CIVIL AVIATION SAFETY AUTHORITY OF PAPUA NEW GUINEA

PNG

Civil Aviation Rule

Part 172

Air Traffic Service Organisations-
Certification and Operation

Applicable 26 November 2026

Published by the Civil Aviation Safety Authority of Papua New Guinea

DESCRIPTION

Part 172 prescribes the requirements for certification, and the operational and technical standards, for provision of air traffic services within the territorial limits of Papua New Guinea.

Air traffic services include:

- Aerodrome control service
- Approach control service
- Area control service
- Flight information service
- Aerodrome flight information service
- Alerting service.

This rule Part aligns with Annex 11 – Air Traffic Services and other applicable ICAO standards and recommended practices.

BULLETIN

This Part first came into force on 1 January 2004 and now incorporates the following amendments:

Amendment	Applicable Date
Amendment 1	01 May 2016
Amendment 2	13 November 2018
Amendment 3	14 December 2020
Amendment 4	02 November 2021
Amendment 5	03 April 2023
Amendment 6	03 November 2023
Amendment 7	04 November 2024
Amendment 8	26 November 2026

Summary of amendments:

Amendment 08 aligns Part 172 with Amendment 54 of ICAO Annex 11

Amendment 8:

(Docket26/17/CAR172/43)

(a) New Rule:

(1) Rule 172.67(f) procedures for activities potentially hazardous to civil aircraft transposes Annex 11, standard 2.19

(2) Rule 172.97(i)(2) plotting requirement of aircraft's known position transposes Annex 11, standard 5.4

(3) Rule 172.97(i)(3) information on aircraft in an emergency is made known to other aircraft in its vicinity transposes Annex 11, standard 5.6

(4) Rule 172.151(b) inserted requirement for the provision of aircraft movement data for the upper airspace.

(5) Rule 172.179 data link communication (amendment 95 to Annex 10 Vol II)

(b) Amendments

(1) Rule 172.67(d), (e) and (g) replaced the word 'provide' with 'establish' for clarity
(2) Rule 172.67(e) divided into two (2) to align with Annex 11, 6.2.3.1.2
(3) Rule 172.97(i)(1) amended in accordance with Annex 11, 5.3
(4) Rule 172.101(a) and (b)(1) aligned with Annex 11, 2.26
(5) Rule 172.119(a) inserted 'in accordance with NCASP'.
(6) Appendix B to align with Annex 1 Appendix 2.

(a) Editorials

Nil

Schedule of Rules

Subpart A — General **7**
172.1 Purpose 7
172.3 Definitions 7
172.5 Requirement for certificate 9
172.7 Application for certificate 9
172.9 Issue of certificate 9
172.11 Privileges of certificate 10
172.13 Duration of certificate 10
172.15 Renewal of certificate 10
Subpart B — Certification Requirements **11**
172.51 Personnel requirements 11
172.53 ATS training 12
172.55 Fatigue management 12
172.57 Facility requirements 13
172.59 Establishment and transfer of service 15
172.61 Shift administration 16
172.63 Documentation 16
172.65 Contingency plan 16
172.67 Co-ordination requirements 17
172.69 Notification of facility status 18
172.71 General information requirements 18
172.73 Meteorological information and reporting 19
172.75 Area and approach control services 19
172.77 Aerodrome control service 20
172.79 Special use airspace 21
172.81 Responsibility for control 22
172.83 Priorities 23
172.85 Air traffic flow management 24
172.86 ATS system capacity 24
172.87 ATC clearances 24
172.89 Cruising levels 26
172.91 Deviation from an ATC clearance 26
172.93 Flight information service 27
172.95 Aerodrome flight information service 28
172.97 Alerting service 28
172.99 Flight plans 31
172.101 Time 31
172.103 Altimeter setting procedures 32
172.105 Radio and telephone procedures 32
172.107 ATS surveillance services 32
172.109 Aircraft emergencies and irregular operation 33
172.111 Action after serious incident or accident involving navigational facilities 34
172.113 Incidents 34
172.115 Records 34
172.117 Logbooks and position logs 36
172.119 Security 36
172.121 Service disruptions 37
172.123 Safety Management System 38
172.125 Quality Management System 38
172.126 Aeronautical data 38
172.127 Organisation exposition 38
Subpart C — Operating Requirements **41**

172.151 Continued compliance 41
172.153 Operations manuals 41
172.155 Safety risk assessment 41
172.157 Trials 42
172.159 Denial of ATC clearance 42
172.161 Suspension of VFR operations 42
172.163 Changes to certificate holder's organisation 43
172.165 Withdrawal or transfer of service 43
172.167 Performance-based navigation (PBN) operations 44
172.169 Performance-based communications (PBC) operations. 44
172.171 Performance-based surveillance (PBS) operations 44
172.172 Monitoring programme 44
172.173 Establishment and identification of ATS routes. 45
172.175 Establishment and identification of significant points. 45
172.177 Voice-Automatic terminal information service (Voice-ATIS) 45
172.179 Data Iink communication 46
Subpart D — Other Air Traffic Services 46
172.201 General 46
172.203 Requirement 46
172.205 Application 47
172.207 Issue of certificate 47
172.209 Operating conditions 47
Subpart E — Separation Criteria 48
172.251 Composite visual separation 48
172.253 Visual separation beyond the vicinity of an aerodrome 48
172.255 Reserved 48
172.257 Reserved 48
172.259 Reserved 48
172.261 Separation between aircraft on an instrument approach 48
172.263 Reduced surveillance-based Separation 48
172.265 Radar and/or ADS-B based separation from an unidentified controlled flight 48
172.267 Radar and/or ADS-B based separation from holding aircraft 49
172.269 Formation flights 49
172.271 Reduced runway separation minima between aircraft using the same runway 49
172.273 Reserved 49
172.275 Reserved 49
172.277 Reserved 49
172.279 Separation from an aircraft dumping fuel 49
172.281 Separation involving military aircraft 50
172.283 Separation of successive IFR departures 50
172.285 Helicopters and unpowered aircraft 50
172.287 Wake turbulence separation 50
172.289 Separation from active special use airspace 50
Subpart F — (Reserved) 51
Subpart G — Surveillance Procedures 51
172.401 Verification of pressure-altitude-derived level information 51
172.403 Speed control 51
Appendix A 52
A1. Automatic terminal information service (voice and/or data link) 52
A2. ATIS for arriving and departing aircraft 52
Appendix B – ATS Training 54
B.1 Issue of approval 54
B.2 Training and procedures manual 54

B.3 Training programs 54
B.4 Quality assurance system 54
B.5 Facilities 55
B.6 Personnel 56
B.7 Records 56
B.8 Oversight 56
B.9 Evaluation and checking 56
Appendix C – ATS Safety Reviews 57
C.1 General requirements 57
C.2 Scope 57

Subpart A — General

172.1 Purpose

(a) This Part prescribes rules governing—

(1) the certification and operation of organisations providing an air traffic service in the Port Moresby Flight Information Region, designated under Part 71; and

(2) the operating and technical standards for the provision of air traffic services operated by those organisations.

(b) Subparts A, B, and C apply to air traffic services specified in paragraphs (a) to (f) of the interpretation of the term *air traffic service* in Section 3 of the Act.

(c) Subpart D and this rule apply to services considered to be air traffic services under paragraph (g) of the interpretation of the term *air traffic service* in Section 3 of the Civil Aviation Act 2000.

