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SUBPART 1: GENERAL

Applicability

178.01.1 (1) This Part:

- (a) provides for the standards that apply to the design of flight procedures; and
- (b) applies to organisations who want to become, or are, Certified Designers or Authorised Designers of flight procedures and certain employees of those organisations;
- (c) sets out certain rules that apply to the Authority in administering procedure design certificates and procedure design authorisations.

(2) This Part does not apply to:

- (a) the design of flight procedures for use by an aircraft in circumstances where one or more engines of the aircraft have become inoperative while it is on an IFR flight; and

- (b) an organisation which carries out design work on such procedures.

Procedure design authorisation

178.01.2 A procedure design authorisation, is an authorisation that:

- (a) is granted by the Commissioner to an organisation under this Part; and
- (b) authorises the organisation to perform either of the following activities subject to any conditions set out in the notice to the organisation contemplated in regulation 178.06.3:
- (i) review or amend a flight procedure that is of a type covered by the authorisation and is for use by a South African registered aircraft operating at, or in the vicinity of, an aerodrome in a foreign country;
- (ii) perform design work on a flight procedure that is of a type covered by the authorisation and is for use by a South African registered aircraft operating at, or in the vicinity of, an off-shore installation located no closer than 30 nm from the nearest land.

Design of flight Procedures

178.01.3 (1) An organisation may perform design work, other than work contemplated in sub-regulation (2) or (3), on a flight procedure for use by South African registered aircraft, or by foreign aircraft operating in South African airspace, if the organisation:

- (a) is a Certified Designer whose procedure design certificate authorises the designer to perform design work on such a flight procedure; or
- (b) is an employee of such a Certified Designer who performs the design work in the normal course of his or her duties.

(2) An organisation may only review or amend a flight procedure that is for use by South African registered aircraft operating at, or in the vicinity of, an aerodrome in a foreign country if:

- (a) the organisation is:
- (i) a Certified Designer whose procedure design certificate authorises the designer to perform design work on such a flight procedure; or
- (ii) an Authorised Designer whose Procedure Design Authorisation authorises the review or amendment of such a Flight Procedure; or

(3) An organisation may only perform design work on a flight procedure that is for use by South African registered aircraft operating at, or in the vicinity of, an off-shore installation if:

- (a) the organisation is:

- (i) a Certified Designer whose procedure design certificate authorises the designer to perform design work on such a flight procedure; or
- (ii) an Authorised Designer whose procedure design authorisation authorises the designer to perform design work on such a flight procedure; or

(4) For the purposes of this regulation, the Authority is deemed to be an organisation referred to in sub-regulations (1) (a), (2) (a) (i) and (3) (a) (i).

Qualified designer

178.01.4 A qualified designer, in relation to a flight procedure, means an individual who:

- (a) is the holder, or an employee of the holder, of a Procedure Design Certificate that authorises the holder to design flight procedures of the same type as the flight procedure concerned; and
- (b) has successfully completed:
 - (i) a CAA approved course of training in the methods and practices contained in ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards; and
 - (ii) any training for persons performing design work on Flight Procedures that is specified in the operations manual under which the qualified designer performs the designer's duties; and
 - (iii) has attended a CAA approved refresher course/workshop on the methods and practices contained in ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards within the time period specified in the Manual of Standards; and
- (c) meets the experience requirements for performing the functions of a qualified designer set out in the Manual of Standards.

SUBPART 2: CERTIFICATION AS CERTIFIED DESIGN

Applications for procedure design certificates

178.02.1 (1) An organisation shall apply for the issue of a procedure design certificate in the manner set out in this regulation.

(2) The application:

- (a) shall be made to the Commissioner on the appropriate form; and
- (b) shall state the following:

- (i) the applicant's name and address; or
 - (ii) if the applicant is incorporated, the applicant's name, registered address and Company Registration Number and the names and addresses of the Board of Directors and the people responsible for its management and control; and
- (c) shall contain or be accompanied by:
- (i) a written statement specifying the type or each type of flight procedure proposed to be covered by the procedure design certificate; and
 - (ii) a written statement setting out the name, qualifications and relevant experience of the individual who is proposed to be the Chief Designer for the applicant's organisation; and
 - (iii) a written statement setting out the qualifications and relevant experience of any other member of the applicant's personnel whose duties would, if the certificate were granted to the applicant, include performing design work under the certificate;
 - (iv) a copy of the Operations Manual under which the applicant proposes to design, or engage in design work on, flight procedures of the type or types concerned; and
 - (v) the fees prescribed in Part 187.

(3) If an applicant was previously issued with a procedure design certificate, and the certificate was cancelled, the applicant shall include with the application any information to prove that the applicant would be in a position to comply with all requirements pertaining to the design of flight procedures of the type or types concerned.

Issuing of procedure design certificates

178.02.2 (1) The Commissioner shall issue the applicant with a procedure design certificate if the applicant complies with the requirements of Part 178.10.

(2) The procedure design certificate issued in terms of sub-regulation (1) shall contain:

- (a) the organisation's name and principal place of business;
- (b) the type or each type of flight procedure covered by the certificate;
- (c) any conditions applicable to it;
- (d) the date when it comes into force; and
- (e) any other information that the Commissioner considers necessary.

(3) The Commissioner may issue a replacement certificate in the event that the original certificate is no longer correct or has been lost or destroyed.

Duties of holder of certificate

178.02.3 A Certified Designer shall comply with all conditions of the procedure design certificate.

Validity of procedure design certificate

178.02.4 (1) A procedure design certificate shall be valid for the period determined by the Commissioner.

(2) The certificate shall remain in force until it is suspended or cancelled.

SUBPART 3: REQUIREMENTS FOR CERTIFIED DESIGNERS**Certified Designer operations manual**

178.03.1 (1) A Certified Designer shall, at all times, maintain an operations manual that meets the standards for operations manuals set out in the Manual of Standards.

