

Schedule 22

Part D -

Aeronautical Telecommunication

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SUBPART A: GENERAL**22.401 Applicability**

- (a) The Authority shall designate the authority responsible for ensuring that the international aeronautical telecommunication service is conducted in accordance with the procedures of this Part and in accordance with the standards, recommendations and specifications contained in Annex 10.
- (b) No person or organization shall provide an Aeronautical Telecommunication Services or operate an aeronautical facility except under the authority of, and in accordance with the provisions of, an Air Navigation Service Certificate with Aeronautical Telecommunication Service Certificate granted by the Authority.
- (c) The requirements of this Part apply to all Aeronautical Telecommunication service providers, including any Aeronautical Telecommunication service provider that currently provides or has submitted an application to the Authority to provide any kind of Aeronautical Telecommunication service and any of its sub-contractors.
- (d) This Part prescribes requirements governing:
 - (1) The provision of Aeronautical Telecommunication services that supports the provision of Air Traffic Services (ATS) and air navigation within the Sovereign airspace of The Bahamas; and
 - (2) The operation of organizations providing Aeronautical Telecommunication services:
 - (i) To support the provision of ATS and air navigation within the flight information region administered by another ICAO Contracting State in accordance with the terms of a Regional Air Navigation Agreement; or
 - (ii) The subject of a written agreement between an organization responsible for the provision of Aeronautical Telecommunication service in adjacent airspace which delegates the provision of Aeronautical Telecommunication service to that organization; and
 - (3) The operating standards for Aeronautical Telecommunication services in relation to their performance, provision, maintenance and safety management.
- (e) An Aeronautical Telecommunication service provider's failure to comply with any of the requirements of these regulations or provisions of any Manual of Standards issued thereunder may:
 - (1) Constitute a breach of the Civil Aviation Regulations of The Bahamas; and
 - (2) Result in proceedings for any such breaches; or
 - (3) Result in the refusal of an application for renewal of an Certificate; or
 - (4) Result in action to suspend, revoke or impose conditions in respect of the Aeronautical Telecommunication provider's Certificates.
- (f) The Aeronautical Telecommunication service provider shall comply with these regulations and any other applicable national legislation in force at any point during the certification process once such process has begun.
- (g) Any reference in this Part to an Annex to the Convention includes the differences notified to ICAO by the Bahamas in respect of the Standards specified in that Annex and published in the AIP of the Bahamas.

22.403 Definitions

- (a) The definitions used throughout this Part are in accordance with Part A of schedule 22 and Appendix 1 to 1.015 of Schedule 1

- (b) Every other term shall have the same meaning as contained in the Chicago Convention or ICAO Document 9713, "International Civil Aviation Vocabulary."

22.405 Use of English

- (a) All documentation, written communications and data (electronic or otherwise) for submission to the Authority in support of an application for Aeronautical Telecommunication Certificate shall be provided, and used in providing the services, in English.

22.407 Compliance with laws, requirements and procedures

- (a) The Aeronautical Telecommunication service provider shall take all necessary steps to ensure that all persons employed, engaged, or contracted by any such person or organization to perform safety sensitive functions, are familiar with the appropriate sections of these Regulations, any applicable conditions of the provider's Certificate and the procedures specified in the Aeronautical Telecommunication provider's safety assurance documentation/organization plan.

22.409 Procedure compliance

- (a) Each person performing duties in relation to a Certificate issued under this Part shall conform to the requirements of this Part and any conditions of the Certificate issued by the Authority.

22.411 Power to inspect

- (a) Aeronautical Telecommunication provider shall ensure that any Inspector of the Authority shall have uninterrupted access to any documentation relating to the Aeronautical Telecommunication organization as appropriate to the operation.
- (b) The Aeronautical Telecommunication service provider shall be responsible for ensuring that, if requested to do so by an Inspector, documentation is produced within a reasonable period of time or any other time specified by the Inspector.

22.413 Exceptions

- (a) The Provisions of sub-paragraph 22.495(a) do not apply if a person or organization operates an aeronautical facility on an aeronautical radio frequency and the aeronautical facility:
- (1) is a radio communication transmitter that does not support an air traffic service ; or
 - (2) is a radio navigation aid that does not support ifr flight or an aeronautical telecommunication service ; or
 - (3) the establishment and operation of the radio communications transmitter is notified to the authority and.
- (b) the aeronautical facility is operated in accordance with :
- (1) The applicable system characteristics prescribed in ICAO Annex 10, Volume III, Part II, Chapter 2 or Annex 10, Volume I, Chapter 3; and
 - (2) The applicable communication procedures prescribed in ICAO Annex 10, Volume II and.
- (c) The aeronautical facility does not interfere with other aeronautical telecommunication service, aeronautical telecommunications equipment or air traffic service; and an approval has been granted by the appropriate authority for the aeronautical facility and.

- (d) A radio licence and approval for use of the aeronautical frequency has been granted by the appropriate authorities.
- (e) The provision of 22.495(a) does not apply if a person or organization operates a ground mobile radio on an aeronautical radio frequency and:
 - (1) The radio is not used to support an Aeronautical Telecommunication service ;
 - (2) The radio is operated in accordance with the applicable communication procedures prescribed in these and other national Regulations ; and
 - (3) The radio transmission does not interfere with any other Telecommunication Services or aeronautical facility.

SUBPART B: AERONAUTICAL TELECOMMUNICATION SERVICES APPROVAL**22.415 Applicability**

- (a) No person or organization shall provide Aeronautical Telecommunication services at aerodromes or in any portion of airspace within the Sovereign airspace of The Bahamas, or other territory for which the Bahamas has assumed responsibility for the provision of ATS on the basis of Regional Air Navigation agreements, except under the conditions approved by the Authority.

22.417 Provision of Services

- (a) An Aeronautical Telecommunication service provider Issued with Certificate under this Part shall be responsible for the provision of Aeronautical Telecommunication Services to ensure that the telecommunication information and data necessary for the safe, regular and efficient operation of air navigation is available in the form suitable for the operational requirements of:
 - (1) Flight operations personnel including flight crews and other personnel responsible for the provision of pre-flight briefing;
 - (2) Air Traffic Service providers; and
 - (3) Other providers of Aeronautical Telecommunication services.

22.419 Application for Certificates

- (a) An applicant for the grant of Aeronautical Telecommunication Service Certificate shall apply to the Authority in the form and manner required by the Authority and at least 90 days before the date of intended operation, except the operations manual which may be submitted later than but not less than 60 days before the date of intended operation, supplying:
 - (1) The applicant's name and address;
 - (2) Sufficient information to identify, for each Aeronautical Telecommunication Service, the type and the location from which the service is proposed to be provided.
 - (3) The Organization plan and proof of Financial Capacity and Liability;
 - (4) Payment of any applicable fee required by the appropriate requirements;
 - (5) Details of or arrangements for frequency allocations for aeronautical frequency assignments for the facility to be provided; and
 - (6) Such other particulars relating to the applicant and the intended service as may be required by the Authority.

22.421 Issue of Aeronautical Telecommunication Certificates

- (a) An applicant may be granted Aeronautical Telecommunication Certificate if the Authority is satisfied that:
 - (1) The applicant meets the requirements of this Part or any other requirements of these Regulations;
 - (2) The applicant, and the applicant's key person or persons, are fit and proper persons and are deemed acceptable by the Authority;

- (3) The organization has the Financial Capacity and Liability Coverage required for it to execute its functions; and
- (4) The granting of the approval is not contrary to the interests of aviation safety and security.

22.423 Privileges of Aeronautical Telecommunication Certificates

- (a) The holder of Aeronautical Telecommunications Certificate shall be entitled to provide any services or combination of services listed in its Operations Manual.
- (b) Aeronautical Telecommunications Certificate will specify the Aeronautical Telecommunication services, aeronautical facility types and aeronautical telecommunication equipment that the Aeronautical Telecommunication organization is approved to operate.
- (c) The Certificate shall authorize the provision of either:
 - (1) a single aeronautical telecommunication service by means of a single aeronautical telecommunication services unit; or
 - (2) a combination of aeronautical telecommunication services by means of a network of approved aeronautical telecommunication service providers.
- (d) The Aeronautical Telecommunications provider may operate any of the aeronautical facility types specified on the holder's Certificate provided:
 - (1) each aeronautical facility that is operated is listed in the aeronautical telecommunication provider's Operations Manual ; or
 - (2) where the aeronautical facility is not listed in the Operations Manual, its operation is for site test purposes only and is controlled by the procedures prescribed under 22.401.
- (e) Aeronautical Telecommunication Service Certificate may include such conditions as the Authority may consider appropriate.
- (f) The Aeronautical Telecommunication Service Provider shall provide Aeronautical Telecommunication services in accordance with the provisions of this Part and with any conditions attached to the approval.