172.3 Definitions

In this Part—

Accepting Unit means an air traffic control unit next to take control of an aircraft:

Aeronautical fixed service means a telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services:

Aeronautical station operator means an aeronautical station operator holding a current licence issued in accordance with Part 65:

Aeronautical telecommunication station means a station in the aeronautical telecommunications service:

Air-ground communication means two-way communication between aircraft and stations or locations on the surface of the earth:

Air traffic controller schedule means a plan for allocating air traffic controller duty periods and non- duty periods over a period of time, otherwise referred to as a roster:

Air traffic flow management (ATFM) means a service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilized to the maximum extent possible and that the traffic volume is compatible with the capacities declared by the appropriate ATS authority:

Air traffic services reporting office means a unit stablished for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure**:**

Annex 1 means Annex 1 to the Convention:

Annex 2 means Annex 2 to the Convention:

Annex 3 means Annex 3 to the Convention:

Annex 10 means Annex 10 to the Convention:

Annex 11 means Annex 11 to the Convention:

Appropriate ATS authority means the relevant authority designated by the State responsible for providing air traffic services in the airspace concerned:

Area of responsibility means the airspace, and in the case of an aerodrome, the manoeuvring area, within which a particular operating position is responsible for the provision of an air traffic service:

ATS Letter of Agreement means a document formalising matters of operational significance between ATS units:

ATS messages means emergency messages, movement and control messages, and flight information messages as described in Part IX of Document 4444:

Certificate holder means the holder of a certificate issued under this Part:

Controlled aerodrome means an aerodrome at which air traffic control service is provided to aerodrome traffic:

Declared capacity means a measure of the ability of the ATC system or any of its subsystems or operating positions to provide service to aircraft during normal activities. It is expressed as the number of aircraft entering a specified portion of airspace in a given period of time, taking due account of weather, ATC unit configuration, staff and equipment available, and any other factors that may affect the workload of the controller responsible for the airspace:

Document 4444 means the ICAO document titled *Procedures for Air Navigation Services – Air Traffic Management:*

Document 7030 means the ICAO document titled *Regional Supplementary Procedures* as applicable to the Middle East/Asia and Pacific regions:

Document 9432 means the ICAO document titled Manual of Radiotelephony:

Downstream clearance means a clearance issued to an aircraft by an air traffic control unit that is not the current controlling authority of that aircraft:

Duty means any task that an air traffic controller is required by an air traffic services provider to perform. These tasks include those performed during time-in-position, administrative work and training:

Duty period means a period which starts when an air traffic controller is required by an air traffic services provider to report for or to commence a duty and ends when that person is free from all duties:

Essential traffic means any controlled traffic that is not separated by the prescribed minima in relation to other controlled flights where separation is required:

Flow control means measures designed to adjust the flow of traffic into a given airspace, along a given route, or bound for a given aerodrome, to ensure the most effective utilisation of theairspace:

Non-duty period means a continuous and defined period of time, subsequent to and/or prior to duty periods, during which the air traffic controller is free of all duties:

Operating position means the work station from which one or more air traffic controllers or aeronautical station operators provide air traffic services within an allocated area or areas of responsibility:

Rated air traffic controller means an air traffic controller holding a current licence, and a rating, or ratings, validated for the particular location, issued in accordance with Part 65:

Rated aeronautical station operator means an aeronautical station operator holding a current licence, and an aeronautical station operator rating, validated for the particular location, issued in accordance with Part 65:

Strayed aircraft means an aircraft that has deviated significantly from its intended track or reports that it is lost:

Time-in-position means the period of time when an air traffic controller is exercising the privileges of the air traffic controller's licence at an operational position:

Traffic avoidance advice means advice provided by an ATS unit to assist a pilot to avoid a collision:

Transfer of control point means a defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next:

Transferring unit means an air traffic control unit in the process of transferring the responsibility for providing air traffic control service to an aircraft to the next air traffic control unit along the route of flight**:**

Unidentified aircraft means an aircraft which has been observed or reported to be operating in a given area but whose identity has not been established**:**

VORSEC means VOR/DME minimum sector altitude chart:

172.5 Requirement for certificate

No person shall provide an air traffic service except under the authority of, and in accordance with the provisions of, an air traffic service certificate issued under this Part.

172.7 Application for certificate

An applicant for the grant of an air traffic service certificate shall—

(1) complete form CA 172/01, which shall require the following information—

(i) the applicant's name and address for service in Papua New Guinea; and

(ii) the specific air traffic service or services to be provided; and

(iii) the aerodrome location or airspace designation at, or within which, the service will be provided; and

(iv) such other particulars relating to the applicant and the intended service as may be required by the Director as indicated on the form; and

(2) submit the completed form to the Director with—

(i) the exposition required by rule 172.127; and

(ii) payment of the appropriate application fee prescribed by regulations made under the Act.

172.9 Issue of certificate

(a) Subject to paragraph (b), an applicant is entitled to an air traffic service certificate if the Director is satisfied that—

(1) the applicant meets the requirements of Subpart B; and

(2) the applicant, and the applicant's senior person or persons required by rule 172.51, are fit and proper persons; and

(3) the granting of the certificate is not contrary to the interests of aviation safety.

(b) The Director shall ensure, in the interests of aviation safety, that only one certificate for the same air traffic service is current at any time.

172.11 Privileges of certificate

An air traffic service certificate holder must perform the scope of air traffic services and training and assessment specified on the certificate.

172.12 Operation specifications

(a) An air traffic service certificate issued under the Act in accordance with this Part must be accompanied by the operations specifications specified in paragraph (b) & (c).

(b) The operations specification must contain -

(1) details of the physical location of the certificate holder's principal base of operation; and

(2) the certificate holder's address for service in Papua New Guinea; and

(3) other business names under which the certificate holder may operate; and

(4) the services the certificate holder is authorised to provide:

(i) area control service:

(ii) approach control service:

(iii) aerodrome control service:

(iv) flight information service:

(v) aerodrome flight information service:

(vi) alerting service:

(vii) any other service provided in accordance with Subpart D.

(5) the training and assessment for such services the certificate holder is authorised to conduct.

(c) The operations specification shall specify -

(1) the aerodrome, service and airspace at or within which the service is provided; and

(2) the operating hours of service provided at the ATS unit; and

(3) may include any conditions as the Director considers appropriate.

172.13 Duration of certificate

(a) An air traffic service certificate may be granted or renewed for a period of up to 5 years.

(b) An air traffic service certificate remains in force until it expires or is suspended or revoked.

(c) The holder of an air traffic service certificate that expires or is revoked shall forthwith surrender the certificate to the Director.

(d) The holder of an air traffic service certificate that is suspended shall forthwith produce the certificate to the Director for appropriate endorsement.

172.15 Renewal of certificate

(a) An application for the renewal of an air traffic service certificate shall be made on form CA 172/01.

(b) The application shall be submitted to the Director before the application renewal date specified on the certificate or, if no such date is specified, not less than 30 days before the certificate expires.

Subpart B — Certification Requirements

172.51 Personnel requirements

(a) An applicant for the grant of an air traffic service certificate shall engage, employ, orcontract—

(1) a senior person identified as the Chief Executive who has the authority within the applicant's organisation to ensure that each air traffic service listed in its exposition—

(i) can be financed; and

(ii) is provided in accordance with the requirements prescribed by this Part; and

(2) a senior person or persons who are responsible for ensuring that the applicant's organisation complies with the requirements of this Part. Such nominated person or persons shall be ultimately responsible to the Chief Executive; and

(3) sufficient personnel to manage, support, and provide the air traffic services and any associated training or assessment listed in the applicant's exposition.

(b) The applicant shall establish procedures to—

(1) ensure the competence of those personnel who are authorised by the applicant to provide the air traffic services, and training and assessment for those services, listedin the applicant's exposition; and

(2) provide those authorised personnel with written evidence of the scope of their authorisation; and

(3) ensure that those authorised personnel hold appropriate current personnel licences and ratings issued under Part 65; and

(4) ensure that authorised personnel only exercise the privileges of their ratings if they are familiar with all relevant and current information; and

(5) facilitate, for rated air traffic service personnel licence holders, compliance with the recent experience requirements of Part 65; and

(6) ensure that an air traffic controller does not exercise the privileges of ratings—

(i) unless they comply with any endorsements on their medical certificate; and

(ii) when any decrease in their medical fitness might render them unable to safely exercise these privileges.

(c) The applicant shall develop and implement a policy and procedures for recruiting and retaining appropriately qualified and experienced ATS personnel applicable to the person's function.

172.53 ATS training

(a) An applicant for the grant of an air traffic service certificate shall establish procedures for the training and assessment of the following personnel:

(1) air traffic controllers:

(2) aeronautical station operators:

(3) personnel directly involved in the provision of an HF aeronautical telecommunication service:

(4) personnel directly involved in activities supporting—

(i) rated air traffic controllers; and

(ii) rated aeronautical station operators.

(b) The applicant shall establish procedures to ensure that personnel giving instruction in an operational environment hold an appropriate current ATS instructor rating issued under Part 65.

(c) The applicant shall establish procedures to ensure that personnel carrying out assessment for the issue of licences, or the issue or validation of ratings, hold an appropriate current ATS instructor rating issued under Part 65 or is an authorised ATS examiner under Part 183.

(d) The applicant shall establish a training program and procedures for ensuring every ATS personnel it employs fulfils the applicable segments for initial, refresher, recurrent and specialised training.

(e) The training prescribed in (d) must be conducted in accordance with Appendix B of this rule part.