(2) A Certified Designer shall:

- (a) keep the manual in a readily accessible form and place; and
- (b) ensure that each employee of the designer whose duties include the performance of design work under the designer's procedure design certificate has ready access to the manual; and
- (c) amend the manual whenever it is necessary to do so, to keep it in an up-to-date form.
- (d) provide a copy of the operations manual to the Commissioner for assessment and approval.

(3) A Certified Designer shall ensure:

- (a) that all amendments of the manual are incorporated in all copies of the manual kept by the Certified Designer; and
- (b) that copies of the amendments are provided to the Commissioner within 5 days of such amendments being made.

Compliance with operations manual

178.03.2 A Certified Designer shall, in carrying out design work authorised under the designer's procedure design certificate, comply fully with their operations manual.

Standards for design of flight procedures

178.03.3 (1) A Certified Designer designing a flight procedure under the Certified Designer's procedure design certificate shall ensure that the procedure is designed in accordance with:

- (a) any applicable standards set out or referred to in ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards; and
- (b) any applicable standards set out in the Manual of Standards.

(2) If, apart from this sub-regulation, a Certified Designer is required to ensure that a flight procedure is designed in accordance with a standard set out or referred to in the ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards, and a standard set out in the Manual of Standards, and it is not possible to comply with both standards, the designer is only required to ensure that the procedure is designed in accordance with the Manual of Standards.

(3) If it is not possible for a designer to comply with either of the standards mentioned in sub-regulation (2), the designer shall apply to the Commissioner for exemption and such application for exemption must be accompanied by supporting Aeronautical Safety Study.

Verification of flight procedures

178.03.4 (1) A Certified Designer shall establish procedures for verifying flight procedures that it is authorised to design under the designer's procedure design certificate or on which the designer is authorised to perform design work.

(2) The verification procedures:

- (a) shall provide for two qualified designers to independently check the design or any subsequent design work on flight procedures which is performed under the Certified Designer's procedure design certificate; and
- (b) shall provide for one of the checks contemplated in paragraph (a) to be made by a qualified designer who did not perform the design work concerned.

(3) In this regulation, a reference to verifying a flight procedure is a reference to the process of checking the procedure (including all data, computations, drawings, documentation and records for the procedure) in accordance with any applicable standards set out in the Manual of Standards.

Flight Validation of Flight Procedures

178.03.5 The Commissioner shall ensure that each flight procedure designed under the designer's procedure design certificate is flight validated by an authorised officer in accordance with the validation process and standards set out in the Manual of Standards.

Publication of flight procedures

178.03.6 A Certified Designer shall ensure that each flight procedure designed under the designer's procedure design certificate is forwarded to the Commissioner for ground and flight validation and quality control checking, prior to publication, together with a quality certificate signed by the Certified Designer's Chief Designer to the effect that the procedure is designed and verified in accordance with any applicable standards set out or referred to in ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards. (2) A Certified Designer shall ensure that all procedures designed under its Procedure Design Certificate and which are not forwarded for publication in the IAIP are submitted to the Commissioner for record keeping purposes.

Radio navigation aids

178.03.7 A Certified Designer shall ensure that a flight procedure designed under the designer's procedure design certificate shall not make use of a ground-based radio-navigation aid other than one that is operated and maintained by a person certificated to do so in terms of Part 171.

Maintenance of flight procedures

178.03.8 (1) Subject to sub-regulation (2), a Certified Designer is responsible for maintaining, in accordance with the standards for the maintenance of flight procedures set out in the Manual of Standards, a flight procedure designed under the designer's procedure design certificate or for which that responsibility is transferred to the Certified Designer in terms of regulation 178.05.5.

(2) The Certified Designer ceases to be responsible for the maintenance of the procedure:

- (a) if the Certified Designer has notified the Commissioner in writing, that the designer has ceased to have that responsibility:
 - (i) on the day when the notice is given; or
 - (ii) if a later day is specified in the notice; on the later day; or
- (b) if the Certified Designer's responsibility for the maintenance of the procedure is transferred to another Certified Designer in accordance with regulation 178.05.5; on the day when the responsibility is transferred; or
- (c) if the Certified Designer has notified the Commissioner in writing and, if the procedure is published in the IAIP, the AIS Section, under regulation 178.05.2, that the designer has ceased to design the type of flight procedure concerned:
 - (i) on the day when the notice is given; or
 - (ii) if a later day is specified in the notice; on the later day; or
- (d) if the Certified Designer's procedure design certificate is changed under Subpart 10 to exclude that type of procedure; on the day when the change takes effect; or
- (e) if the Certified Designer ceases to be a Certified Designer; on the day when the designer ceases to be a Certified Designer.

(3) The Certified Designer will be responsible for ensuring that the maintenance for all active flight procedures be transferred to a Certified Designer before ceasing the maintenance responsibility of that procedure.

Certified Designer facilities

178.03.9 (1) A Certified Designer shall provide and maintain adequate facilities for carrying on design work on flight procedures under the designer's procedure design certificate, including:

- (a) providing premises and equipment appropriate for the Certified Designer's employees to perform the design work taking into account the critical effect that human factors can have on the quality of the work of the employees; and
- (b) ensuring that those employees have access to all necessary data for designing the procedures including but not limited to:
 - (i) accurate and current databases or charts detailing terrain and obstacle information; and
 - (ii) accurate and current navigation aid coordinate data; and
 - (iii) accurate and current aerodrome survey data.

(2) A Certified Designer shall, if an aeronautical database and aeronautical data is utilised for designing a flight procedure under the designer's procedure design certificate, have, and put into effect, procedures approved by the Commissioner to ensure the integrity of the database and the data.

Certified Designer organisation

178.03.10 A Certified Designer shall, at all times, maintain an appropriate organisation with a sound and effective management structure to enable the designer to perform design work on flight procedures under the designer's procedure design certificate in accordance with these Regulations.