22.425 Amendment and Revocation of Aeronautical Telecommunication Certificates

- (a) The Authority may amend any Air Navigation Service Certificate with Aeronautical Telecommunication Certificate or amend the conditions under which any person authorized to provide an Aeronautical Telecommunication service before the entry into force of these regulations, may continue to provide the service if:
 - (1) The Authority determines that aviation safety and the public interest require the amendment; or
 - (2) The Aeronautical Telecommunication service provider applies for an amendment.
- (b) The Authority may, if the requirements of this Part are met, amend Aeronautical Telecommunication Certificates, where there is a change in the services provided.
- (c) If the Authority stipulates in writing that an emergency exists requiring immediate amendment in the public interest with respect to aviation safety, such an amendment is effective without stay on the date the Aeronautical Telecommunication provider receives notice.
- (d) The Aeronautical Telecommunication Service Provider may appeal the amendment, but shall operate in accordance with it, unless it is subsequently withdrawn.

- (e) Amendments proposed by the Authority, other than emergency amendments, become effective 30 days after notice to the Aeronautical Telecommunication provider, unless the Certificate Holder appeals the proposal in writing prior to the effective date. The filing of an appeal stays the effective date until the appeal process is completed.
- (f) Amendments proposed by any such Aeronautical Telecommunication Provider shall be made at least 30 days prior to the intended date of the start of any service under that amendment.
- (g) No person may provide any Aeronautical Telecommunication Service that is not included in a current and valid ANS Certificate and related Aeronautical Telecommunication Certificate and for which an amendment to such Certificate is required, unless it has received notice of approval from the Authority.

22.427 Duration of approval

- (a) Aeronautical Telecommunications Certificate shall be valid for a period not exceeding 1 calendar year from the date of issuance until midnight on the date of expiry.
- (b) Aeronautical Telecommunication Certificate shall remain in force until it is suspended or revoked.
- (c) The holder of an ANS Certificate with Aeronautical Telecommunication Certificate that has been suspended or revoked shall forthwith surrender such certificate to the Authority.
- (d) The holder of Aeronautical Telecommunication Certificate shall make any payment required by the appropriate requirements in respect of continued validity or amendment of the Certificates.

22.429 Renewal of Certificates

- (a) The application for the renewal of Aeronautical Telecommunication Certificate shall be in a form and manner prescribed by the Authority.
- (b) The application shall be submitted to the Authority not less than 30 days before the certificate expiry date.

22.431 Establishment or transfer of service

- (a) An applicant for the grant of Aeronautical Telecommunication Certificate shall include with the application:
 - (1) for each aerodrome and airspace, a part of the proposed hours of service; and
 - (2) in respect of an aerodrome or airspace not currently provided with aeronautical telecommunication services, a summary of safety factors considered before seeking approval.
- (b) An applicant for the grant of Aeronautical Telecommunication Certificate that intends to assume responsibility for providing any Aeronautical Telecommunication service from an existing Aeronautical Telecommunication provider shall include with its application full details of transitional arrangements endorsed by the Accountable Managers of both organizations.

22.433 Withdrawal or transfer of service

- (a) The holder of Aeronautical Telecommunication Certificate who wishes permanently to withdraw an Aeronautical Telecommunication service shall give the Authority at least 90 days' notice of the proposal and include in that notice a summary of factors considered in arriving at the decision to withdraw the service.
- (b) The holder of Aeronautical Telecommunication Certificate who intends permanently to reduce the hours of operation shall provide to the Authority advance notice of, and the reasons for, the proposed reduction.

- (c) The holder of Aeronautical Telecommunication Operations Specifications who is the outgoing provider of an Aeronautical Telecommunication service shall provide all necessary assistance in the preparation and execution of the transitional arrangements.

SUBPART C: SURVEILLANCE AND REVALIDATION**22.435 Continuing Validation of the Certification Basis Required**

- (a) The Aeronautical Telecommunication Service Provider shall be subject to a continuing system of surveillance administered by the Authority to validate the original certification basis and the organization's continued eligibility to hold its approval.
- (b) The Aeronautical Telecommunication service provider shall allow the Authority to conduct tests and inspections, at any time or place, to determine whether an Aeronautical Telecommunication Provider is complying with the applicable laws, regulations and approval terms and conditions.
- (c) The Aeronautical Telecommunication Service Provider shall:
 - (1) Continue to meet the standards and comply with the requirements of this Part
 - (2) Comply with all procedures and programmes detailed in its approved Organization plan and Operations Manual ; and
 - (3) Provide, at each location covered by the Organization plan, in hard copy, electronic or other form acceptable to the Authority:
 - (i) All portions and sufficient copies of the Operations Manual that are readily accessible by all personnel who may need to refer to it.
 - (ii) All applicable portions of the applicable Air Traffic Service Equipment Maintenance Manuals
 - (iii) At least one current copy of the relevant sections of its Organization plan applicable to the operation; and
 - (iv) A current listing that includes the location and individual positions responsible for each record, document and report required to be kept by an ANS Certificate holder with Aeronautical Telecommunication Certificate under the applicable aviation law, regulations or standards.
- (d) The Aeronautical Telecommunication Service Provider shall make its records available to the Authority upon request, either at the Authority's offices or other location stipulated by the Authority.
- (e) Failure by the Aeronautical Telecommunication Provider to make available to the Authority upon request, any or all portions of the Certificates, Operations and Equipment Maintenance Manuals and any required record, document or report has committed a breach which is grounds for suspension of all or part of the Certificate and associated Air Navigation Services Certificate.

22.437 Site validation inspections

- (a) An applicant for the issuance of an Aeronautical Telecommunication Services Provider Certificate shall permit an Aeronautical Telecommunication Services Inspector to carry out such Site validation inspection prior to installation of any Aeronautical Telecommunications facility as may be necessary to verify the validity of any application made in accordance with these Regulations.
- (b) The holder of an Aeronautical Telecommunication Services Certificate shall permit an Aeronautical Telecommunication Services Inspector to carry out such site validation inspection prior to installation of any Aeronautical Telecommunications facility as may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

22.439 Access for Inspection

- (a) To determine continued compliance with the applicable regulations, the Aeronautical Telecommunication provider shall –
 - (1) grant the authority free and uninterrupted access to and co-operation with any of its organizations, facilities and equipment;
 - (2) ensure that any person authorized by the authority shall have free and uninterrupted access to any documentation relating to activities associated with the approval.
 - (3) ensure that the authority is granted access to and co-operation with any organization or facilities that it has contracted for services associated with any air navigation service and equipment maintenance for those services.
 - (4) grant the authority free and uninterrupted access to any aeronautical telecommunication facility at any time during operations; and
 - (5) be responsible for ensuring that, if requested to do so by an inspector, documentation is produced within a period prescribed by the authority.

22.441 Changes to Aeronautical Telecommunication provider's organization

- (a) The Aeronautical Telecommunication Service Provider shall ensure that its Organization plan is amended so as to remain a valid description of the holder's current and organization planned organization and services.
- (b) The Aeronautical Telecommunication Service Provider shall ensure that any amendments made to the holder's Organization plan:
 - (1) Meets the applicable requirements of this Part; and
 - (2) Complies with the amendment procedures contained in the holder's Organization plan.
- (c) Subject to sub-paragraph (d) below, the Aeronautical Telecommunication Provider shall provide the Authority with a copy of each amendment to the holder's Organization plan as soon as practicable after its incorporation into the Organization plan as follows:
 - (1) Printed amendments, at least 15 working days in advance of their effective date; and
 - (2) Amendments of an urgent or immediate nature, without delay, and no later than the date on which they are effective.
- (d) Prior notification to and acceptance by the Authority is required whenever The Aeronautical Telecommunication Service Provider proposes to make a change to any of the following.:
 - (1) The Accountable Manager;
 - (2) Any of the listed key persons;
 - (3) The maintenance engineering staffing; or
 - (4) The aeronautical telecommunication equipment operated under the authority of the approval.
- (e) No significant safety-related change to the Aeronautical Telecommunication system shall be effected until a safety assessment has demonstrated that an acceptable level of safety will be met and users have been

consulted. When appropriate, the responsible authority shall ensure that adequate provision is made for post-implementation monitoring to verify that the defined level of safety continues to be met.

- (f) The Authority may prescribe conditions under which the Aeronautical Telecommunication Provider may operate during or following any of the changes specified in this paragraph and the Aeronautical Telecommunication Provider shall comply with those conditions.
- (g) Where any of the changes referred to in this paragraph require an amendment to the Certificates, the Aeronautical Telecommunication Provider shall forward the documentation describing the changes to the Authority for review as soon as practicable.
- (h) The Aeronautical Telecommunication Service Provider shall make such amendments to the holder's Organization plan as the Authority may consider necessary in the interests of aviation safety.