172.55 Fatigue management

(a) An applicant for the grant of an air traffic service certificate shall;

(1) establish air traffic service personnel schedules to manage fatigue, commensurate with the services provided; and

(2) ensure that the schedules in (1) do not exceed the limitations prescribed in (b); and

(3) ensure that ATS personnel are familiar with the principles of fatigue management and policies with regard to fatigue management; and

(4) ensure that any variation from the prescribed limitations is accompanied by a safety assessment demonstrating that any associated risk is being managed to a level of safetyequivalent to, or better than, that achieved through the prescriptive fatigue management regulations; and

(5) ensure the safety assessment required by (4) is accompanied with;

(i) reason for the deviation; and

(ii) date and time of enactment of the deviation; and

(iii) extent of the deviation; and

(6) the schedules established under (1) must be acceptable to the Director.

(b) The schedules required by (a)(1) shall not exceed the following limitations:

(1) the maximum:

(i) 10 hours in any duty period;

(ii) 7 consecutive work days;

(iii) 90 hours in a fortnight; and

(iv) 7 hours of time-in-position;

(2) the minimum:

(i) 8 hours of non-duty periods;

(ii) 2 non-duty days in a 14-day period; and

(iii) 15 minutes between periods of time-in-position in a duty period.

172.57 Facility requirements

(a) An applicant for the grant of an air traffic service certificate shall establish the following facilities that are appropriate to the air traffic services listed in the applicant's exposition:

(1) aerodrome control towers:

(2) approach control units:

(3) area control centres:

(4) aerodrome flight information units:

(5) flight information centres:

(6) dedicated training and assessment facilities.

(b) An applicant for an aerodrome control service, or an aerodrome flight information service, shall establish procedures to ensure that any aerodrome control tower or aerodrome flight information office, including any mobile tower or office, listed in the applicant's exposition, is—

(1) constructed and situated to provide—

(i) the maximum practicable visibility of aerodrome traffic; and

(ii) protection from glare and reflection; and

(iii) protection from noise; and

(2) safeguarded from any development that would affect the requirements of paragraph (b)(1); and

(3) at solo watch locations, provided with—

(i) toilet facilities that ensure the minimum possible interruption to, or degradation of air traffic services; and

(ii) storage and preparation facilities for food and drink in the visual control room; and

(4) provided with air-ground communication facilities that enable direct, rapid, continuous and static-free two-way communications to take place between an aerodrome control tower and-

(i) appropriately equipped aircraft operating at any distance within 25 NM of the aerodrome concerned; and

(ii) aircraft, vehicles and persons on, or adjacent to, the manoeuvring area; and

(5) provided with the following minimum equipment:

(i) a display system or systems designed to show the disposition of current and pending aerodrome traffic together with ancillary information for individual aircraft:

(ii) a power supply:

(iii) appropriate and current maps and charts:

(iv) binoculars:

(v) clocks:

(vi) logbook:

(vii) outside temperature indicator:

(viii) QNH display:

(ix) signal lamp with green, red, and white functions:

(x) telephone communications:

(xi) status monitors for approach and landing aids and any road signalling equipment affecting the use of a runway:

(xii) visibility and cloud height checkpoints:

(xiii) voice and, where applicable, data recording equipment:

(xiv) wind direction and speed display:

(xv) an audible alerting alarm:

(xvi) an AFTN terminal or, where provided for in an ATS letter of agreement, an alternative means of reception and transmission of information normally conveyed by AFTN:

(xvii) if applicable, airfield lighting controls panel; and

(6) provided with two independent sources of the current altimeter setting, at least one of which shall be an aneroid barometer or barometric altimeter situated in the visual control room.

(c) The applicant shall establish procedures to ensure that area control centres, flight information centres, and approach control units are—

(1) provided with equipment enabling—

(i) to the fullest extent practical, two-way voice communication; and

(ii) where applicable, data communication—

with aircraft in, or adjacent to, airspace for which the applicant has responsibility; and

(iii) where applicable, a dedicated air-ground communications channels provided for approach control service for its exclusive use; and

(2) provided with the following minimum equipment:

(i) a display system or systems designed to show the disposition of current and pending flights together with ancillary information for individual aircraft:

(ii) a power supply:

(iii) appropriate and current maps and charts:

(iv) clocks:

(v) logbook:

(vi) status monitors as appropriate for navigation, approach, and landing aids:

(vii) telephone communications:

(viii) voice recording equipment and, where applicable, data recording equipment:

(ix) an AFTN terminal:

(x) for approach control operating positions, an ILS/MLS status monitor at the approach control or approach control radar operating position for the aerodrome concerned:

(xi) for approach control operating positions responsible for aircraft on final approach, or aircraft landing or taking-off, a wind direction and speed display fed from the same source as the corresponding equipment in the aerodrome control tower.

(3) provided with emergency frequency 121.500 MHz at each control position, in accordance with Annex 10 Vol 5 Ch 4, 4.1.3.1.

(d) The applicant shall establish procedures to ensure that the aeronautical telecommunications equipment required by paragraphs (b) and (c) are operated in accordance with the requirements of Part 171.

(e) The applicant shall establish procedures to ensure that visual display units used by air traffic services are positioned with due regard to the relative importance of the information displayed and ease of use by the staff concerned.

(f) The equipment required by paragraphs (b)(4) and (5), and (c)(1) and (2), shall have a level of reliability, availability, and redundancy, that minimises the possibility of failure, non-availability, or significant degradation of performance.

(g) The applicant shall establish procedures to ensure that the status monitors required by paragraph (b)(5)(xi) and paragraphs (c)(2)(vi) and (x) are fitted with—

(1) an aural signal to indicate a change of status; and

(2) a visual indication of the current status.

172.59 Establishment and transfer of service

(a) An applicant for the grant of an air traffic service certificate shall include with its application—

(1) for each aerodrome and airspace, a schedule of the proposed hours of service for the first 12 months of operation; and

(2) in respect of an aerodrome, or airspace, not currently provided with an air traffic service, a summary of safety factors considered before seeking certification.

(b) An applicant for the grant of an air traffic service certificate intending to assume responsibility for providing any air traffic service from an existing certificate holder, shall include with its application, full details of transitional arrangements endorsed by the Chief Executives of both organisations.

172.61 Shift administration

An applicant for the grant of an air traffic service certificate shall establish a procedure to ensure that—

(1) adequate time is provided at the beginning and end of each shift, for the performance of those duties required—

(i) before providing an air traffic service; and

(ii) after ceasing to provide an air traffic service; and

(2) a minimum of 5 minutes is provided for each transfer of watch at an ATS operational position.

172.63 Documentation

(a) An applicant for the grant of an air traffic service certificate shall hold copies of the relevant technical manuals, and all other documents, necessary for the provision and operation of the services listed in its exposition.

(b) The applicant shall establish a procedure to control all the documentation required by paragraph (a). The procedure shall ensure that—

(1) all incoming documentation is reviewed, and actioned as required, by authorised personnel; and

(2) all documentation is reviewed and authorised before issue; and

(3) current issues of all relevant documentation are available to personnel at all locations where they need access to such documentation for the provision and operation of air traffic services; and

(4) all obsolete documentation is promptly removed from all points of issue or use; and

(5) any obsolete documents retained as archives are suitably identified as obsolete; and

(6) changes to documentation are reviewed and approved by authorised personnel who shall have access to pertinent background information upon which to base their review and approval; and

(7) the current version of each item of documentation can be identified to preclude the use of out-of-date editions.

172.65 Contingency plan

(a) An applicant for the grant of an air traffic service certificate shall establish a contingency plan providing for the safe and orderly flow of traffic in the event of a disruption, interruption, or temporary withdrawal of an air traffic service or related supporting service such as –

(1) major facility failures; or

(2) natural disasters; or

(3) public health emergencies; or

(4) industrial action or civil unrest; or

(5) military conflicts; or

(6) acts of unlawful interference.

(b) When developing the contingency plan required under paragraph (a) the applicant shall ensure that the plan is coordinated with all concerned neighbouring States; and

(c) the contingency plan must be acceptable to the Director.

172.67 Co-ordination requirements

(a) An applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure, where applicable, co-ordination between each ATS unit listed in the applicant's exposition and the following agencies—

(1) a holder of an aeronautical telecommunication service organisation certificate issued under Part 171; and

(2) a holder of an instrument flight procedure design service organisation certificate issued under Part 173; and

(3) a holder of an aviation meteorological service organisation certificate under Part 174; and

(4) a holder of an aeronautical information service organisation certificate issued under Part 175; and

(5) aircraft operators; and

(6) the Papua New Guinea Defence Force; and

(7) search and rescue authorities; and

(8) where the listed ATS unit is an aerodrome control tower or aerodrome flight information unit—

(i) the aerodrome operator; and

(ii) the apron management service, if that service is not provided by the aerodrome control tower.