Certified Designer personnel

178.03.11 A Certified Designer:

- (a) shall employ a sufficient number of personnel to enable the designer to perform design work on flight procedures under the designer's procedure design certificate in accordance with these Regulations; and
- (b) shall ensure that those personnel:
 - (i) are suitably qualified and competent to perform their duties; and
 - (ii) are trained in accordance with the Manual of Standards and the designer's operations manual.

Supervisory personnel

178.03.12 A Certified Designer shall ensure that each employee who is occupying or acting in a supervisory position in the designer's organisation in relation to design work on flight procedures carried out under the designer's procedure design certificate, meets the standards for supervisory positions set out in the Manual of Standards.

Appointment of Chief Designer

178.03.13 A Certified Designer shall not perform design work on a Flight Procedure under the designer's Procedure Design Certificate unless:

- (a) The Certified Designer has appointed a person to be the Chief Designer for the designer's organisation; and
- (b) The appointment is approved in writing by the CAA and is in force; and
- (c) The functions of the Chief Designer are being carried out by the person or, if the Chief Designer is temporarily absent from duty, another duly appointed person:
 - (i) Who is appointed by the Certified Designer to act as Chief Designer; and
 - (ii) Whose appointment is approved by the CAA and is in force.

Training and checking programme

178.03.14 A Certified Designer shall provide training and checking programmes that are in compliance with ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards, to ensure that the employees of the designer maintain their competence and are provided with ongoing training appropriate to their duties.

Safety management system

178.03.15 (1)A Certified Designer shall have, and put into effect, a safety management system that includes the policies, procedures, and practices necessary for managing design work on flight procedures carried out under the designer's procedure design certificate.

(2) The safety management system shall be in accordance with the standards set out in the Manual of Standards.

(3) The designer shall keep its safety management system under review and take any necessary corrective action to ensure that it operates in accordance with guidelines in the Manual of Standards.

Documentation and record keeping

178.03.17 (1)A Certified Designer shall keep documents and records of the types specified in the Manual of Standards.

(2) A document or record shall be retained for as long as the Manual of Standards specifies for the particular type of document or record.

(3) The designer shall, at the Commissioner's request, make the documents and records, or copies of them or extracts from them, available for inspection by the Commissioner.

Documentation and record control system

178.03.18 (1) A Certified Designer shall establish, and put into effect, a system for controlling documents and records relating to the flight procedures on which the designer performs design work under the Certified Designer's procedure design certificate, including the policies and procedures for making, amending, preserving and disposing of those documents and records.

(2) The system shall be in accordance with the standards set out in the Manual of Standards.

(3) The documents and records shall include the documents and records required to be kept under this Part.

SUBPART 4: CHIEF DESIGNER

Approval for appointment of Chief Designer

178.04.1 (1) A Certified Designer shall not appoint a person as Chief Designer unless the appointment is approved in writing by the Commissioner.

(2) To be appointed as Chief Designer, a person shall, at the time of appointment, meet the standards for the Chief Designer for a Certified Designer's organisation set out in the Manual of Standards.

Approval for appointment to as Acting Chief Designer

178.04.2 (1) A Certified Designer shall not appoint a person to act as Chief Designer for the Certified Designer unless the appointment is approved by the Commissioner.

(2) To be appointed to act as Chief Designer, a person shall, at the time of appointment, meet the standards for the Acting Chief Designer for a Certified Designer's organisation set out in the Manual of Standards.

Chief Designer's functions and duties

178.04.4 The Chief Designer for a Certified Designer's organisation is responsible to the Certified Designer for the following:

- (a) ensuring that any design work on Flight Procedures that is performed under the designer's Procedure Design Certificate is carried on in accordance with these Regulations;
- (b) appointing persons as employees of the Certified Designer to perform design work on Flight Procedures under the designer's Procedure Design Certificate;
- (c) effectively managing work done in relation to those flight procedures by those persons;
- (d) issuing certificates as required by these regulations.

Validity of approval

178.04.5 (1) An approval under regulation 178.04.1 or 178.04.2 is valid until –

- (a) the appointment to which it relates ends; or
- (b) it is withdrawn.

(2) An approval is not valid during any period in which it is suspended.

Withdrawal or suspension of approval of appointment

178.04.6 (1) The Commissioner may, by notice in writing to a person appointed as the Chief Designer, or to act as the Chief Designer, for a Certified Designer's organisation, withdraw or suspend approval of the person's appointment if the continuing approval of the appointment would be likely to have an adverse effect on the safety of air navigation.

(2) In deciding whether continuing approval of a person's appointment would be likely to have an adverse effect on the safety of air navigation, the Commissioner may take into account the matters mentioned in regulation 178.04.3.

(3) The notice:

- (a) shall set out the reasons for the withdrawal or suspension; and
- (b) in the case of a suspension, shall specify the period of suspension or state when, or in what circumstances, it will end.

(4) The Commissioner shall forward a copy of the notice to the Certified Designer.

(5) If Commissioner suspends approval of a person's appointment, the person shall not carry out the functions of the appointment during the period of the suspension.

(6) If Commissioner withdraws approval of a person's appointment:

- (a) for the purposes of these Regulations, the appointment is considered as having ended immediately; and

- (b) the person shall not continue to carry out the functions of the position to which the appointment relates.

SUBPART 5: CERTIFIED DESIGNERS - GENERAL

Organisational changes

178.05.1 A Certified Designer shall inform the Commissioner, in writing, of a change of circumstances that materially affects its capacity to design Flight Procedures under the designer's Procedure Design Certificate, or engage in any design work on that procedure, within 7 days after the change occurs.

Discontinuing design work on Flight Procedures of a particular type

178.05.2 (1) If a Certified Designer ceases to perform design work on Flight Procedures of a particular type, the Certified Designer shall give written notice to that effect to the Commissioner within 7 days after ceasing to perform the design work concerned.