22.443 Subsequent Certification Requirement

- (a) The Authority may require that a full certification process be completed prior to the implementation of any major change in any aspect of the Aeronautical Telecommunication Provider's Service Provision described in 22.435 or as prescribed by the Authority.

SUBPART D: AERONAUTICAL TELECOMMUNICATION MANUALS & DOCUMENTATION**22.445 Organization plan**

- (a) An applicant for the grant of Aeronautical Telecommunication Service Certificate shall provide the Authority with an organisation organization plan that shall be approved by the Authority
- (b) The organization plan shall contain:
 - (1) A set of overall aims and goals of the Aeronautical Telecommunication Provider and its strategy towards achieving them in consistency with any overall longer term organization plan of the provider and any other requirements prescribed by the Authority.
 - (2) Appropriate performance objectives in terms of quality and level of service, safety and cost effectiveness.
 - (3) A statement signed by the Accountable Manager on behalf of the applicant's organization confirming that the Organization plan and the appropriate Operations Manual:
 - (i) defines the organization and demonstrate its means and methods for ensuring safety of all services provided to support air navigation and to ensure that such serviced are provided safely, securely and in continuing compliance with this and any other applicable regulations; and
 - (ii) are required to be complied with by its personnel at all times.
- (c) The titles and names of the key person or persons required by this Part.
- (d) The duties and responsibilities of the key person or persons specified in this Part including matters for which they have responsibility to deal directly with the Authority on behalf of the organization.
- (e) An organization chart showing lines of responsibility of the key personnel and extending to each location approved by the Authority.
- (f) A summary of the organization's staffing structure including job descriptions and safety responsibilities.
- (g) The procedures, evidence or a reference that identifies the documentation that contains the procedures or evidence, that are required under this Part as follows:
 - (1) A summary of the operational details of each type of aeronautical telecommunication equipment to be operated under the authority of the aeronautical telecommunication service approval
 - (2) A summary of services provided at each location where an aeronautical telecommunication service is provided and/or is proposed to be provided
 - (3) Details of procedures regarding the design, installation, and commissioning of facilities
 - (4) Details of procedures regarding the operation of temporary, pre-operational or replacement equipment for site tests;
 - (5) Details of the systems and procedures regarding the equipment maintenance programme;
 - (6) Details of the procedures regarding equipment performance;
 - (7) Details of the systems and procedures regarding the control, calibration, and maintenance of inspection, measuring, and test equipment;

- (8) Details of the procedures regarding the notification of facility information;
 - (9) details of the procedures regarding equipment checks after notification of an accident or incident;
 - (10) Details of the procedures regarding equipment malfunction incidents;
 - (11) Details of the procedures regarding radio interference incidents;
 - (12) Details of the systems and procedures regarding the maintenance of records;
 - (13) Details of the systems and procedures regarding operating and maintenance instructions;
 - (14) Details of procedures regarding the competency, qualifications, maintenance of current operating practice and fitness of personnel;
 - (15) Details of procedures regarding the training and assessment of personnel and the qualifications of training personnel within or utilized by the organization;
 - (16) Details of procedures regarding the observation of Human Factors Principles in all systems, procedures, documentation and programmes;
 - (17) Details of the systems, procedures, and programmes regarding the safety and quality management system;
 - (18) Details of the systems, procedures and programmes regarding the organization's Security programme as required under BASR Part 29 ;
 - (19) Procedures to mitigate against the effects of fatigue; and
 - (20) Procedures to control, amend and distribute the organization plan.
- (h) The Aeronautical Telecommunication Service Provider shall:
- (1) Hold at least one complete, current copy of its Organization plan at each unit listed in its Organization plan, except those parts relating solely to a particular place need only be held at principal locations and the place concerned;
 - (2) Amend or revise the organization plan, as is necessary, to ensure that the information contained therein is kept up to date;
 - (3) Incorporate in the organization plan, any material as the Authority may require;
 - (4) Comply with all procedures and standards detailed in its Organization plan;
 - (5) Make each applicable part of its Organization plan available to personnel who require those parts to carry out their duties;
 - (6) Continue to meet the standards and comply with the requirements under this Part; and
 - (7) Notify the Authority promptly of any change of address for service, telephone number or facsimile number prior to and within 30 days of the intended date of the change; and
- (i) Where the Aeronautical Telecommunications Services Provider is proposing to operate or maintain facilities owned by an Aerodrome Operator or Air Traffic Service Provider, such as on-aerodrome navigation aids or facilities in a control tower, then the services provider shall demonstrate that there is an agreement with the owner such as a memorandum of understanding.

22.447 Manuals of Operations and Facility Manuals

- (a) The Aeronautical Telecommunications Provider shall prepare and keep current for compliance by its personnel, a Operations Manual (MANOPs) that contains the procedures and policies for the use and guidance of its personnel in the provision of the services listed in its organization plan.
- (b) The Aeronautical Telecommunications Provider shall provide separate Facility Manuals to be used in conjunction with the MANOPs at each Facility location listed in the Organization plan. The Facility Manuals shall contain procedures and instructions of a local nature which are either subject to frequent change or limited in application, but are, in all cases, supplementary to the provisions of the MANOPs.
- (c) The Accountable Manager shall sign any MANOPs or Facility Manual submitted to the Authority for approval.
- (d) The MANOPs and Facility Manual shall be acceptable to the Authority and amended or revised as directed by the Authority; and as otherwise necessary to ensure that the information contained therein is appropriate and kept up-to-date.
- (e) The Aeronautical Telecommunications Provider shall control the distribution of the MANOPs and Facility Manual, or pertinent portions, together with all amendments and revisions to ensure their provision to all personnel that are required to use them.
- (f) No person may provide for use of its personnel in the provision of Aeronautical Telecommunication services, any MANOPs, Facility Manual or any portion of such manual which has not been reviewed and found acceptable or approved by the Authority.
- (g) The MANOPs shall describe the overall (general) company policies and procedures regarding the provision of Aeronautical Telecommunication services listed in the Organization plan. The contents of the MANOPs shall include but is not limited to:
 - (1) Description of personnel requirements and the responsibilities of personnel;
 - (2) Identification of training instructors and proficiency assessment officers within the organization, where applicable;
 - (3) minimum required staffing and qualifications at unit level; and
 - (4) Quality Assurance and Safety Management System operational procedures required under Subpart F;
 - (5) Contingency organization plans developed for part or total system failure for which the organization provides the services as required under 22.405;
 - (6) Security organization plan as required under 22.471;
 - (7) Minimum air navigation facility equipment list specifying the minimum level of equipment required as applicable to a particular class of operation;
 - (8) Procedures to be followed to satisfy the maintenance responsibility for facility equipment with respect to these regulations and manufacturer specifications;
 - (9) fault and defect reporting

- (10) maintenance of documents and records; and
 - (11) any other information required by the Authority.
- (h) The MANOPs shall also contain:
- (1) A chart depicting the Aeronautical Telecommunications provider's organizational structure and shows the Accountable Manager and the position of each key person along with the name, qualification, experience, duties and responsibilities of each key person and all other personnel involved in service provision; and
 - (2) Information on the status of the Aeronautical Telecommunications provider's compliance with the applicable requirements of these regulations, applicable Technical Manuals and Documents issued by the Authority and any deviations approved by the Authority
- (i) Facility Manuals shall contain but are not limited to the following
- (1) detailed unit operational procedures and requirements; and
 - (2) detailed unit administrative requirements, including the responsibilities of each operating position ; and
 - (3) amplification and/or ex-organization planation of provisions of the national requirements, where necessary; and
 - (4) coordination procedures between internal and external agencies; and
 - (5) contingency arrangements in the event of a communications, navigation aids or facility failure; and
 - (6) letters of Agreement with other agencies as applicable;

22.449 Equipment Maintenance Control Manual

- (a) The Aeronautical Telecommunications service provider shall provide to the Authority an equipment maintenance control manual and subsequent amendments, for the use and guidance of equipment maintenance and operational personnel concerned, containing details of the organization's structure including –
- (1) The Accountable Manager and designated person(s) responsible for the equipment maintenance system;
 - (2) Procedures to be followed to satisfy the maintenance responsibility of these regulations and manufacturer specifications.
 - (3) Procedures for the reporting of failures, malfunctions, and defects to the Authority, and the manufacturer within 24 hours of discovery; and, items that warrant immediate notification to the Authority by telephone/telex/fax, with a written follow-on report as soon as possible but no later than within 72 hours of discovery, are –
 - (i) Failure of any piece of surveillance equipment resulting in partial or complete failure;
 - (ii) Partial or complete communication system failure;
 - (iii) Failure of any component of the aeronautical fixed network ;
 - (iv) Failure or malfunction of any automation system under jurisdiction of the Aeronautical Telecommunications service provider's jurisdiction;

- (iv) Failure or malfunction of any automatic voice or data recording system;
 - (v) Any software or hardware malfunction resulting in a disruption to the safe provision of air traffic services;
 - (vi) Any other condition considered an imminent hazard to safety.
- (b) This manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up-to-date.
- (c) The Aeronautical Telecommunications Service Provider shall furnish the Manual described in this section, or pertinent portions, together with all amendments and revisions to all personnel and organizations that are required to use it.
- (d) No person may provide for use of its personnel in the provision of any Aeronautical Telecommunication any Equipment Maintenance Control Manual or portion of this manual which has not been reviewed and approved for the Aeronautical Telecommunications Service Provider by the Authority.
- (e) Upon receipt of material the Authority prescribes as mandatory for inclusion in any portion of the Equipment Maintenance Control Manual, the Aeronautical Telecommunications Service Provider shall make the necessary amendments as soon as reasonably possible.