(b) The applicant shall establish procedures to ensure an ATS letter of agreement is in place between each ATS unit listed in the applicant's exposition and—

(1) each ATS unit responsible for adjoining airspace, and

(2) any other ATS unit with which regular operational co-ordination is required.

(c) The applicant shall establish procedures to ensure each ATS letter of agreement—

(1) details such matters as are necessary for effective co-ordination between the unit's party to the agreement; and

(2) is kept current; and

(3) is signed by senior representatives of the participating units; and

(4) is part of the applicant's operations manual.

(d) The applicant shall establish procedures to ensure that direct speech and/or data link communications are used in ground-ground communications for air traffic services purposes.

(e) The applicant shall establish facilities for communications between area control centres serving contiguous control areas to-

(1) include provisions for direct speech and, where applicable, data link communications, with automatic recording; and

(2) ensure that communications can be established instantaneously for the purpose of transfer of control using radar, ADS-B or ADS-C data and for other purposes the communications can normally be established within fifteen seconds.

(f) An applicant shall establish procedures to ensure activities potentially hazardous to civil aircraft, within the FIR is coordinated with the appropriate ATS unit or authority.

(g) The applicant shall establish procedures to ensure that ATS units, aircraft operators, and aviation meteorological service providers, where they require the information, are provided, through the exchange of ATS messages, with details of —

(1) the intended movement of each aircraft for which a flight plan has been filed, and any amendments to that flight plan; and

(2) current information on the actual progress of the flight.

(h) The applicant shall establish procedures to ensure that ATS messages are prepared and transmitted in accordance with procedures detailed and cross-referenced in Document 4444 (Chapter 11 – Air Traffic Services Messages).

172.69 Notification of facility status

(a) An applicant for the grant of an air traffic service certificate shall establish procedures to notify users of its air traffic services of relevant operational information and of any changes in the operational status of each facility or service listed in the applicant's exposition.

(b) The procedures shall ensure that —

(1) operational information for each of the applicant's air traffic services is forwarded to the holder of the aeronautical information service certificate issued under Part 175 for the PNGAIP service; and

(2) the users of an air traffic service are notified without delay of any change in operational status of the facility or service that may affect the safety of air navigation, and, except where the change is temporary in nature, information concerning any change in operational status is forwarded to the holder of the aeronautical information service certificate for the NOTAM service.

172.71 General information requirements

(a) An applicant for the grant of an air traffic service certificate shall establish procedures for the receipt of information on the following activities when the activity could affect airspace used by flights within the applicant’s area of responsibility—

(1) pre-eruption volcanic activity; and

(2) volcanic eruptions; and

(3) volcanic ash-cloud; and

(4) release into the atmosphere of radioactive materials or toxic chemicals.

(b) The applicant shall establish systems and procedures to ensure that each ATS unit, as appropriate to the applicant’s intended area of responsibility, is kept informed of the operational status of—

(1) non-visual navigation aids; and

(2) visual aids essential for take-off, departure, approach, and landing procedures; and

(3) visual and non-visual aids essential for surface movement.

(c) Each applicant for the grant of an air traffic service certificate for an—

(1) aerodrome control tower; or

(2) approach control unit; or

(3) aerodrome flight information service unit—

shall establish procedures to ensure the unit is kept informed of operationally significant conditions on the movement area. The information shall include the existence of temporary hazards and the operational status of any associated facilities at the aerodrome.

172.73 Meteorological information and reporting

(a) Each applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure that all meteorological information provided as part of any flight information service is—

(1) supplied by the holder of an aviation meteorological service organization certificate issued under Part 174; or

(2) issued as a *basic weather report* in accordance with rule 174.3 and rule 174.6.

(b) The applicant shall establish systems and procedures to ensure that ATS units are supplied with the meteorological information necessary for the performance of their respective functions, in a form that requires a minimum of interpretation by ATS personnel.

(c) The applicant shall establish procedures to ensure that equipment used in the compilation of *basic weather reports*—

(1) supplies data representative of the area for which the measurements are required; and

(2) where that equipment consists of multiple wind direction and speed indicators, identifies the runway, or section of the runway, monitored by each instrument.

(d) The applicant shall establish a procedure to ensure that the information contained in a meteorological bulletin remains unchanged through onward transmission.

(e) The applicant shall establish an agreement with Part 174 certificate holder to formalize the provision of aviation meteorological services.

(f) The applicant shall establish mechanism for ensuring that it coordinates with the holder of an aviation meteorological service organization certificate issued under Part 174 matters relating to weather observations, including wind shear warnings.

172.75 Area and approach control services

(a) An applicant for the grant of an air traffic service certificate in respect of an area or approach control service shall establish systems and procedures to—

(1) determine, from information received, the positions of known aircraft relative to each other; and

(2) provide for the issue of ATC clearances, instructions, and information, according to the airspace classification and type of flight, for the purpose of preventing collisions between aircraft under the control of the unit, and expediting and maintaining a safe and efficient flow of traffic; and

(3) co-ordinate clearances, as necessary, with other ATC units; and

(4) display, in a manner that permits ready analysis, information on aircraft movements, together with a record of clearances issued.

(b) The procedures required by paragraph (a)(2) shall, except as provided in 172.91, ensure vertical or horizontal or composite separation is provided, in accordance with paragraph

(c), between—

(1) all flights in class A airspace; and

(2) IFR flights in class C airspace; and

(3) IFR flights and VFR flights in class C airspace; and

(4) IFR flights and Special VFR flights; and

(5) Special VFR flights when the flight visibility is reported to be less than 5 km.

(c) The separation required by paragraph (b) shall be in accordance with criteria and minima prescribed by—

(1) Annex 11; or

(2) Document 4444; or

(3) Document 7030; or

(4) Subpart E.

172.77 Aerodrome control service

(a) An applicant for the grant of an air traffic service certificate in respect of an aerodromecontrol service shall establish systems and procedures to—

(1) determine, from information received and visual observation, the relative positions ofknown aircraft to each other; and

(2) provide for the issue of ATC clearances, instructions, and information, for the purposeof preventing collisions between—

(i) aircraft flying in the vicinity of an aerodrome; and

(ii) aircraft landing and taking off; and

(iii) aircraft operating on the manoeuvring area; and

(iv) aircraft, vehicles, and persons, operating on the manoeuvring area; and

(v) aircraft on the manoeuvring area and obstructions on that area; and

(3) provide for the issue of ATC clearances, instructions, and information, for the purposeof expediting and maintaining a safe and efficient flow of traffic; and

(4) except as provided in rule 172.91 and rule 172.287, provide runway and wake turbulence separation in accordance with criteria and minima prescribed by—

(i) Annex 11; or

(ii) Document 4444; or

(iii) Document 7030; or

(iv) Subpart E; and

(5) ensure that emergency vehicles responding to an aircraft emergency are given priority over all other surface movement traffic; and

(6) provide for the control of the movement of persons or vehicles, including towed aircraft, on the manoeuvring area, as necessary to avoid hazard to them or to aircraft landing, taxiing, or taking off in accordance with rule 172.83 (i); and

(7) co-ordinate as necessary with other ATS units; and

(8) display, at operating positions, continuously updated information on aircraft movements.

(b) The applicant shall establish a procedure to ensure that, when radio communication is not available, basic clearances, instructions, and information required by paragraph (a)(2) canbe conveyed by the use of the light signals described in rule 91.243.

(c) The applicant shall establish procedures to ensure that when required by either the weather, or category of approach, or both—

(1) aircraft on an ILS or MLS approach are informed of ILS/MLS critical area incursions, or the imminent possibility of an incursion; or

(2) the applicable ILS/MLS critical areas are protected from incursion when an aircraft is on an ILS or MLS approach, or has reached a point on the approach from which protection from incursion is necessary.

(d) The applicant shall establish a procedure to ensure that, except as provided in rule 172.91, and subject to authorisation by the applicable approach control unit, aerodrome control towers provide separation between—

(1) IFR flights and Special VFR flights; and

(2) Special VFR flights when the flight visibility is reported to be less than 5 km.

(e) The applicant shall establish a procedure to ensure that, when authority has been delegated by, and accepted from, the applicable area or approach control unit, aerodrome control towers provide separation between controlled flights in accordance with the delegation.

(f) The separation required by paragraphs (d) and (e) shall be obtained by the use of vertical or horizontal or composite separation, in accordance with criteria and minima prescribed by—

(1) Annex 11; or

(2) Document 4444; or

(3) Document 7030; or

(4) Subpart E.