(2) Sub-regulation (1) does not apply if, having regard to the Certified Designer's circumstances, it is not reasonably practicable for the designer to give the the Commissioner at least 7 days notice and the notice is given as soon as is reasonably practicable.

Notification of a change to a Procedure Design Certificate

178.05.3 If a Certified Designer's Procedure Design Certificate is changed under subpart 10 to exclude a particular type of Flight Procedure and the designer has forwarded any procedures of that type to the Commissioner for validation, charting and publication in the IAIP, the designer shall give written notice to the Commissioner of the variation within 7 days after the day when the change takes effect.

Discontinuing maintenance of particular Flight Procedures

178.05.4 (1) If a Certified Designer ceases to be responsible for the maintenance of a Flight Procedure, the Certified Designer shall give written notice to that effect to the Commissioner within 7 days after ceasing to have that responsibility.

(2) Sub-regulation (1) does not apply if, having regard to the Certified Designer's circumstances, it is not reasonably practicable for the designer to give the Commissioner at least 7 days notice and the notice is given as soon as is reasonably practicable.

Note: In relation to 178.05.4 (2), the Commissioner shall be the sole judge of what constitutes reasonably practicable.

Transfer of maintenance responsibility

178.05.5 (1) A Certified Designer may transfer the designer's responsibility for maintaining a Flight Procedure under regulation 178.03.8 to another Certified Designer who's Procedure Design Certificate authorises that designer to design flight procedures of the same type as the procedure concerned.

(2) If a Certified Designer accepts responsibility for the maintenance of a Flight Procedure under this regulation, the designer:

- (a) shall give written notice to the transferor to that effect; and**
- (b) shall give written notice of the transfer to the Commissioner within 14 days after the transfer.**

(3) A transfer takes effect on the day when the Certified Designer accepting responsibility for maintaining the procedure gives notice to the transferor under paragraph (2)(a) or, if a later day is specified in the notice, on the later day.

(4) If a Certified Designer transfers the designer's responsibility for maintaining a Flight Procedure, the designer shall give written notice of the transfer to the Commissioner within 14 days after the transfer.

SUBPART 6: AUTHORISATION OF AN AUTHORISED DESIGNER

Applications for Procedure Design Authorisations

178.06.1 (1) An organisation shall apply for the grant of a Procedure Design Authorisation in the way set out in this regulation.

(2) The application:

- (a) shall be made, in writing, to the Commissioner; and**
- (b) shall state the following:**
 - (i) the applicant's name and address; or**
 - (ii) if the applicant is incorporated, the applicant's name, registered address and Company Registration Number and the names and addresses of the Board of Directors or the people responsible for its management and control; and**
- (c) shall contain or be accompanied by:**
 - (i) a written statement specifying the activity mentioned in subparagraph 178.01.2(b)(i) or (ii) that is proposed to be authorised under the authorisation, including specifying the type or each type of Flight Procedure proposed to be covered by the authorisation;**
 - (ii) a written statement setting out the qualifications and relevant experience of each member of the applicant's personnel whose**

duties would, if the authorisation were granted to the applicant, include performing the design work concerned;

- (iv) a copy of the operations manual under which the applicant proposes to perform that activity; and
- (v) the fees as prescribed in Part 187.

(3) If an applicant has previously been issued with a Procedure Design Authorisation, and the authorisation was cancelled, in addition to the information referred to in sub-regulation (2), the applicant shall include with the application any information to prove that the applicant could now comply with all requirements for pertaining to the design of Flight Procedures of the type or types concerned.

Criteria for the granting of Procedure Design Authorisations

178.06.2 For regulation 178.10.4, an organisation which has applied for the granting of a Procedure Design Authorisation shall, if the authorisation is granted, be able to comply with the requirements of Part 178.7.

Notice of Procedure Design Authorisation

178.06.3 If the Commissioner grants a Procedure Design Authorisation to an organisation under Part 178.10, CAA shall include in the notice of decision under that Part:

- (a) a description of the activity authorised by the authorisation, including a statement setting out the type or each type of Flight Procedure concerned; and
- (b) a statement setting out any conditions of the authorisation; and
- (c) a statement setting out the date when it comes into force; and
- (d) any other information that CAA deems necessary should be included.

Procedure Design Authorisations: Subject to conditions

178.06.4 An Authorised Designer shall comply with any conditions of the Procedure Design Authorisation set out in the notice mentioned in regulation 178.06.3.

Duration of Procedure Design Authorisation

178.06.5 (1) A Procedure Design Authorisation:

- (a) comes into force on the date stated in the notice mentioned in regulation 178.06.3; and
- (b) remains in force unless it is cancelled.

(2) However, the authorisation is not valid during any period in which it is suspended.

Changing of Procedure Design Authorisation

178.06.6 (1) If an Authorised Designer wants to change a Procedure Design Authorisation or a condition of the Procedure Design Authorisation, application shall be made to the CAA, under Part 178.10, for that purpose.

(2) The application shall contain, or have with it, a copy of the proposed change.

(3) If CAA approves the application under Part 178.10, the change takes effect:

(a) if a day is specified in the written notice given to the applicant under Part 178.10: on that day; or

(b) if no day is specified: on the day when the notice is given to the applicant.

SUBPART 7: REQUIREMENTS FOR AUTHORISED DESIGNERS

Operations manual

178.07.1 (1) An Authorised Designer shall, at all times, maintain an operations manual that meets the standards set out in the Manual of Standards.

(2) An Authorised Designer:

(a) shall keep the manual in a readily accessible form and place; and

(b) shall ensure that each employee of the designer whose duties include the performance of design work under the designer's Procedure Design Authorisation has ready access to the manual; and

(c) shall amend the manual whenever it is necessary to do so to keep it in an up-to-date form.