22.451 Equipment Service and Maintenance Records

- (a) The Aeronautical Telecommunications Service Provider shall have an equipment technical log that contains the record of all maintenance records on that equipment during the course of its operations in a form prescribed by the Authority.
- (b) This log, its contents, layout and the procedures for its use shall be approved by the Authority prior to its use in the provision of Aeronautical Telecommunication services.
- (c) Each page shall be identifiable to the Aeronautical Telecommunications service provider, separately numbered with a unique number and shall be arranged chronologically in a bound document.
- (d) Each page shall be provided in at least duplicate with each copy being a different colour, carbonless and detachable.
- (e) This uniquely numbered, bound document will be assigned to a specific piece of equipment operated by the Aeronautical Telecommunications Service Provider until all pages are used.
- (f) This document shall be retained by the Aeronautical Telecommunications service provider in safe custody as long as the equipment in operation or for three (3) months, whichever is longer.
- (g) If the Aeronautical Telecommunications Service Provider desires to use a different methodology, it must submit the forms and procedures to the Authority for technical evaluation and approval, prior to use of the different methodology in the provision of Aeronautical Telecommunication service provision.

22.453 Deferred Defects Summary

- (a) The Aeronautical Telecommunications Service Provider shall have for each piece of equipment, a log of the deferred defects for that equipment that is attached to or aligned with the Equipment Technical Log.
- (b) This log may be included in the printed Equipment Technical Log or attached in some manner to the cover of that log and will include the information prescribed by the Authority.
- (c) This document shall be retained by the Aeronautical Telecommunications Service Provider in safe custody as long as the equipment is included in the organization's equipment inventory.

- (d) The maximum period of deferral with respect to any equipment or component of any such equipment that is used by the Aeronautical Telecommunications Service Provider shall be as prescribed by the manufacturer or as approved by the Authority, whichever is shorter.

22.455 Submission and Revision of Manuals

- (a) Each manual required by this Part shall –
 - (1) include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;
 - (2) be in a form that is easy to revise and contains a system which allows personnel to determine the current revision status of each manual;
 - (3) have a date of the last revision on each page concerned;
 - (4) not be contrary to any requirement under these regulations and/or as prescribed by any Inspector and the Aeronautical Telecommunication provider's Certificates; and
 - (5) Observe Human Factors Principles in their design and utilization
- (b) No person may use or cause the use of any policy and procedure for any operational function prior to co-ordination with or approval by the Authority.
- (c) The Aeronautical Telecommunications provider shall ensure that hard and soft copies of the manuals required under this Part and any other manual outlining any policy or procedure arrive at the Authority:
 - (i) For initial reviews: No later than 60 business days prior to the intended date of publication
 - (ii) For all other reviews: No later than 30 business days
- (d) A report that demonstrates compliance with the applicable Regulations, the requirements of this Part and the procedures contained in any applicable Manuals of Standards issued by the Authority shall accompany all manuals submitted to the Authority as appropriate. The compliance document shall be acceptable and appropriate to the Authority
- (e) The MANOPs and Facility Manual shall be kept up to date and any requests for amendments thereto shall be forwarded to the Authority:
 - (i) At least 15 working days in advance of their effective date; or
 - (ii) In the case of amendments of an urgent or immediate nature, without delay, and no later than the date on which they are effective.
- (f) Operations personnel shall be expeditiously informed of the amendments to the Operations Manual applying to their duties as well as of their entry into force.
- (g) Upon receipt of material the Authority prescribes as mandatory for inclusion in any portion of any manual required under these regulations, the Aeronautical Telecommunications provider shall make the necessary amendments as soon as reasonably possible or at a time specified by the Authority.
- (h) The Aeronautical Telecommunications provider shall ensure that the contents of the MANOPs and Facility Manuals includes at least those subjects prescribed by the Authority that are applicable to the Aeronautical Telecommunications provider's operations, including any additional materials made mandatory by the Authority.

22.457 Operational Documentation

- (a) The Aeronautical Telecommunications provider shall hold copies of the relevant manuals and any other document necessary for the provision and operation of the services listed in its Organization plan.
- (b) The Aeronautical Telecommunications provider shall establish a procedure to control all the documentation required under this Part which shall ensure that:
 - (1) All incoming documentation, including amendments, are reviewed, and actioned as required by Authorized Personnel; and
 - (2) All documentation is reviewed and authorized before issue; and
 - (3) All obsolete documentation shall be removed promptly from all points of issue or use; and
 - (4) Any obsolete documents retained as archives are suitably identified as obsolete; and
 - (5) Changes to documentation are reviewed and approved by an Inspector of the Flight Safety Division who shall have access to pertinent background information upon which to base their review and approval; and
 - (6) Safety-significant changes are assessed in accordance with the safety management system; and
 - (7) The current version of each item of documentation can be identified to preclude the use of out-of-date editions.
- (c) Current issues of the following documents shall be made available to personnel at all locations where they need access to such documentation for the provision of Aeronautical Telecommunication. These documents shall include but not limited to:
 - (1) The Civil Aviation Act and these Regulations;
 - (2) Applicable Manuals of Standards issued by the Authority;
 - (3) The MANOPs and Facility Manuals;
 - (4) Air Traffic Services and Aerodrome Operations Manual, where applicable;
 - (5) Relevant ICAO Annexes and Documents
- (d) The Aeronautical Telecommunications provider shall ensure that where documents are held as computer based records and where paper copies of computer based records are made, they are subjected to the same control as paper documents.

22.459 Record Keeping

- (a) Each Aeronautical Telecommunications provider shall establish systems and procedures to identify, collect, file, store securely, maintain, access and dispose of records necessary for:
 - (1) The operational provision of Aeronautical Telecommunication services; and
 - (2) The purpose of assisting with any accident or incident investigation.
- (b) The Aeronautical Telecommunications provider shall ensure that its procedures for providing information to the persons designated to complete a specific record are provided in a timely way so that the record is continuously up-dated and available for consideration for the organization planning and provision of air navigation services.

- (c) The person(s) designated to complete a specific record shall be given that designation in writing and provided training and written policy guidance for the completion of the document with respect to timing and accuracy.
- (d) Every person designated to complete and/or sign a record required under these regulations shall make the required entries accurately and in a timely manner so that the record used for organization planning and provision of Aeronautical Telecommunication services reflects the true situation at the time of use.
- (e) Every record required for the Aeronautical Telecommunications provider's operations and equipment maintenance purposes shall be completed in ink or indelible pen, unless otherwise approved by the Authority.
- (f) Access to recorder equipment and tapes shall be restricted to only the authorized personnel listed in the Aeronautical Telecommunications provider's Operations Manual and/or Facility Manuals or as prescribed by the Authority.
- (g) Any Aeronautical Telecommunications provider that withholds any records described under this subsection following any request from any Authorized person shall be guilty of an offence.

22.461 Maintenance of Inspection(s) Records and Entries

- (a) Each person who maintains, performs preventive maintenance, or alters/upgrades an aeronautical telecommunication facility shall, when the work is performed satisfactorily, make an entry in the maintenance logbook of that equipment. The entry shall state a description (or reference to data acceptable to the Authority) of work performed, including:
 - (i) Appropriate details of alterations and repairs;
 - (ii) The current status of the aeronautical telecommunication facility on return to services;
 - (iii) Completion date of the work performed; and
 - (iv) Name, signature, and unique identification number of the person making such records and of the person approving the work.