172.79 Special use airspace

Each applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that appropriate separation is provided between controlled flights and active special use airspace designated under Part 71 except when—

(1) in the case of a danger area or a volcanic hazard area, the pilot has notified an express intention to operate in the area, or;

(2) in the case of a low flying zone, it is known, or reasonably believed, that the pilot of a VFR flight, is aware that the airspace is active, and the flight is cleared to maintain its own separation from the airspace; or

(3) in the case of a restricted area, the administering authority has given approval.

172.81 Responsibility for control

(a) An applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that any controlled flight is under the control of only one ATC operating position at any given time.

(b) The applicant shall establish procedures to ensure that responsibility for the control of all aircraft operating within a given block of airspace is vested in a single operating position. Control of an aircraft or groups of aircraft may be delegated to other operating positions provided that co- ordination between all affected operating positions is assured.

(c) The applicant shall establish procedures for the transfer of responsibility for the control of an aircraft.

(d) The procedures required by paragraph (c) shall ensure that—

(1) transfer arrangements are—

(i) agreed between ATC units responsible for adjacent airspaces and published in ATS letters of agreement; and

(ii) in place for separate operating positions within an ATC unit and promulgated in the holder's operations manual; and

(2) responsibility for control of an aircraft is not transferred from one ATC unit to another without—

(i) communication of appropriate parts of the current flight plan; and

(ii) any relevant control information; and

(iii) the consent of the accepting unit; and

(3) where transfer of control is to be effected using radar or ADS-B data, the control information pertinent to the transfer includes the position and, if required, the track and speed of the aircraft, as observed by radar or ADS-B immediately prior to the transfer; and

(4) where transfer of control is to be effected using ADS-C data, the control information pertinent to the transfer shall include the four-dimensional position and other information as necessary.

(5) the accepting control unit

(i) indicates its ability to accept control of the aircraft on the terms specified by the transferring control unit, unless by prior agreement between the two units concerned, the absence of any such indication is understood to signify acceptance of the terms specified, or indicate any necessary changes thereto; and

(ii) specify any other information or clearance for a subsequent portion of the flight, which it requires the aircraft to have at the time of transfer; and

(iii) notify the transferring control unit when it has established two-way voice and/or data link communication with and assumed control of the aircraft concerned, unless otherwise specified by agreement between the two control units concerned.

172.83 Priorities

(a) An applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that, providing safety is not jeopardised, ATC units apply the following priorities—

(1) an aircraft known or believed to be in a state of emergency or impaired operation has priority over all other aircraft; and

(2) an aircraft landing, or in the final stages of an approach to land, has priority over a departing aircraft; and

(3) an aircraft landing or taking off has priority over taxiing aircraft.

(b) The applicant shall establish procedures to ensure that, where practical, following a request from the pilot, an aircraft involved in, or positioning for, the following activities is granted priority—

(1) ambulance or mercy missions; and

(2) search and rescue; and

(3) civil defence or police emergencies; and

(4) carriage of heads-of-state, heads-of-government, or equivalent dignitaries; and

(5) an aircraft at a cruising level shall normally have priority over other aircraft requesting that level.

(c) An applicant for an air traffic service certificate in respect of an area control service may establish procedures regarding priorities to be applied in airspace designated as RNP or RVSM airspace under Part 71.

(d) Subject to the requirements of paragraphs (a) and (b), an applicant may put in place schemes for the determination of priorities for arriving and departing flights, provided that consultation with interested parties is undertaken prior to implementing the scheme.

(e) The applicant shall establish procedures to ensure that, where priorities are established under paragraphs (c) or (d), relevant information, including details regarding the handling of complaints, is published in the PNGAIP.

(f) The applicant shall establish procedures to ensure that, providing safety is not jeopardised, due regard is given to those priorities determined in conjunction with the aerodrome operator for—

(1) aircraft arriving and departing that aerodrome; and

(2) other operations in any control zone associated with that aerodrome.

(g) The applicant shall establish procedures to ensure that, except when applying priority in accordance with other provisions of this rule, priority for arriving and departing flights is allocated on a first-come first-served basis.

(h) The applicant shall establish procedures to ensure that the provision of an ATC service takes precedence—

(1) over the provision of a flight information service whenever the situation so requires; and

(2) over the performance of any other non-ATS tasks.

(i) The applicant shall establish procedures to ensure that, subject to rule 172.77 (a)(5), vehicles and vehicles towing aircraft on the manoeuvring area comply with the following:-

(1) give way to aircraft which are landing, taking- off or taxiing; and

(2) give way to other vehicles towing aircraft; and

(3) give way to other vehicles in accordance with ATS unit instructions; and

(j) Notwithstanding the provisions of paragraph (i), vehicles and vehicles towing aircraft shall comply with instructions issued by the aerodrome control tower.

172.85 Air traffic flow management

(a) An applicant for the grant of an air traffic service certificate in respect of an air traffic control service must establish and implement air traffic flow management where, air traffic demand at times exceeds or is expected to exceed the declared capacity of air traffic control service concerned.

(b) The applicant shall establish procedures for notification to air crew, air operators and ATS units concerned of the delays expected or restrictions that will be applied.

172.86 ATS system capacity

(a) An applicant for the grant of an air traffic service certificate must establish procedures to declare ATC system capacity within a given period of time at a particular location.

(b) The procedure must ensure —

(1) the number of aircraft provided with an ATC service does not exceed that which can be safely handled in accordance with the declare ATC capacity; and

(2) periodic review of the ATC capacities in relation to traffic demand.

172.87 ATC clearances

(a) An applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures for the provision of ATC clearances and read-back of clearances and safety-related information.

(b) The procedures shall ensure that—

(1) no person knowingly issues an ATC clearance or instruction that requires or invites a pilot to violate the provisions of any other rule; and

(2) clearances and instructions contain positive and concise data and are, where practicable, phrased in a standard manner; and

(3) if a pilot advises that a clearance or instruction is unsuitable, an amended clearance or instruction is, if practicable, issued; and

(4) an ATC clearance for an en route flight consists of—

(i) the aircraft identification as shown in the flight plan or, where similarity with another flight might cause confusion, an alternative identification provided by ATC; and

(ii) the clearance limit; and

(iii) the route of flight; and

(iv) the level(s) of flight for the entire route, or part thereof, and changes of level if required; and

(v) any necessary instructions or information on other matters, such as approach or departure manoeuvres, communications, and the time of validity or expiry of the clearance; and

(5) an ATC clearance for a local flight, a flight operating in defined areas, or a flight

operating in a random manner, includes those elements detailed in paragraph (4) that are appropriate; and

(6) an ATC clearance for a transonic flight—

(i) extends at least to the end of the transonic acceleration phase; and

(ii) provides for uninterrupted descent during deceleration from supersonic cruise to subsonic flight.

(c) The read-back procedures in (a) must ensure that -

(1) the flight crew read back to the air traffic controller of safety-related parts of ATC clearances and instructions which are transmitted by voice; and

(2) the following items are read back:

(i) ATC route clearances; and

(ii) clearances and instructions to enter, land on, take off from, hold short of, cross and backtrack on any runway; and

(iii) runway-in-use, altimeter settings, SSR codes, level instructions, heading and speed instructions and transition levels; and

(iv) other clearances or instructions, including conditional clearances, are read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with; and

(3) the controller listens to the read-back to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and take immediate action to correct any discrepancies revealed by the read-back; and

(4) unless specified ~~by~~ under this Part, voice read-back of CPDLC messages are not required; and

(5) vehicle drivers operating or intending to operate on the manoeuvring area read back to the air traffic controller safety-related parts of instructions which are transmitted by voice, e.g. instructions to enter, hold short of, and operate on any operational runway or taxiway; and

(6) the controller listens to the read-back to ascertain that the instruction has been correctly acknowledged by the vehicle driver and take immediate action to correct any discrepancies revealed by the read-back.

(d) The applicant shall establish procedures for the coordination of clearances to ensure that –

(1) air traffic control clearances are coordinated between air traffic control units to cover the entire route of an aircraft or a specified portion thereof; and

(2) an aircraft is cleared for the entire route to the aerodrome of first intended landing when:

(i) it has been possible, prior to departure, to coordinate the clearance between all the units under whose control the aircraft will come; or

(ii) there is reasonable assurance that prior coordination will be effected between those units under whose control the aircraft will subsequently come; and

(3) when coordination in (e)(2) has not been achieved, the aircraft shall be cleared only to that point where coordination is reasonably assured; prior to reaching such point, or at such point, the aircraft shall receive further clearance, holding instructions being issued as appropriate.