(d) provide a copy of the Operations Manual to the CAA for assessment and approval.

(3) An Authorised Designer shall ensure:

(a) that all amendments of the manual are incorporated in all copies of the manual kept by the Authorised Designer; and

(b) that copies of the amendments are provided within 5 days to the CAA.

Compliance with operations manual

178.07.2 An Authorised Designer shall, in carrying on the activity authorised by the designer's Procedure Design Authorisation, comply with the designer's operations manual.

Standards for design of Flight Procedures

178.07.3 (1) An Authorised Designer designing a Flight Procedure under the Authorised Designer's Procedure Design Authorisation shall ensure that the procedure is designed in accordance with:

- (a) any applicable standards set out or referred to in ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards; and
- (b) any applicable standards set out in the Manual of Standards.

(2) If, apart from this sub-regulation, an Authorised Designer would be required to ensure that a Flight Procedure is designed in accordance with a standard set out or referred to in the ICAO documentation applicable to flight procedure design, as listed in the Manual of Standards, and a standard set out in the Manual of Standards, and it is not possible to comply with both standards, the designer is only required to ensure that the procedure is designed in accordance with the Manual of Standards.

Off-shore installations

178.07.4 (1) This regulation applies to an Authorised Designer who is authorised to perform design work on a Flight Procedure that:

- (a) is of a type covered by the authorisation; and
- (b) is for use by South African aircraft operating at, or in the vicinity of, an off-shore installation located no closer than 30 nm from the nearest land.

(2) The Authorised Designer shall ensure that a copy of each Flight Procedure designed under the designer's Procedure Design Authorisation is forwarded to the CAA.

(3) The Authorised Designer shall ensure that a Flight Procedure designed under the designer's Procedure Design Authorisation does not require the use of a ground-based radio-navigation aid other than one that is operated and maintained by a person certificated to do so under Part 171.

Maintenance of Flight Procedures

178.07.5 (1) Subject to sub-regulation (2), an Authorised Designer is responsible for the maintaining, in accordance with the standards for the maintenance of Flight Procedures set out in the Manual of Standards, a Flight Procedure designed under the designer's Procedure Design Authorisation or a Flight Procedure for which that responsibility is transferred to the Authorised Designer under regulation 178.08.3.

(2) The Authorised Designer ceases to be responsible for the maintenance of the procedure:

- (a) if the Authorised Designer has notified the CAA, under regulation 178.08.2, that the designer has ceased to have that responsibility:
 - (i) on the day when the notice is given; or
 - (ii) if a later day is specified in the notice: on the later day; or
- (b) if the Authorised Designer's responsibility for the maintenance of the procedure is transferred to a Certified Designer or another Authorised Designer under regulation 178.08.3: on the day when the responsibility is transferred; or
- (c) if the Authorised Designer has notified CAA, under regulation 178.08.1, that the designer has ceased to design the type of Flight Procedure concerned:
 - (i) on the day when the notice is given; or
 - (ii) if a later day is specified in the notice: on the later day; or
- (d) if the Authorised Designer's Procedure Design Authorisation is changed under Part 178.10 to exclude that type of procedure: on the day when the authorisation is changed; or
- (e) if the Authorised Designer ceases to be an Authorised Designer: on the day when the designer ceases to be an Authorised Designer.

Personnel Requirements

178.07.6 An Authorised Designer:

- (a) shall employ a sufficient number of personnel to enable the designer to perform the activity authorised by the designer's Procedure Design Authorisation in accordance with these Regulations; and
- (b) shall ensure that those personnel:
 - (i) are suitably qualified and competent to perform their duties; and
 - (ii) are trained in accordance with the Manual of Standards and the designer's operations manual.

Maintenance of Reference Materials

178.07.7 (1) An Authorised Designer shall maintain reference materials of the types specified in the Manual of Standards.

(2) An Authorised Designer shall keep the reference materials fully amended and up-to-date and in a readily accessible form.

(3) Each employee of the Authorised Designer who performs design work on a Flight Procedure under the Authorised Designer's Procedure Design Authorisation shall have ready access to the reference materials.

Authorised Designer Documentation and Record Keeping

178.07.8 (1) An Authorised Designer shall keep documentation and records of the types specified in the Manual of Standards.

(2) A document or record shall be retained for as long as the Manual of Standards specifies for the particular kind of document or record.

(3) The designer shall, at the CAA's request, make the documents and records, or copies of them or extracts from them, available for inspection by the CAA.

Authorised Designer Document and Record Control System

178.07.9 (1) An Authorised Designer shall establish, and put into effect, a system for controlling documents and records relating to the activity authorised under the Authorised Designer's Procedure Design Authorisation, including the policies and procedures for making, amending, preserving and disposing those documents and records.

(2) The system shall be in accordance with the standards set out in the Manual of Standards.

(3) The documents and records shall include the documents and records required to be kept under this Part.

SUBPART 8: AUTHORISED DESIGNERS MISCELLANEOUS

Discontinuing design work on Flight Procedures of a particular type

178.08.1 (1) If an Authorised Designer ceases to perform design work on Flight Procedures of a particular type, the Authorised Designer shall give written notice to the CAA to that effect within 7 days after ceasing to perform the design work concerned.

(2) Sub-regulation (1) does not apply if, having regard to the Authorised Designer's circumstances, it is not reasonably practicable for the designer to give the CAA at least 7 days notice and the notice is given as soon as is reasonably practicable.

Note: In relation to 178.08.1 (2), the Commissioner shall be the sole judge of what constitutes reasonably practicable.

Discontinuing maintenance of Flight Procedures

178.08.2 (1) If an Authorised Designer ceases to be responsible for the maintenance of a Flight Procedure, the Authorised Designer shall give written notice to the CAA to that effect within 7 days after ceasing to have that responsibility.