SUBPART E: AERONAUTICAL TELECOMMUNICATION ORGANIZATION**22.463 Personnel Requirements**

- (a) An Aeronautical Telecommunications Services provider shall, at all times, maintain an appropriate organization with a sound and effective management structure to enable it provide, in accordance with the standards set out in the Regulations, the Aeronautical Telecommunication Services covered by its Approval.
- (b) An Aeronautical Telecommunications Services provider shall have, at all times, enough suitably qualified and trained personnel to enable it to organization plan, provide and supervise all services provided, in accordance with the standards set out in the Regulations and conditions of its Certificates.
- (c) The Aeronautical Telecommunications Services provider shall engage, employ or contract:
 - (2) An Accountable manager responsible for :
 - (i) Managing safety;
 - (ii) Ensuring that the organisation complies with the requirements of this Part;
 - (iii) Ensuring that safety is given the highest priority when assessing commercial, operational, environmental or social pressures; and
 - (iv) Managing personnel in relation to safety and compliance with this Part.
 - (3) A Key Person or Key Personnel that is competent and qualified in respect of inspection, supervision and maintenance; and
 - (4) A person who is responsible for quality control, and who shall have direct access to the person referred to in paragraph (C) (1) above on matters affecting aviation safety
- (d) The Accountable manager and key personnel shall ensure that all activities undertaken by the unit are carried out in accordance with the applicable requirements prescribed in this section, and who shall in addition be vested with the following powers and duties in respect of the compliance with such requirements.
- (e) Written records and procedures shall be established in respect of commissioning, operation and maintenance of aeronautical telecommunications services or equipment:
 - (1) to assess and maintain the competence of such persons with the authority or responsibility for those functions ;
 - (2) establish a means to provide those personnel with signed written evidence of the scope of their authority and responsibility ; and
 - (3) establish the job descriptions containing safety responsibilities.
- (f) The Aeronautical Telecommunications Services provider shall ensure that its personnel are of sufficient numbers and experience and have been given appropriate authority to be able to discharge their allocated responsibilities.
- (g) An Aeronautical Telecommunications Services provider shall arrange the work flow Part of Aeronautical Telecommunication Services officers to provide duty rest periods. A copy of the Aeronautical Telecommunications Services providers fatigue management procedure shall be included in the Operations Manual.

- (h) An Aeronautical Telecommunication Services officer shall not provide or cause to be provided any services directly or indirectly related to the provision of Aeronautical Telecommunication Services if he knows or suspects that he is suffering from or, having regards to the circumstances of the period of duty to be undertaken, is likely to suffer from such fatigue as may endanger the safety of any aircraft to which an aeronautical telecommunications control services is provided.
- (i) A person shall not under the influence of alcohol or a drug to the extent as to impair his capacity to exercise such privileges when providing any services described under these Regulations.

22.465 Training and Checking of Staff

- (a) The Aeronautical Telecommunications Services provider shall establish a training program that covers recruitment, ab-initio training, initial certification, advanced certification and a procedure for maintaining, the competence of the personnel required to operate and maintain the equipment concerned.
- (b) The program mentioned in sub-paragraph (a) shall adhere to the guidance contained in ICAO Document 7192 –E2 and paragraph 22.461.

22.467 Proficiency

- (c) As part of the quality system, the holder of an Aeronautical Telecommunication Services provider Certificate shall assess the Aeronautical Telecommunication Services personnel under his employment.
- (d) A formal proficiency assessment shall be carried out to assess whether the applicant has achieved and is maintaining the required level of competence.
- (e) At each facility the Aeronautical Telecommunications Services provider shall nominate a person to establish and maintain unit proficiency standards.
- (f) Specific senior officers shall be appointed and tasked by the person responsible for the services as proficiency assessment officers for each discipline.
- (g) At units where operational staff are multi - disciplined, the person responsible for the services shall appoint and task at least one proficiency assessment officer. Proficiency assessment officers may be appointed and tasked for each discipline although operating within a multi- disciplined environment.
- (h) At each major facility, the manager shall appoint and task an Aeronautical Telecommunication Services officer responsible for satellite units as the proficiency assessment officer.
- (i) A person assessed as unsatisfactory may not be permitted to continue in the assessed discipline without supervision. If after a reasonable period a person is unable to pass the proficiency check, all details pertaining to the unsatisfactory assessment shall be assembled and sent to the Authority.
- (j) Proficiency assessment officers shall prepare proficiency check rosters so that all operational staff are screened on a regular basis. Personnel shall be given advanced notice of a real time annual proficiency check so that adequate preparation, mentally and functionally, can be made.
- (k) In addition to the requirements of sub-paragraph (h), a formal assessment shall be carried out at least every 12 months to determine whether all operational personnel are maintaining the required level of competence in the positions for which they are certified. Routine assessments should be conducted on an on - going basis during duty assignment.
- (l) Personnel shall be assessed in key elements of the performance areas detailed on an assessment form.
- (m) An assessment shall be made of both the quality of work and the level of knowledge of the elements assessed.

- (n) The Operations Manual shall also include the procedures for:
 - (1) Aeronautical Telecommunication Services personnel to undertake remedial training; and
 - (2) Updating Aeronautical Telecommunication Services personnel skills when introducing new equipment into services and updating communications.
- (o) Proficiency and training records shall be maintained for all Aeronautical Telecommunication Services personnel.
- (p) The Aeronautical Telecommunication Service provider shall ensure that the training requirements of sub-regulations 22.459 and 22.461 are similarly applied to its maintenance contractors, if any.

22.469 Recurrency Training

- (a) An Aeronautical Telecommunications Services provider shall establish and maintain, in accordance with the Manual of Standards, programs for :
 - (1) Continuing assessment of its employees' competency for the purposes of ensuring that they continue to satisfy the currency requirements in relation to ratings and endorsements ; and
 - (2) Familiarization, retraining and assessment of any of its employees that at any time do not satisfy the currency or frequency requirements in relation to an endorsement.
- (b) The provider shall include details of the program, including necessary training and tests of competency, in its operations manual.

22.471 Prevention of Fatigue

- (a) The Aeronautical Telecommunications service provider that operates on a 24 hour basis shall establish suitable procedures to mitigate the effects of fatigue on Aeronautical Telecommunication operational staff.
- (b) The Aeronautical Telecommunications service provider is required to receive approval of the policy mentioned in sub-paragraph (a) above from the Authority as well as any procedures and record completion and retention for the duty time scheme it uses with respect to its operations personnel.
- (c) Where the Aeronautical Telecommunications service provider has instituted the requirement under sub-paragraph (a), the Aeronautical Telecommunication service provider shall:
 - (1) Establish and include the maximum number of hours worked in a given period or minimum number of rest periods in the Organizational Organization plan prescribed in these regulations.
 - (2) Maintain a record of each person's assigned and actual duty times and minimum rest period in accordance with a system set out and approved by the Authority in its Operations Manual.
- (d) When requested by any person occupying an operational positions, the Aeronautical Telecommunications service provider shall, with 5 working days of the request being made, provide any such person with a copy of the record required by sub-paragraph (c) (2) of this subsection
- (e) The Aeronautical Telecommunications service provider shall ensure that the required records for tracking operational and duty times and rest periods are maintained in a manner so that an updated record is available before a person begins their duty day or their first operational duty assignment of the day.

SUBPART F: SAFETY AND QUALITY MANGEMENT SYSTEMS AND OTHER PROGRAMS**22.473 Safety Management System.**

- (a) The Aeronautical Telecommunication service provider shall establish a safety management system appropriate to the size and complexity of the operation, for the proactive management of safety, that integrates the management of operations and technical systems with financial and human resource management, and that reflects quality assurance principles.
- (b) The safety management system shall include policy and objectives for continuous improvement to the organization's overall safety performance.
- (c) As a part of the continuous safety improvements mentioned in sub-paragraph (b) above, The Aeronautical Telecommunication service provider shall ensure that:
 - (1) Safety reviews of Aeronautical Telecommunication units are conducted on a regular and systematic basis by personnel qualified through training, experience and expertise and having a full understanding of relevant Civil Aviation legislation, Procedures contained in the applicable Manuals of Standards and guidance material, safe operating practices and Human Factors principles; and
 - (2) Any actual or potential hazard related to the provision of Aeronautical Telecommunication services, whether identified through a safety management activity or by any other means, shall be assessed and classified by the appropriate authority for its risk acceptability.
- (d) The safety management system shall clearly define lines of safety accountability throughout the operator's organization, including a direct accountability for safety on the part of senior management.
- (e) The safety management system shall include, as a minimum, the following:
 - (1) Processes to identify actual and potential safety hazards and assess the associated risks;
 - (2) Processes to develop and implement remedial action necessary to maintain agreed safety performance;
 - (3) Provision for continuous monitoring and regular assessment of the safety performance;
 - (4) Recurring processes for continuous improvement of the performance of the safety management system; and
 - (5) Quality assurance processes to:
 - (i) Identify applicable requirements, regulations and standards and demonstrate compliance with them; and
 - (ii) Ensure technical manuals, checklists and other documentation are appropriately maintained and incorporate the latest amendments; and
 - (iii) Ensure that training programmes maintain staff proficiency and competency.
 - (iv) Evaluate trends, including "Mean Time Between Failures" (MTBF).
- (f) The safety management system shall be described in relevant documentation, and shall be acceptable to the Authority.
- (g) The programme referred to in paragraph (a) shall have an accountable manager that –