(e) The applicant in respect of an air traffic control service shall establish procedures to ensure that –

(1) an aircraft contacts a downstream air traffic control unit, for the purpose of receiving a downstream clearance prior to the transfer of control point; and

(2) the aircraft maintains the necessary two-way communication with the current air traffic control unit whilst obtaining a downstream clearance; and

(3) a clearance issued as a downstream clearance is clearly identified as such to the pilot; and

(4) unless coordinated, a downstream clearance does not affect the aircraft's original flight profile in any airspace, other than that of the air traffic control unit responsible for the delivery of the downstream clearance; and

(5) when an aircraft intends to depart from an aerodrome within a control area to enter another control area within a period of thirty minutes, or such other specific period of time as has been agreed between the area control centres concerned, coordination with the subsequent area control centre shall be effected prior to issuance of the departure clearance; and

(6) when an aircraft intends to leave a control area for flight outside controlled airspace, and subsequently re-enter the same or another control area:

(i) a clearance from point of departure to the aerodrome of first intended landing may be issue; and

(ii) such clearance or revisions thereto are applied only to those portions of the flight conducted within controlled airspace.

172.89 Cruising levels

An applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that cruising levels allocated within the Papua New Guinea FIR are selected in accordance with rule 91.419 for IFR flights, or rule 91.313 for VFR flights, except that, within controlled airspace—

(1) for both IFR and VFR flights, correlation of cruising level with track need not apply; and

(2) VFR flights may be allocated IFR levels.

172.91 Deviation from an ATC clearance

(a) Subject to paragraph (b), an applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that instructions issued to restore any loss of separation do not hinder the responses of a pilot to—

(1) ACAS or GPWS alerts; or

(2) weather, or other emergency situations, necessitating a deviation from an ATC clearance.

(b) The procedures required by paragraph (a) shall ensure that, once the emergency situation

has been resolved, if any separation has been lost it is restored.

172.93 Flight information service

(a) An applicant for the grant of an air traffic service certificate shall establish procedures to ensure that a flight information service is provided to any aircraft that is likely to be affected by the information, if—

(1) the aircraft is being provided with an ATC service; or

(2) the aircraft is being provided with an aerodrome flight information service; or

(3) the aircraft is operating under IFR; or

(4) the aircraft is operating under VFR having filed the flight plan required by 91.307; or

(5) the pilot of an aircraft operating under VFR without a flight plan makes a specificrequest for flight information.

(b) The applicant shall establish procedures to ensure that the flight information service includesthe provision of available and relevant—

(1) SIGMET information; and

(2) information on weather conditions reported or forecast, at departure, destination, andalternate aerodromes; and

(3) information concerning pre-eruption volcanic activity, volcanic eruptions, and volcanic ash clouds; and

(4) information concerning the release into the atmosphere of radioactive materials ortoxic chemicals; and

(5) information on changes in the serviceability of navigation aids; and

(6) information on changes in the condition of aerodromes and associated facilities, including information on the state of the aerodrome movement areas when they areaffected by snow, ice, or water; and

(7) information on unmanned free balloons; and

(8) other information likely to affect safety.

(c) The applicant shall establish procedures to ensure that flight information provided to aircraft operating on a VFR flight plan, and aircraft specifically requesting the information, includes available details concerning weather conditions along the route of flight that are likely to make operation under VFR impracticable.

(d) The applicant shall establish procedures to ensure that, when requested by a pilot, flight information for a long-distance flight over water includes any available information on surface vessels in the area.

(e) The applicant shall establish procedures to ensure that, whenever water is present on a runway, a description of the runway surface conditions on the centre half of the width of the runway is made available using one of the following terms—

(1) DAMP – the surface shows a change of colour due to moisture; or

(2) WET – the surface is soaked but there is no standing water; or

(3) WATER PATCHES – significant patches of standing water are visible; or

(4) FLOODED – extensive standing water is visible.

(f) The applicant shall establish procedures to ensure that, where practical, local aircraft operators likely to be affected by the information are advised of short-notice changes to published hours of service where they are unlikely to have the information from any other sources.

(g) An applicant for the grant of an air traffic service certificate for an air traffic control service, shall establish procedures to ensure that essential traffic information is passed to all affected traffic.

(h) An applicant for the grant of an air traffic service certificate shall establish procedures to ensure that traffic information is provided to flights likely to be affected by the informationas follows:

(1) in class C airspace, between VFR flights, together with traffic avoidance advice on request:

(2) in class F airspace**,** between IFR flights, IFR flights and VFR flights, and where practical, between VFR flights on request:

172.95 Aerodrome flight information service

(a) An applicant for the grant of an air traffic service certificate in respect of an aerodrome flight information service shall establish systems and procedures to—

(1) determine, from information received and visual observation, the relative positions of known aircraft to each other; and

(2) provide for the issue of advice and information, including the designation of a preferred runway, for the purpose of the safe and efficient operation of aircraft—

(i) flying in the vicinity of an aerodrome; and

(ii) operating on the manoeuvring area; and

(iii) landing and taking off; and

(iv) vehicles, and persons, on the manoeuvring area; and

(v) on the manoeuvring area and obstructions on that area.

(b) The applicant shall establish procedures to ensure that the designated preferred runway is that most suitable for the particular operation.

172.97 Alerting service

(a) In this Rule—

ALERFA means the Alert phase:

DETRESFA means the Distress phase:

INCERFA means the Uncertainty phase:

RCC means the rescue co-ordination centre established under section 8A of the Act.

(b) An applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure the provision of an alerting service within its areas of responsibility—

(1) when aerodrome control or aerodrome flight information service is in attendance, forall aerodrome traffic; and

(2) for all aircraft—

(i) having filed a flight plan in accordance with rule 91.307 or rule 91.407; or

(ii) having notified a SARTIME; or

(iii) otherwise known by any air traffic service to be in need of assistance; and

(3) for any aircraft known or believed to be the subject of unlawful interference.

(c) An applicant shall establish procedures to ensure that, in the event of a state of emergency described in paragraph (f)—

(1) immediate declaration of an INCERFA, ALERFA, or DETRESFA is made, in accordance with paragraph (f); and

(2) the declaration is notified to the ACC or FIC responsible, except where the emergencycan be dealt with by local emergency organisations.

(d) An applicant in respect of an area control service or flight information service shall establish procedures to ensure that, in the event of a state of emergency of an aircraft, an ACC or FIC—

(1) serves as the central point within the FIR concerned for collecting all information relevant to the state of emergency;

(2) except as prescribed in paragraph (j)(1), forwards such information without delay tothe RCC; and

(3) maintains an up-to-date contact directory for notification of emergencies to RCC, air operators and the ATS management.

(e) Notwithstanding paragraph (c), an applicant for an air traffic service certificate for an aerodrome control, approach control, or aerodrome flight information service, shall establish procedures to ensure that whenever the urgency of the situation so requires, those servicesshall first alert appropriate local emergency organisations.

(f) The declaration required by paragraph (c) shall be made in the following circumstances, andin any other circumstances that warrant such a declaration—

(1) INCERFA when—

(i) no communication has been received from an aircraft within a period of 15 minutes after the time a communication should have been received, or from the time an unsuccessful attempt to establish communication with the aircraft was first made, whichever is the earlier; or

(ii) an aircraft fails to arrive within 30 minutes of the estimated time of arrival last notified to, or estimated by ATS, whichever is the later; or

(iii) an aircraft fails to report at the nominated SARTIME and immediate checks have failed to locate the aircraft— except when no doubt exists as to the safety of the aircraft and its occupants; or

(2) ALERFA when—

(i) an aircraft is known or believed to be subject to unlawful interference; or

(ii) following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have failedto reveal any news of the aircraft; or

(iii) an aircraft has been cleared to land, and fails to land within five minutes of the estimated time of landing, and communication has not been re-established with the aircraft; or

(iv) information has been received that indicates that the operating efficiency of the aircraft has been impaired, but not to the extent that a forced landing is

likely or where the likelihood of a forced landing has not been determined —

except, in the case of subparagraphs (ii), (iii), and (iv), when evidence exists that would allay apprehension as to the safety of the aircraft and its occupants; or

(3) DETRESFA when—

(i) following the alert phase further unsuccessful attempts to establish communication with the aircraft and more widespread unsuccessful inquiries point to the probability that the aircraft is in distress; or

(ii) the fuel on board is considered to be exhausted, or to be insufficient to enablethe aircraft to reach safety; or

(iii) information is received that indicates that the operating efficiency of the aircraft has been impaired to the extent that a forced landing is likely; or

(iv) information has been received that, or it is reasonably certain that, the aircraft is about to make or has made a forced landing—except when there is reasonable certainty that the aircraft and its occupants are not threatened by grave and imminent danger and do not require immediate assistance.