(2) Sub-regulation (1) does not apply if, having regard to the Authorised Designer's circumstances, it is not reasonably practicable for the designer to give the CAA at least 7 days notice and the notice is given as soon as is reasonably practicable.

Note: In relation to 178.08.2 (2), the Commissioner shall be the sole judge of what constitutes reasonably practicable.

Transfer of maintenance responsibility

178.08.3 (1) An Authorised Designer may transfer the designer's responsibility for maintaining a Flight Procedure under regulation 178.07.5:

- (a) to a Certified Designer whose Procedure Design Certificate authorises that designer to design Flight Procedures of the same type as the procedure concerned; or
- (b) to another Authorised Designer whose Procedure Design Authorisation authorises that designer to design such a Flight Procedure.

(2) If a Certified Designer or an Authorised Designer accepts responsibility for the maintenance of a Flight Procedure under this regulation, the designer:

- (a) shall give written notice to the transferor to that effect; and
- (b) shall give written notice of the transfer to the CAA within 14 days after the transfer.

(3) A transfer takes effect on the day when the Certified Designer or Authorised Designer accepting responsibility for maintaining the procedure gives notice to the transferor under sub-regulation (2) or, if a later day is specified in the notice, on the later day.

(4) If an Authorised Designer transfers the designer's responsibility for maintaining a Flight Procedure, the designer shall give written notice of the transfer to CAA within 14 days after the transfer.

SUBPART 9: PERFORMANCE OF DESIGN WORK

Exceeding the limitations of the Certified Designer's Procedure Design Certificate

178.09.1 A Certified Designer shall not perform design work on a Flight Procedure that is not of a type covered by the designer's Procedure Design Certificate.

Exceeding the limitations of Procedure Design Authorisation

178.09.2 An Authorised Designer shall not perform an activity mentioned in paragraph 178.01.2(b)(i) or (ii) unless that activity is authorised by the designer's Procedure Design Authorisation.

SUBPART 10: APPLICATION FOR, GRANTING OF, PROCEDURE DESIGN CERTIFICATES AND PROCEDURE DESIGN AUTHORISATION AND RELATED MATTERS

Request for information

178.10.1 (1) If the CAA needs any information or other documentation to allow it to consider an application under this Part, the CAA may, by written notice, ask the applicant to forward it the information, document or a copy of the document, specified in the notice.

(2) If the CAA asks for more information, documentation, or a copy of a document, under sub-regulation (1), the CAA needs not to begin to consider, or may stop considering, the application until the applicant forwards it the information, document or copy.

Additional CAA requirements: Interview

178.10.2 (1) The CAA may, by written notice, ask an individual who is an applicant under this Part to attend an interview at a place and time specified in the notice.

(2) In the case of an applicant that is a organisation the CAA may, by written notice, ask the applicant, in writing, to have a specified officer or specified officers of the applicant attend an interview at a place and time specified in the notice.

(3) CAA shall give to the applicant a copy of the record of any interview conducted under sub-regulation (1) or (2).

(4) If the CAA makes a request under sub-regulation (1) or (2), the CAA need not begin to consider, or may stop considering, the application until the applicant complies with the notice.

Demonstrations of equipment

178.10.3 (1) The CAA may, by written notice, ask an applicant under this Part:

- (a) to give a practical demonstration of the ability of the applicant to perform the design work sought under the application; or
- (b) to demonstrate the operation of any facility or equipment to be used in the course of carrying on that work; or
- (c) to allow the CAA to inspect the relevant facility or equipment (whether or not it is operating).

(2) If the CAA asks an applicant to allow the CAA to inspect any relevant facility or equipment or asks an applicant to conduct a demonstration under sub-regulation (1), the CAA need not begin to consider, or may stop considering, the application until the applicant allows the inspection or conducts the demonstration.

Granting of Procedure Design Certificate or Procedure Design Authorisation

178.10.4 (1) Subject to regulation 178.10.5, if an applicant has applied for the granting of a Procedure Design Certificate or Procedure Design Authorisation in accordance with this Part, the CAA shall grant the certificate or the authorisation, if:

- (a) the applicant meets the criteria specified in this Part for the grant of the certificate or authorisation; and
- (b) any other requirements in relation to the applicant specified in these Regulations are satisfied; and
- (c) no provision of these Regulations forbids the CAA to grant the certificate or authorisation, or makes the applicant ineligible for the certificate or authorisation; and
- (d) granting the certificate or authorisation would not be likely to have an adverse effect on the safety of air navigation.

(2) The CAA may grant a Procedure Design Certificate or Procedure Design Authorisation in respect of only some of the matters sought in the application.

Information to be taken into account

178.10.5 (1) In deciding whether granting a Procedure Design Certificate or Procedure Design Authorisation would be likely to have an adverse effect on the safety of air navigation, the CAA may take into account the factors stated in the Manual of Standards.

(2) For the application of sub-regulation (1) in relation to an applicant that is a body corporate, references to the applicant include each of the officers (other than employees) of the applicant.

(3) In making a decision on an application, CAA may take into account:

- (a) anything in the application or in any other document submitted by the applicant; and
- (b) the record of any interview under this Part; and
- (c) anything else in its records about the applicant; and
- (d) the results of any demonstration or inspection under this Part.

(4) However, before taking into account anything in its records about an applicant, the CAA shall:

- (a) tell the applicant, in writing, that it intends to do so, and the substance of what CAA intends to take into account; and
- (b) invite the applicant, in writing, to make a written submission about the matter within a specified time.

(5) If the applicant makes a written submission within the specified time, the CAA shall take the submission into account.

(6) In deciding whether to grant a Procedure Design Certificate or a Procedure Design Authorisation to an applicant who was previously a Certified Designer or an

Authorised Designer and whose certification or authorisation was cancelled under this Part, CAA shall take into account:

- (a) the fact of the cancellation; and
- (b) the reasons for the cancellation given at the time of the cancellation; and
- (c) any information that the applicant submits to show that the applicant could now properly design Flight Procedures of the type or types to be covered by the certificate or authorisation.