- (1) Has direct access to the Chief Executive Officer or Accountable Manager, on operational system safety matters;
 - (2) Conducts risk assessments of current and proposed operational policies, organization plans and procedures; and
 - (3) Coordinates the collection and analysis of operational risk related data
- (e) Before introducing any change to an Aeronautical Telecommunication system which may have safety implications, the Aeronautical Telecommunication service provider shall:
- (1) Conduct safety assessment in respect of proposals for significant changes in the provision of Aeronautical Telecommunications covered by the organizations Certificates, and for the introduction of new equipment, systems or facilities;
 - (2) Consult users as far as practicable about the intended change; and
 - (3) Ensure that hazard identification as well as risk assessment and mitigation are systematically conducted for any changes to those parts of the functional system and supporting arrangements within managerial control, in a manner, which addresses:
 - (v) the complete life cycle of the constituent part of the system under consideration, from initial organization planning and definition to post-implementation operations, maintenance and de-commissioning;
 - (vi) the airborne, ground and, if appropriate, spatial components of the functional system, through cooperation with responsible parties; and
 - (vii) the equipment, procedures and human resources of the system, the interactions between these elements and the interactions between the constituent part under consideration and the remainder of the functional System.
 - (4) Demonstrate that an acceptable level of safety will be achieved as a result of the intended change, taking into account any associated effects of the change.
- (f) In relation to any change referred to in sub-paragraph (g) of this section and notwithstanding any actions taken in respect of those changes, the Aeronautical Telecommunication service provider shall ensure that adequate provision is made for monitoring after implementation to verify whether or not the expected levels of safety are being met.
- (g) The safety management system shall be integrated with the safety management systems of all related services for which coordination is required.

22.475 Quality Management System

- (a) The Aeronautical Telecommunication service provider shall establish a quality management system within 2 years after the issuance of any operational approval by the Authority and designate technically qualified auditor(s) who will monitor compliance with, and adequacy of, procedures required to ensure safe operational practices.
- (b) The quality management system shall be in conformity with the International Organization for Standardization 9000 series of quality assurance standards.
- (c) The quality management system and the quality manager shall be approved by the Authority.

- (d) The Aeronautical Telecommunication service provider shall describe the quality management system in relevant documentation.
- (e) The quality management system shall cover all services being provided and shall include—
 - (1) A quality policy and safety policy designed to meet the needs of all the different users as closely as possible;
 - (2) A quality assurance program that contains procedures designed to verify that all operations are being conducted in accordance with applicable requirements, standards and procedures.
 - (3) Procedures to demonstrate the functioning of the quality system by means of manuals and monitoring documents and other quality indicators.
 - (4) An audit programme to audit the organization for compliance with the quality policy and remedial actions as appropriate
 - (5) A procedure for preventive action to ensure that potential causes of problems that have been identified within the system are remedied; and
 - (6) Management reviews of the quality management system to ensure compliance with, and adequacy of, procedures to ensure safe and efficient operational practices.
- (f) The safety policy procedures shall ensure that the safety policy is understood, implemented, and maintained at all levels of the organization.
- (g) The procedure for corrective action shall specify how—
 - (1) to correct an existing problem;
 - (2) to follow up a corrective action to ensure the action is effective;
 - (3) to amend any procedure required by this part as a result of a corrective action; and
 - (4) management will measure the effectiveness of any corrective action taken.
- (h) The procedure for preventive action shall specify how—
 - (1) to correct a potential problem;
 - (2) to follow-up a preventive action to ensure the action is effective;
 - (3) to amend any procedure required by this part as a result of a preventive action; and
 - (4) management will measure the effectiveness of any preventive action taken.
- (i) The internal quality audit programme shall—
 - (1) specify the frequency and location of the audits taking into account the nature of the activity to be audited; and
 - (2) ensure audits are performed by trained auditing personnel who are independent of those having direct responsibility for the activity being audited;
 - (3) ensure the results of audits are reported to the personnel responsible for the activity being audited and the manager responsible for internal audits;

- (4) require preventive or corrective action to be taken by the personnel responsible for the activity being audited if problems are found by the audit; and
 - (5) ensure follow up audits to review the effectiveness of any preventive or corrective action taken.
- (j) The procedure for management review shall—
- (1) Specify the frequency of management reviews of the quality assurance system taking into account the need for the continuing effectiveness of the system;
 - (2) Identify the responsible manager who shall review the quality assurance system; and
 - (3) Ensure the results of the review are evaluated and recorded.
- (k) The key person who has the responsibility for internal quality assurance shall report directly to the Chief Executive or the Accountable Manager on matters affecting the safe provision of any Aeronautical Telecommunication service provided.

22.477 Security

- (a) The Aeronautical Telecommunication service provider shall establish a security programme which shall specify the physical security, practices and procedures to be followed to minimize the risk of destruction of, damage to, or interference with the operation of any air navigation facility where such destruction, damage or interference is likely to endanger the safety of aircraft.
- (b) The security programme shall conform to all requirements prescribed in CAGR Part 29
- (c) The security programme shall include and specify such physical security requirements, practices and procedures that may be necessary:
 - (1) To ensure that all appropriate personnel are familiar, and comply with, the relevant requirements of all national security programmes.
 - (2) To ensure that all employees are acquainted with preventive security measures and techniques in regards to all related air transport operations so that they may contribute to the prevention of acts of sabotage or other forms of unlawful interference;
 - (3) To ensure that these personnel are able to take appropriate action to prevent acts of unlawful interference and to minimize the consequences of such events should they occur; and
 - (4) To ensure that all units contain a checklist of the procedures to be followed in the event of unlawful interference or other security provisions. All checklists shall observe Human Factors Principles and shall be supported by guidance –
 - (i) on the course of action to be taken should a bomb or suspicious object be found;
 - (ii) to ensure that access to permanent air navigation facilities operated by the applicant are subject to control to prevent unauthorized entry;
 - (iii) to protect personnel on duty;
 - (iv) to secure operational information and data that is received or produced or otherwise employed, so that access to it is restricted only to those authorized;
 - (v) to be followed in the event of a bomb threat or other threat of violence against an air navigation facility;
- (d) To monitor unattended telecommunication buildings to ensure that any intrusion or interference is detected;
- (e) To conduct security risk assessments and mitigation, security monitoring and improvement, security reviews and lesson dissemination; and

- (f) To contain the effects of security breaches and to identify recovery action and mitigation procedures to prevent re- occurrence.
- (g) The Aeronautical Telecommunication service provider shall ensure the security clearance of its personnel as required under the CAGR Part 29 and coordinate with the relevant authorities to ensure the security of its facilities, personnel, information and data.

SUBPART G: AERONAUTICAL TELECOMMUNICATION FACILITIES**22.479 Commissioning of New Facility**

- (a) The Aeronautical Telecommunication Service provider shall establish procedures to ensure that each new facility:
 - (i) Is commissioned to meet the specifications for that facility; and
 - (ii) Is in compliance with the Standards and specifications prescribed in Annex 10, where applicable.
- (b) The Aeronautical Telecommunication Service provider shall ensure that the system performance of the new facility has been validated by the necessary tests, and that all parties involved with the operations and maintenance of the facility, including its maintenance contractors have accepted and are satisfied with the results of the tests.
- (c) The Aeronautical Telecommunication Service provider shall ensure that procedures include documentation of tests conducted on the facility prior to the commissioning, including those that test the compliance of the facility with the applicable Annex 10 SARPS and any flight check required in compliance with ICAO Doc 8071.

22.481 Aeronautical Telecommunication Equipment Requirements

- (a) The Aeronautical Telecommunication service provider shall list the aeronautical telecommunication equipment comprising the service in the Aeronautical Telecommunications Organization plan and for each, the Aeronautical Telecommunications Service Exposition shall provide evidence that:
 - (1) it is designed, installed, and commissioned to meet the safety requirements of the safety management system prescribed under subpart f;
 - (2) it conforms with the applicable standards and recommended practices prescribed in all related icao annexes, including guidance material unless a justifiable alternative is agreed with the authority;
 - (3) the monitoring and communication of the operational status shall meet the operational needs of the related air traffic service;
 - (4) the power supply to the equipment shall meet the operational continuity requirements of the service being supported;
 - (5) any critical or sensitive site area necessary for protecting the safe operation of equipment listed shall be defined and protected; and
 - (6) a procedure has been established to ensure sufficient spares are held to ensure the continuity of the aeronautical telecommunication service.
- (b) The Aeronautical Telecommunication service provider that intends to operate temporary or pre-operational equipment shall:
 - (1) notify the authority with adequate notice prior to start of the tests; and
 - (2) demonstrate that the operation does not cause any interference with any other operating aeronautical telecommunication equipment;

22.483 Procurement of Aeronautical Telecommunication and Radio Navigation Equipment/ General CNS Facilities

- (a) Aeronautical Telecommunication Services providers shall:

- (3) avoid the proliferation of equipment and systems;
 - (4) establish and maintain efficient maintenance systems and procedures that includes procedures to maintain an adequate inventory of spare parts ;
 - (5) conduct quality assessment of equipment and systems prior to purchase ; and
 - (6) maintain uniform operational characteristics and standardization.
- (b) The Aeronautical Telecommunication Services provider shall inform the Authority by writing prior to the purchase of any aeronautical telecommunications facilities.
- (c) An Inspector nominated by the Authority shall observe the installation and radiation tests of facilities and commissioning tests before they are finally put into operation.