(g) The applicant shall establish procedures to ensure the notification of an emergency situation required by paragraph (c)(2) includes such of the following information as is available, inthe order listed:

(1) INCERFA, ALERFA, or DETRESFA as appropriate to the phase of the emergency:

(2) agency and person calling:

(3) nature of the emergency:

(4) significant information from the flight plan:

(5) unit that made last contact, time, and frequency used:

(6) last position report and how determined:

(7) colour and distinctive marks of aircraft:

(8) any action taken by the reporting office:

(9) any dangerous goods carried as cargo.

(h) The applicant shall establish procedures to ensure that, following the notification of anemergency situation, the RCC is provided, without delay, with—

(1) any useful additional information; and

(2) notification when the emergency situation no longer exists.

(i) The applicant shall establish procedures for aircraft in a state of emergency to ensure that—

(1) as necessary, use all available communication facilities to endeavour to establish and maintain communicationand to request news of the aircraft; and

(2) the flight of the aircraft involved shall be plotted on a chart in order to determine the probable future position of the aircraft and its maximum range of action from its last known position; and

(3) the flights of other known aircraft operating in the vicinity of the aircraft involved shall also be plotted in order to determine their probable future positions and maximum endurance; and

(4) other known aircraft in the vicinity of the aircraft involved shall be informed of the nature of the emergency as soon as practicable, except when it is known or believed that the aircraft is being subjected to unlawful interference.

(j) An applicant for the grant of an air traffic service certificate in respect of an area controlservice or flight information service shall establish procedures to ensure that —

(1) when an ACC or FIC declares an INCERFA or ALERFA it shall, where practical,advise the aircraft operator prior to notifying the RCC; and

(2) all information notified to the RCC by an ACC or FIC shall, where practical, also be communicated without delay to the aircraft operator.

172.99 Flight plans

(a) An applicant for the grant of an air traffic service certificate shall establish procedures for the acceptance and actioning of flight plans.

(b) An applicant shall ensure that the acceptance procedures required by paragraph (a) include, for the first ATS unit receiving a filed flight plan—

(1) a check for compliance with any prescribed flight plan format and data conventions; and

(2) a check for completeness, and to the extent practical, for accuracy; and

(3) provision for any action necessary to make the plan acceptable to ATS.

(c) An applicant intending to provide air traffic services from more than one location may nominate a single ATS unit within the applicant's organisation to accept filed flight plans on behalf of any or every unit.

(d) An applicant intending to operate a centralised flight planning office shall ensure the office is equipped with—

(1) AFTN, facsimile, and computer data-link connection facilities, for the acceptance of flight plans from aircraft operators and any other ATS unit; and

(2) facilities for the advance filing, retention, and activation of standard or repetitive elements of flight plan information.

172.101 Time

(a) An applicant for the grant of an air traffic service certificate shall establish a procedure to ensure that ATS unit clocks and other time recording devices—

(1) use Co-ordinated Universal Time (UTC) and express that time in hours and minutes and when required, seconds of the 24-hour day beginning at 0000 UTC; and

(2) is indicating the time in hours, minutes and seconds, clearly visible from each operating position in the unit concerned; and

(3) are checked to ensure correct time to within plus or minus 30 seconds of UTC as determined by reference to a standard time station; and

(4) used in data link communications are correct to within 1 second of UTC.

(b) The applicant shall establish a procedure to ensure that the correct time, to the nearest half minute, is provided—

(1) in respect of any aerodrome control service, to an aircraft prior to taxiing for take-off unless arrangements have been made for the pilot to obtain it from other sources;

and

(2) to any aircraft on request.

172.103 Altimeter setting procedures

An applicant for the grant of an air traffic service certificate shall establish a procedure to ensure that—

(1) QNH altimeter settings are in hectopascals rounded down to the nearest whole hectopascal; and

(2) the appropriate aerodrome or area QNH setting is provided to all aircraft on initial radio contact, including aircraft that advise having received the current applicable ATIS broadcast; and

(3) ATS units provide to an aircraft, on request, the current applicable aerodrome or area QNH altimeter setting.

172.105 Radio and telephone procedures

(a) An applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure that—

(1) the standard telephony and radiotelephony phraseology prescribed in paragraph (b) is used; and

(2) in all radiotelephony communications discipline is observed, by transmitting only those messages that are necessary for the provision of an air traffic service, or that otherwise contribute to safety; and

(3) communications procedures are in accordance with the applicable communication procedures prescribed in Annex 10 Volume II, except that procedures relating to callsigns for domestic use by Papua New Guinea registered aircraft are those required by rule 91.251.

(b) The applicant shall establish procedures to ensure that, for the purposes of paragraph (a), the standard phraseology, and the circumstances in which it is used, is that published in—

(1) Subpart F; or

(2) Annex 10; or

(3) Document 4444; or

(4) Document 9432.

(c) For the purposes of paragraph (b), where differences occur between the stated documents, the particular phraseology shall be selected according to the order of precedence of the documents as listed.

172.107 ATS surveillance services

An applicant for the grant of an air traffic service certificate shall establish procedures to ensure that, where surveillance systems is used to support the provision of an air traffic service—

(1) all surveillance services are provided in accordance with procedures published in—

(i) Document 4444; or

(ii) Document 7030 (as applicable to the Middle East/Asia Region); or

(iii) Subpart G; and

(2) SSR code allocation for international flights is in accordance with the code assignment system published in the applicable ICAO Air Navigation Plan; and

(3) an SSR code management plan is in place for domestic flights that—

(i) conforms to the applicable principles contained in Document 4444; and

(ii) does not conflict with the SSR code allocation tables of rule 91.249(a); and

(4) full information is made available to pilots and aircraft operators on—

(i) the nature and extent of the surveillance services provided; and

(ii) any significant limitations regarding such surveillance services; and

(5) the information displayed at individual surveillance system operating positions is that required for the air traffic services to be provided; and

(6) Radar and ADS-B ground systems provide for the display of safety-related alerts and warnings, including conflict alert, conflict prediction, minimum safe altitude warning and unintentionally duplicated SSR codes.

172.109 Aircraft emergencies and irregular operation

An applicant for the grant of an air traffic service certificate shall establish procedures–

(a) to ensure maximum assistance and priority is given to an aircraft known, or believed to be, in a state of emergency; and

(b) to assist strayed aircraft, unidentified aircraft, aircraft subject to military interception; and aircraft subject to bomb threat; and

(c) for ATC contingencies in respect of –

(1) air-ground communication failure;

(2) blocked frequency;

(3) unauthorized use of ATC frequency

(4) emergency separation;

(5) emergency descent;

(6) short-term conflict alert (STCA);

(7) airborne collision avoidance system (ACAS);

(8) minimum safe altitude warning (MSAW);

(9) autonomous runway incursion warning system; and

(10) change of aircraft radiotelephony call sign.

(d) to ensure that, when an aircraft is known or believed to be subjected to unlawful interference -

(1) ATS units attend promptly to requests by the aircraft; and

(2) no reference is made in ATS air-ground communications to the nature of the emergency unless it has first been referred to in communication from the aircraft involved and it is certain that such reference will not aggravate the situation; and

(3) information pertinent to the safe conduct of the flight continues to be transmitted; and

(4) necessary action is taken to expedite the conduct of all phases of the flight, especially the safe landing of the aircraft; and

(5) the appropriate authority designated by the state is immediately informed; and

(6) necessary information is exchanged with the operator or its designated representative.

(e) to ensure that when a state of emergency exists –

(1) the flight of the aircraft involved is plotted on a chart in order to determine the probable future position of the aircraft; and

(2) the flight of other aircraft known to be operating in the vicinity of the aircraft involved are plotted to determine their probable future position; and

(3) other aircraft known to be in the vicinity of the aircraft involved are, except as provided in (d)(2), informed of the nature of the emergency as soon as practicable.

172.111 Action after serious incident or accident involving navigational facilities

An applicant for the grant of an air traffic service certificate shall establish procedures regarding aserious incident or accident to—

(1) determine if any air navigation facilities have contributed to the event; and

(2) ensure immediate action is taken to—

(i) warn other aircraft that may be using or intending to use the facilities; and

(ii) advise the operator of the facility of the occurrence, and that the facility may beimplicated; and

(3) assist the operator of the facility with the prompt promulgation of any decision to withdrawthe equipment from service; and

(4) ensure that any facility identified in paragraph (1) is not used in the provision of separationto IFR aircraft until cleared for use by the relevant holder of an aeronautical telecommunications service certificate issued under Part 171.