(7) However, in making a decision in relation to an applicant referred to in sub-regulation (6), the CAA is not obliged to reconsider, or inquire into the circumstances of, the cancellation.

Granting of certificates or authorisations subject to conditions

178.10.6 (1) The CAA may grant a Procedure Design Certificate or Procedure Design Authorisation subject to any condition that CAA considers necessary to impose in the interests of the safety of air navigation.

(2) In particular, the CAA may grant a Procedure Design Certificate or Procedure Design Authorisation subject to a condition requiring its holder to permit an authorised officer (within the meaning given by Part 178.14) to exercise the powers of an authorised officer under that Part in relation to the certificate or authorisation.

(3) However, such a condition is not taken to require the holder to permit the exercise of those powers:

- (a) unless the authorised officer first shows his or her Authorised Officer identity book to the holder, or another person on behalf of the holder, if asked to do so by the holder or other person; or
- (b) at a time other than during normal business hours.

(4) Such a condition is not taken to authorise the authorised officer to use force to any extent in exercising those powers.

(5) Annual and Ad Hoc inspections will be conducted at the discretion of the CAA.

Decision making period

178.10.7 (1) If the CAA does not make a decision about an application under this Part within 3 months after receiving it, the CAA is taken to have refused the application.

(2) However, if CAA makes a request under regulation 178.10.1, 178.10.2 or 178.10.3, the time between when the CAA makes the request, and when the applicant conducts the demonstration, attends the interview, or gives the CAA the information or copy requested, does not count towards the period.

(3) Also, if the CAA invites an applicant to make a written submission under sub-regulation 178.10.5(4), the time between when the CAA gives the invitation and when the applicant makes the submission does not count towards the period.

Notice of decision

178.10.8 (1) After making a decision on an application under this Part, the CAA shall notify the applicant in writing, as soon as practicable:

- (a) of the decision; and
- (b) if the decision was to refuse the application, or to grant the relevant Procedure Design Certificate or Procedure Design Authorisation subject to a condition not sought by the applicant: of the reasons for the decision.

(2) If the CAA grants to an applicant a Procedure Design Certificate, sub-regulation (1) does not require the CAA to send to the applicant a separate notice of its decision.

Charges for the granting of a Procedure Design Certificate/ Authorisation

178.10.9 The charges applicable for the granting of a Procedure Design Certificate or Authorisation are contained in Part 187.

Return of certificate if Procedure Design Certificate cancelled

178.10.10 (1) An organisation which ceases to be a Certified Designer shall return any Procedure Design Certificate or replacement certificate issued to the organisation under this Part within 14 days after ceasing to be a Certified Designer.

Changing of Procedure Design Certificates

178.10.11 (1) If a Certified Designer wants to change a Procedure Design Certificate or a condition of it, application shall be made to CAA in writing.

- (2) The application shall contain, or have attached to it,
 - (a) a copy of the proposed change; and
 - (b) the fees as prescribed in Part 187.
- (3) If the CAA approves the application under Part 178.10, the change takes effect:
 - (a) if a day is specified in the written notice given to the applicant under Part 178.10, on that day; or
 - (b) if no day is specified, on the day when the notice is received by the applicant.

SUBPART 11: CHANGE OF PROCEDURE DESIGN CERTIFICATES AND PROCEDURE DESIGN AUTHORISATIONS

Applicability of this Part

178.11.1 This Part applies in relation to changes of a Procedure Design Certificate or Procedure Design Authorisation (including imposing, removing or changing a condition applicable to the certificate or authorisation).

Application for change

178.11.2 (1) Part 178.2 and Part 178.10 apply in relation to an application to change a Certified Designer's Procedure Design Certificate except that the designer needs to forward to the CAA information, or documentation, that the designer has already given to CAA *only* if the information or documentation has changed since it was last given to the CAA.

(2) Part 178.6 and Part 178.10 apply in relation to an application to change an Authorised Designer's Procedure Design Authorisation except that the designer needs to forward to the CAA information, or documentation, that the designer has already given to the CAA *only* if the information or documentation has changed since it was last given to the CAA.

Charges for the Changing of a Procedure Design Certificate/ Authorisation

178.11.3 The charges applicable for the variation of a Procedure Design Certificate or Authorisation are contained in Part 187.

SUBPART 12: DIRECTIONS TO AMEND CERTIFIED DESIGNER'S OR AUTHORISED DESIGNER'S OPERATIONS MANUAL

CAA may direct amendments to designer's operations manual

178.12.1 (1) If necessary in the interests of the safety of air navigation, the CAA may, in writing, direct a Certified Designer or an Authorised Designer, within a period specified in the direction, to amend the designer's operations manual by:

- (a) including in the manual the information or other requirements set out or described in the direction; or
- (b) altering the information or other requirements in the manual in the manner set out in the direction.

(2) The CAA may extend the period by written notice, before or after the end of the period referred to in sub-regulation (1).

SUBPART 13: SUSPENSION AND CANCELLATION OF PROCEDURE DESIGN CERTIFICATES AND PROCEDURE DESIGN AUTHORISATIONS

Suspension or cancellation of Procedure Design Certificate or Procedure Design Authorisation by CAA

178.13.1 (1) The CAA may, by written notice given to a Certified Designer or Authorised Designer, suspend or cancel the designer's Procedure Design Certificate or Procedure Design Authorisation if there are grounds for believing that the designer:

- (a) has breached a condition of the certificate or authorisation; or
- (b) has contravened a provision of this Part; or
- (c) does not meet, or continue to meet, a requirement of this Part for getting or holding the certificate or authorisation; or
- (d) has otherwise been guilty of conduct that renders the designer's continued holding of the certificate or authorisation likely to have an adverse effect on the safety of air navigation.