SUBPART H: AERONAUTICAL TELECOMMUNICATION MAINTENANCE ACTIVITIES & INSPECTION**22.485 Equipment Maintenance**

- (a) No person may operate an aeronautical telecommunication facility unless the facility and its component are maintained in accordance with equipment certification procedures and the facility is inspected in accordance with the certification programme approved by the authority.
- (b) The Aeronautical Telecommunication service provider shall be responsible for maintaining the aeronautical telecommunication facility by ensuring that:
 - (1) All maintenance, overhaul, alterations and repairs which may affect or alter continued serviceability are carried out as contained in the equipment maintenance manual;
 - (2) Maintenance personnel make appropriate entries in the logbook certifying the serviceability of the equipment; and
 - (3) The approval for return to services is completed to the effect that the maintenance carried out has satisfactorily been completed in accordance with the equipment maintenance manual;
- (c) The applicant shall establish a procedure for maintenance of the aeronautical telecommunications equipment listed in the applicant's Organization plan verifying that it meets the applicable requirements and performance specifications for that equipment, including:
 - (1) A Part of maintenance meeting the manufacturers' recommendations and ICAO
 - (2) Doc 8071 (Manual on Testing of Radio Navigation Aids);
 - (3) Personnel maintenance instructions meeting manufacturers' recommendations and ICAO Doc 8071, as required under paragraph 22.491; and
 - (4) The identification of any maintenance or fault rectification that requires a flight check before the equipment is returned to service.
- (d) Any flight checking organization for maintenance of the aeronautical telecommunications equipment shall be approved by the Authority in accordance with the requirements of the Twenty Fourth, "C" Part.
- (e) The facility maintenance procedure shall be included in the Aeronautical Telecommunication provider's operations manuals and shall include a description of the equipment and components and recommended methods for the accomplishment of maintenance tasks. Such information shall include guidance on fault diagnosis.
- (f) The Aeronautical Telecommunication service provider's operations manuals shall state the specific maintenance tasks to be accomplished regarding each piece of equipment at each air navigation facility and the recommended intervals at which these tasks are to be performed.
- (g) Maintenance tasks and frequencies that have been specified as mandatory by the manufacturer of the equipment shall be identified in the operations manuals. Basic details of the maintenance carried out and the chronology of such maintenance shall be maintained in approved technical manuals was carried out.

22.487 Performance Rules Maintenance, Preventive Maintenance or Alterations/Upgrade.

- (a) Each person performing maintenance, preventive maintenance, or alteration/upgrade on an aeronautical telecommunication facility shall use the methods, techniques, and practices prescribed in:

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- (1) The current manufacturer's maintenance manual or operations manual for Continued Serviceability prepared by the Aeronautical Telecommunications provider and approved by the Authority; and
 - (2) Additional methods, techniques and practices required by the Authority; or methods, techniques and practices prescribed by the Authority where the manufacturer's documents were not available or adequate.
- (b) Each person performing maintenance, preventive maintenance, or alteration on an aeronautical facility shall do that work in such a manner, and use materials of such a quality, that the condition of the aeronautical telecommunication facility worked on will be restored to its optimal or properly altered condition with regards to acceptable standards by the Authority.
- (c) The methods, techniques, and practices contained in a MANOPs and equipment certification maintenance procedure, as approved by the Authority, will constitute an acceptable means of compliance with the requirements of this subsection.
- (d) An aeronautical telecommunication equipment/component manufacturer or its representative may:
- (1) Replace, upgrade, or alter any aeronautical telecommunication facility part manufactured by that manufacturer; and
 - (2) Perform any inspection as prescribed in the Authority's Manual of Standards and the Air Navigation Services provider's Operations Manual (MANOPs) subject to the approval of the Authority;

22.489 Persons Authorized to perform maintenance

- (a) No person shall perform maintenance on an aeronautical telecommunication facility, equipment part or component unless such a person is :
- (1) An Air Traffic Safety Electronic Personnel trained in accordance with paragraph 22.459(b); or
 - (2) Working under supervision of a person mentioned in sub-paragraph (a) above during the course of a practical component of training in accordance with ICAO Doc 7192-E2.
- (b) A person having under-gone the training prescribed under 22.459(b) shall only perform or supervise the maintenance of an aeronautical telecommunication facility for which such person has demonstrated competent and currency in accordance with the training and proficiency requirements of this Part.

22.491 Aeronautical telecommunication equipment performance

- (a) The applicant shall ensure that a person does not put or return an aeronautical telecommunication service into operation unless:
- (1) He is assessed as competent and authorised for that specific function according to paragraph 22.459(b);
 - (2) The appropriate checks detailed in the operating and maintenance instructions required under paragraph 22.499 have been carried out to verify the performance of the aeronautical telecommunication equipment;
 - (3) The aeronautical telecommunication equipment record has been completed according to the procedures required under paragraph 22.453 and any other record required to be kept in the manuals specified under Subpart D; and

- (1) That person knows or suspects that the information being provided by that facility is erroneous unless it is being used under the conditions at paragraph 22.401.
- (b) The applicant shall apply the requirements of sub-paragraph (a) above before returning aeronautical telecommunication systems into service following a flight inspection.

22.493 Approval to return Equipment/Facility to service.

- (a) No person, other than the Chief Executive officer, of an aeronautical telecommunication Services Provider shall approve the return to service of an aeronautical Telecommunication equipment or facility especially after a major component of the equipment or facility has been replaced or undergone maintenance or alteration.
- (b) Air Traffic Service Electronics personnel may approve return to services, of an aeronautical telecommunication facility after performing maintenance as delegated by the Accountable officer.
- (c) The Accountable manager shall not delegate the authority to approve the return to service of any aeronautical telecommunication equipment or facility to any person mentioned in sub-paragraph (b) unless the person has demonstrated a level of competency equal to that which is required under this Part.
- (d) No person shall approve for return to services any aeronautical telecommunication facility that has undergone maintenance, preventive maintenance, alteration or upgrading unless—
 - (1) The appropriate entry has been made in the maintenance logbook; and
 - (2) The facility is tested through the conduct of a ground checked or flight check as appropriate.
- (e) No person shall describe in any required state in a maintenance logbook of an aeronautical telecommunication facility as having been altered or upgraded unless it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits.
- (f) No person(s) shall approve the return to service of equipment or facility after a major alteration or equipment part replacement unless such person has tested the equipment to determine satisfactory performance in accordance with the current manufacturer's recommendations.

22.495 Fault and Defect Reporting

- (a) The Applicant shall maintain system for tracking and rectifying faults within the aeronautical telecommunications services system.
- (b) Procedure for reporting and the resolutions of faults and defects shall be documented in the Aeronautical Telecommunication provider's MANOPs. This includes procedures for ensuring that the operational Status of Communications, Navigation and Surveillance facilities are provided to the units providing Air Traffic Control Services.
- (c) The Aeronautical Telecommunications Service Provider shall forward daily, weekly and monthly defect reports to the Authority.
- (d) The Aeronautical Telecommunications Service Provider shall report power system failures to the Authority as it they occur.

22.497 Tools and tests

- (a) Each person shall use the tools, equipment, and test apparatus necessary to ensure completion of the work in accordance with accepted industry practices. If the equipment manufacturer involved recommends special

equipment or test apparatus, the person performing maintenance shall use that equipment or apparatus or its equivalent acceptable to the Authority.

- (b) The applicant shall establish a procedure to control, calibrate, and maintain all the equipment required under sub-paragraph (a) above to ensure that it is suitable for purpose.

22.499 Notification of aeronautical telecommunication service information

- (a) A person operating an aeronautical telecommunication service shall have a procedure to:
 - (1) Inform all relevant AIS providers of:
 - (i) Information to be promulgated in the AIP in relation to that aeronautical telecommunication service in relation to type and availability for use by aircraft; and
 - (ii) Information to be promulgated in a NOTAM concerning any change in the operational status of the aeronautical telecommunication service;
 - (2) Verify that the information provided under sub-paragraph (1) has been accurately published by the AIS.

