30) days must show proof of the admittance period by the Immigration Division in Trinidad and Tobago.

4.6 Call-signs

Call signs are required when issuing amateur radio operator licences only and are not applicable to amateur radio station licences. This is because every user of the system must be identified by a call sign. This call sign should generally give an indication of which country a message is originating from. It should also indicate whether the operator is certified in Morse Code communications or not. Therefore two different call signs will be necessary. Morse Code certification will be acceptable with a rate of thirteen (13) words per minute as previously required by the ITU.

Amateur Radio Services Framework Guideline

All approved amateur radio operators (reciprocal and otherwise) will be licensed with the prefix '9Z4' to their call sign, with the exception of those who are certified in Morse Code, in which case a prefix "9Y4" will be issued to their call sign. Morse Code certification will be acceptable with a rate of thirteen (13) words per minute as previously required by the ITU.