(2) Before suspending or cancelling a Certified Designer's Procedure Design Certificate or an Authorised Designer's Procedure Design Authorisation, the CAA:

- (a) shall give written notice to the designer of the facts or circumstances that, in the opinion of the CAA, amount to grounds for the suspension or cancellation of the certificate; and
- (b) shall invite the designer to show cause in writing, within 30 days after the date of the notice, why the certificate or authorisation should not be suspended or cancelled; and
- (c) shall take into account any written representations made, within the time allowed under paragraph (b), by or on behalf of the designer explaining why the certificate should not be cancelled.

Cancellation at request of Certified Designer or Authorised Designer

178.13.2 (1) Despite anything else in this Part, the CAA shall cancel a Certified Designer's Procedure Design Certificate or an Authorised Designer's Procedure Design Authorisation if asked to do so, in writing, by the designer subject to compliance with Part 178.05.2, 178.05.3, 178.05.4, 178.08.1, 178.08.2 and 178.08.3.

(2) The cancellation takes effect when the request is forwarded to the CAA, or if a later day is stated in the request, on the later day.

SUBPART 14: AUTHORISED OFFICERS

CAA may appoint Authorised Officers

178.14.1 (1) The Commissioner may in terms of Section 5 (4) (a) of the Aviation Act, 74 of 1962, in writing, appoint an officer of the CAA as an authorised officer.

(2) The instrument of appointment may:

- (a) describe the premises and activities in relation to which the Authorised Officer may use his or her powers under regulation 178.14.3; and
- (b) specify the duration of the appointment; and
- (c) specify that the appointment is subject to 1 or more conditions.

Authorised Officer Identity Book

178.14.2 (1) The CAA shall issue each Authorised Officer with an Authorised Officer Identity Book and card that includes a recent photograph of the Authorised Officer.

(2) No more than 7 days after ceasing to be an Authorised Officer, a person shall return its Authorised Officer Identity Book and card to the CAA.

Powers of Authorised Officer

178.14.3 (1) The powers of an Authorised Officer are as defined in Part 13 of the CAR, and may exercise the powers to do any or all of the following:

- (a) enter and inspect premises connected with, or used for the purposes of, design work that is carried on by, or for, a Certified Designer or Authorised Designer or where any documents or records relating to that work are kept;
 - (b) observe the practices and procedures of the Certified Designer or Authorised Designer (including the designer's employees) in carrying on design work under designer's Procedure Design Certificate or Procedure Design Authorisation;
 - (c) inspect the designer's facilities used for, or in relation to, that work;
 - (d) inspect and test any systems and equipment used for, or in relation to, that work;
 - (e) inspect any documents or records maintained, or required to be kept under this Part, by the designer in relation to that work;
 - (f) make a copy of any document or record that the Authorised Officer inspects.
 - (g) impound any documentation or data which is considered by the Authorised Officer to have a negative impact on air navigation safety.
- (2) However, an Authorised Officer may exercise his or her powers only:
- (a) at premises connected with, or used for the purposes of, design work that is carried on by, or for, a Certified Designer or Authorised Designer or where any documents or records relating to that work are kept; and

- (b) if the designer, or a person on behalf of the designer, so requests: after the designer or person has been shown the Authorised Officer Book/card; and
- (c) during normal business hours; and
- (d) to ensure that design work is being carried on in accordance with these Regulations.

(3) The cost of any copying carried out for the purposes of paragraph (1)(f) shall be carried by the Certified Designer or Authorised Designer.

Charges for the inspection of a Certified/Authorised Procedure Designer

178.14.4 The charges applicable for the inspection of a Certified/Authorised Procedure Designer are contained in Part 187.

15. PROPOSAL FOR INSERTION OF REGULATION 187.00.35A IN THE REGULATIONS

15.1 The following Regulation is hereby inserted in the regulations:

“Fees relating to Part 178

187.00.35A The following fees shall be payable upon application:

	R
(a) For amendment of Procedure Design Certificate or Authorisation	250.00
(b) For the inspection of an organisation for issuance of a Procedure Design Certificate or Authorisation per hour per inspection	525.00
(c) For the issuing of a duplicate Procedure Design Certificate or Authorisation	500.00
(d) For the issuing of a Procedure Design Certificate for - (regulation 178.02.3)	
(i) Non-precision and APV approach design	11,270.00
(ii) APV I approach design	14,870.00
(iii) Precision and APV II approach design	18,870.00
(iv) PBN	21,430.00
(e) For the issuing of a Procedure Design Authorisation for - (regulation 178.06.3)	
(i) Non-precision and APV approach design	11,270.00

(ii) APV I approach design	14,870.00
(iii) Precision and APV II approach design	18,870.00
(iv) PBN	21,430.00

16. MOTIVATION

ICAO PANS-Ops Doc 8168 Volume II (Part 1, Chapter 4, 4.1) requires that the State ensure that all published instrument flight procedures within its airspace can be flown safely by aircraft. Over and above ensuring the application of the technical criteria, the State is required to apply measures that control the quality of the process used to apply that criteria, which include regulations, air traffic monitoring, ground and flight validation. These measures shall ensure the quality and safety of the flight procedure product through review, verification, coordination and validation at appropriate points in the process of flight procedure design, so that corrections can be made at the earliest opportunity in the process.

Currently, the State has no legal framework in which to carry out the mandated oversight above.

Key to the provision of flight procedures is the qualification of flight procedure designers, as defined by ICAO Doc 9906 Quality Assurance Manual for Flight Procedure Design. Unlike other safety critical aviation functions in South Africa, the State has had until now, no legal authority to regulate the qualification or competence of flight procedure designers.

Part 178 defines the roles, responsibilities, requirements, and minimum standards for service providers applicable to flight procedure design. It also defines the regulatory framework for oversight of this safety critical function.