SUBPART I: AERONAUTICAL TELECOMMUNICATION PROVIDER OPERATIONS**22.4100 Provision of Aeronautical Telecommunications Services**

- (a) The Aeronautical Telecommunication Services provider shall provide Aeronautical Telecommunication Services in accordance with the requirements of these Regulations, the requirements of this Part and referenced compliance and guidance material including any Manual of Standards approved, authorized, published and amended by the Authority.
- (b) The Aeronautical Telecommunication Services provider may deviate from the standards if an emergency, or other circumstances, arises that makes the deviation necessary in the interest of safety.
- (c) As soon as practicable, the provider shall report, the deviation to the Authority, stating how the deviation is expected to last.
- (b) An Aeronautical Telecommunication Services provider shall ensure that the Aeronautical Telecommunication Services it provides are provided in accordance with the radiotelephony procedures and the procedures for Aeronautical Telecommunications set out in ICAO Annex 10, Vol. II and these Regulations.

22.4103 Certification of Air Navigation Service equipment, facility and procedures

- (a) The Authority shall certify all the Communication, Navigation, Surveillance, Landing aids, products, facilities and procedures used in the provision of Air Navigation Services before their commissioning for use in the provision of Air Traffic Services within the Sovereign airspace of The Bahamas or other territory for which the Bahamas has assumed responsibility for providing Air Traffic Services.

22.4105 Identification codes, call signs and frequencies

- (a) The applicant Aeronautical Telecommunication service provider shall only operate an aeronautical radio navigation aid or radio communication transmitter if a current licence is held for the radio frequency and that an identification code has been allocated and that this has been declared in the Aeronautical Telecommunications Service Organization plan.
- (b) The applicant shall ensure the performance of an aeronautical radio navigation aid or radio communication transmitter is protected against any interference caused by obstructions and other radio emissions.

22.4107 Operating and maintenance instructions

- (a) The holder of an aeronautical telecommunication service approval shall:
 - (1) Have operating and maintenance instructions that set out the requirements for operating and maintaining each aeronautical telecommunication equipment listed in its exposition; and
 - (2) Provide the operating and maintenance instructions required under sub-paragraph (a) for the use and guidance of its personnel.

22.4109 Temporary aeronautical telecommunication equipment

- (a) If temporary, pre -operational or replacement aeronautical telecommunication equipment is operated for the purpose of a site test, the holder of an Aeronautical Telecommunication service Certificate is not required to comply with any requirements of this Part, except for sub-paragraph 22.473 (b).

22.4111 Limitations on approval holder

- (a) Except if a site test is carried out according to the procedures required under paragraphs 22.401 (b) and 22.495, the holder Aeronautical Telecommunication service provider may not operate aeronautical telecommunication equipment under the authority of its Certificate unless:

- (1) The aeronautical telecommunication equipment is listed in the approval holder's Aeronautical Telecommunications Service Organization plan;
- (2) The performance of the aeronautical telecommunication equipment meets the applicable information published for that facility under paragraph 22.491;
- (3) The performance of the aeronautical telecommunication equipment meets the applicable requirements in paragraph 22.473(a);
- (4) Any integrity monitoring system for the aeronautical telecommunication equipment is fully functional; and
- (5) All the periodic tests for the aeronautical telecommunication equipment are completed according to the programmes established in accordance with the requirements of Subpart H.

22.4113 Contingency Organization plan

- (a) Within one year after initial certification, an Aeronautical Telecommunications Services provider shall develop and maintain Contingency Organization plans for implementation in the emergencies including degradation, disruption or potential disruption of Aeronautical Telecommunication Services and related supporting services for the facilities it maintains. The disruption may be caused intentionally (sabotage) or unintentionally (equipment failure).
- (b) The minimum the organization plan shall include:
 - (1) the actions to be taken by personnel responsible for providing the service during;
 - (i) emergency situations and;
 - (ii) degraded modes of operation.
 - (2) hand-over and service continuity procedures during facility emergency evacuations;
 - (3) provisions to protect against cyber related threats;
 - (4) security assessment of emergency/degraded modes;
 - (5) determination of the need for service continuity including arrangements for cross-border provision of services if applicable;
 - (6) maximum agreed period of service disruption;
 - (7) human factors considerations;
 - (8) the arrangements for resuming normal operations; and
 - (9) any other requirement prescribed by the authority
- (c) The Contingency organization plan required under sub-paragraph (a) shall be incorporated in the Aeronautical Telecommunication service provider's Operations Manual.

22.4115 Aeronautical telecommunication equipment check after an accident or incident

- (a) The applicant shall establish a procedure to check and accurately record the operating condition of any aeronautical telecommunication equipment operated under the authority of an approval that may have been used by an aircraft, or an air traffic service, that is involved in an accident or incident.

22.4117 Aeronautical telecommunications equipment malfunction

- (a) Where telecommunication equipment malfunctions such that it fails to meet the technical requirements of this Part, the Aeronautical Telecommunication provider shall:
 - (1) Notify, investigate, and record the malfunction;
 - (2) Record and implement corrective action;
 - (3) Record where a change has been implemented to prevent recurrence; and
 - (4) Monitor the performance of the changes using the Safety Management System to determine if an acceptable level of safety has been achieved.

22.4119 Voice Communications Failure – Air Ground

- (a) When an aircraft station fails to establish contact with the appropriate aeronautical station on the designated channel, it shall attempt to establish contact on the previous channel used and, if not successful, on another channel appropriate to the route. If these attempts fail, the aircraft station shall attempt to establish communication with the appropriate aeronautical station, other aeronautical stations or other aircraft using all available means; and advise the aeronautical station that contact on the assigned channel could not be established. In addition, an aircraft operating within a network shall monitor the appropriate VHF channel for calls from nearby aircraft.
- (b) If the attempts specified under sub-paragraph (a) fail, the aircraft station shall transmit its message twice on the designated channel(s), preceded by the phrase “TRANSMITTING BLIND” and, if necessary, include the addressee(s) for which the message is intended.

22.4121 Failure of CPDLC Provision of Infrastructure for GNSS

- (a) The Aeronautical Telecommunications service provider shall provide facilities that will permit the operation and maintenance of facilities that support GNSS procedures and installations.

22.4123 Intentional Shutdown of CPDLC

- (a) When a system shutdown of the communications network or the CPDLC ground system is organization planned, a NOTAM shall be published to inform all affected parties of the shutdown period and if necessary, the details of the voice communication frequencies to be used.
- (b) Aircraft currently in communication with the ATC unit shall be informed by voice or CPDLC of any imminent loss of CPDLC service.
- (c) The controller and pilot shall be provided with the capability to abort CPDLC.

22.4125 Flight Inspection and Calibration

- (a) The Aeronautical Telecommunications service provider shall either carry out itself or identify the resources required to conduct flight inspection of Navigation and landing Aids and Surveillance systems in accordance with the provision of ICAO Doc 8071.
- (b) Flight tests other than routine checks required under this Part in accordance with manufacturer specifications and guidance material, as appropriate, shall be conducted to inspect any equipment after major maintenance activities or after being subjected to factors outside of standard operating conditions as influenced by external

factors such as site conditions, ground conductivity, terrain irregularities, metallic structures, propagation effects, etc.

- (c) The Aeronautical Telecommunication Services provider shall ensure that flight testing is utilized for :
 - (1) Site proving;
 - (2) Commissioning;
 - (3) Routine inspections; and
 - (4) Non-routine inspections
- (d) Radio navigation aids of the types covered by the specifications in Chapter 3 of Annex 10 Volume 1 and available for use by aircraft engaged in international air navigation shall be the subject of periodic ground and flight tests.

22.4127 External Data Sources

- (a) An Aeronautical Telecommunication Services provider shall consider the availability and reliability of external data sources required to provide an Aeronautical Telecommunication services.
- (b) The Aeronautical Telecommunication Services provider shall include the originator, the data source and means of receipt, display and integrity of the following information:
 - (1) AIS;
 - (2) AFN;
 - (3) Flight testing;
 - (4) Meteorological information;
 - (5) Meteorological warnings;
 - (6) Voice coordination with Aeronautical Telecommunications providers ;
 - (7) Information on aerodrome conditions and the operational status of facilities and navigation aids; and
 - (8) Aerodrome works and administration coordination.
- (c) The Aeronautical Telecommunication Services provider shall provide a description of the arrangements made or proposed to be made by the applicant to ensure that it can, and will continue to be able to provide the information in relation to its Aeronautical Telecommunication Services to other organizations whose functions reasonably require that information e.g. ATS units and centres, aerodrome operators. Data recipients may include :
 - (1) AIS;
 - (2) Aeronautical Telecommunications providers;
 - (3) Aerodrome operators;
 - (4) Aircraft Operators;
 - (5) Aeronautical Meteorology services providers;

- (6) Military; and
- (7) Other Government agencies.

22.4129 Search and Rescue Responsibilities and Co-ordination.

- (a) The Aeronautical Telecommunication Services provider shall provide such assistance as requested from the agency responsible for conducting SAR activities.
 - (1) Technical Log containing the entry for the correction.

End of Schedule 22 – Part D