172.113 Incidents

An applicant for the grant of an air traffic service certificate shall establish procedures for—

(1) the notification, investigation, and reporting of incidents in accordance with Part 12; and

(2) the forwarding of facility malfunction reports required by rule 91.253 to the applicable aeronautical telecommunication service certificate holder.

172.115 Records

(a) An applicant for the grant of an air traffic service certificate shall establish systems and procedures to identify, collect, index, file, store, secure, maintain, access, and dispose of, records necessary for—

(1) the provision of air traffic services; and

(2) the purpose of assisting with any accident or incident investigation; and

(3) the maintenance of personnel training records

(b) The records shall include—

(1) telephone communications; and

(2) radio broadcasts and communications; and

(3) air-ground digital data exchanges; and

(4) radar information; and

(5) filed flight plans including standard and repetitive plans; and

(6) flight progress strips; and

(7) staff duty rosters; and

(8) appropriate meteorological and aeronautical information, except where the information is retained for an equivalent period by a meteorological or AIS organisation; and

(9) a record of each safety management review carried out under the procedures required by rule 172.123. The record shall detail the activities reviewed and any necessary follow-up corrective and preventive actions.

(10) a record of each quality management review carried out under the procedures required by rule 172.125. The record shall detail the activities reviewed and any necessary follow-up corrective and preventive actions.

(c) The applicant shall establish systems and procedures to ensure the electronic recording of

(1) all ATS radio and telephone communications; and

(2) all high-frequency air-ground communications; and

(3) all relevant data from primary and secondary radar equipment, or obtained through automatic dependent surveillance (ADS), used in providing or supporting an ATC service; and

(4) for any equipment coming into service after the date this Part comes into force, any transfer and acceptance of control process not conducted by telephone.

(d) The applicant shall establish systems and procedures to ensure that electronic records required by paragraph (c)—

(1) include time recording, correct to within 5 seconds of UTC, as determined by reference to a standard time station or GPS time standard; and

(2) either—

(i) replicate the voice communications, and, if applicable, the radar picture, applying at the particular operating position; or

(ii) are accompanied by a statement fully describing the differences between the recording supplied and a recording in accordance with subparagraph (i).

(e) For the purposes of paragraph (d)(2) the term radar picture includes any visual presentation of aircraft position, however derived.

(f) The option provided by paragraph (d)(2)(ii) shall apply only to equipment in service on the date this Part comes into force.

(g) The applicant shall establish systems and procedures to ensure that all records, except where replication is required by paragraph (d)(2)(i), are of sufficient clarity to convey the required information.

(h) The applicant shall establish procedures to ensure that the records referred to in paragraph (b) are retained for 31 days from the date of entry, except for—

(1) staff duty rosters; and

(2) written records associated with the requirements of rule 172.121(a)(3) - which shall be retained for 2 years.

(3) recordings which are pertinent to accident and incident investigations, which shall be retained for longer periods until it is evident that they will no longer be required.

172.117 Logbooks and position logs

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that a logbook, with sequentially numbered pages, is kept at each ATS unit, and, where a unit has physically separate operations areas, at each such location within the unit.

(b) The procedure shall ensure that—

(1) the logbook is maintained by the senior person on duty, or the person on watch at a nominated operating position; and

(2) the logbook is maintained throughout the hours of watch of the unit or operations room; and

(3) all entries include the time of entry; and

(4) the person responsible for maintaining a logbook signs *On Watch,* and effects transfer of responsibility by successive *On Watch* entries; and

(5) logbook entries are—

(i) in chronological sequence and in ink; and

(ii) without erasure, defacement, or obliteration; and

(iii) corrected by drawing a single line through the erroneous information and initialing the correction; and

(6) actual times of opening and closing watch are recorded in the logbook, together with the reason for every variation from published hours of service; and

(7) logbooks are retained for a period of 3 years from the date of final entry.

(c) An applicant shall establish a procedure to ensure the keeping of an operating position log, when such information is not available in the logbook required by paragraph (a).

(d) The procedure shall ensure that the operating position log—

(1) contains sufficient information to identify—

(i) when that position was in operation; and

(ii) the services being provided from that position; and

(iii) the identity of the individual providing the service; and

(2) is retained for a period of 31 days from the date of filing.

172.119 Security

(a) An applicant for the grant of an air traffic service certificate shall prepare an ATS security programme.

(b) An ATS security programme shall specify the physical security requirements, practices, and procedures to be followed for the purposes of minimising the risk of destruction of, damage to, or interference with the operation of, any ATS unit operated by the applicant where such destruction, damage, or interference is likely to endanger

the safety of aircraft.

(c) Without limiting the generality of paragraph (b), the security programme shall specify such other security requirements, practices, and procedures as may be necessary to meet the requirements of the National Civil Aviation Security Program, including—
—

(1) to ensure that entrances to permanent ATS facilities operated by the applicant are subject to positive access control at all times; and

(2) to protect personnel on duty; and

(3) procedures to be followed in the event of a bomb threat or other threat of violence against an ATS unit; and

(4) monitoring of unattended ATS unit buildings to ensure that any intrusion or interference is detected; and

(5) To protect critical information communications technology systems from interference and cyber security threats that may jeopardise the safety of air navigation services; and

(6) ATM contribution to safeguarding against unlawful interference; and

(7) contingency planning for ATM security; and

(8) ATM support for law enforcement; and

(9) airspace management for ATM security.

(d) The security programme required under paragraph (a) shall include procedures to notify, investigate and report security incidents to the Director in accordance with Part 12.

172.121 Service disruptions

(a) An applicant for the grant of an air traffic service certificate shall establish procedures, in addition to any requirements in Part 12, to—

(1) advise the Director of any planned disruption to the provision of air traffic services that could have an impact on safety; and

(2) investigate any unplanned disruption to the provision air traffic services; and

(3) report to the Director, within 48 hours of the occurrence, the circumstances surrounding any unplanned disruption to air traffic services when the disruption affected, or could have affected, the safety of air traffic.

(b) Disruptions reportable under paragraph (a) shall include, but are not limited to, any—

(1) failure to open watch within 15 minutes after the promulgated opening time; and

(2) any interruption, of greater than 10 minutes, to the normal provision of an air traffic service; and

(3) curtailment of watch, by greater than 30 minutes, from the promulgated off watch time.

172.123 Safety Management System

(a) An applicant for the grant of an air traffic service certificate shall establish and implement a safety management system which meets the requirements of Part 100.

(b) The safety management system required by paragraph (a) must include a runway safety program.

(c) The applicant for the grant of an air traffic service certificate shall establish systems and procedures to conduct safety reviews of ATS units in accordance with Appendix C.

172.125 Quality Management System

An applicant for the grant of an air traffic service certificate shall establish and implement a quality management system which meets the requirements of Part 100.

172.126 Aeronautical data

An applicant for the grant of an air traffic service certificate shall establish procedures to ensure that -

(1) determination and reporting of air traffic services-related aeronautical data is in accordance with the accuracy and integrity classification required to meet the needs of the end-user of aeronautical data; and

Note – Specifications concerning the accuracy and integrity classification of air traffic services- related aeronautical data are contained in PANS-AIM (Doc 10066), Appendix 1.

(2) digital data error detection techniques are used during the transmission and/or storage of aeronautical data and digital data sets; and

Note – detailed specifications concerning digital data error detection techniques are contained in PANS-AIM (Doc 10066).

(3) the AIRAC effective dates are observed when submitting the raw information/data to aeronautical information services.

Note – detailed specifications concerning the AIRAC system are contained in PANS-AIM (Doc 10066), Chapter 6.

172.127 Organisation exposition

(a) An applicant for the grant of an air traffic service certificate shall provide the Director with an exposition containing—

(1) a statement signed by the Chief Executive on behalf of the applicant's organisation confirming that the exposition and any included manuals—

(i) define the organisation and demonstrate its means and methods for ensuring ongoing compliance with this and any other applicable Part; and

(ii) are required to be complied with by its personnel at all times; and

(2) the titles and names of the senior person or persons required by rule 172.51(a)(1) and (2); and

(3) the duties and responsibilities of the senior person or persons specified in paragraph (a)(2), including matters for which they have responsibility to deal directly with the Director on behalf of the organisation; and

(4) an organisation chart showing lines of responsibility of the senior persons specified in paragraph (a)(2), and extending to each location listed under paragraph (a)(5)(i); and

(5) in the case of an organisation providing air traffic services from more than one ATS unit, a table listing—

(i) locations of ATS units; and

(ii) the aerodrome or airspace being serviced; and

(iii) the services provided; and

(6) details of the applicant's staffing structure for each ATS unit; and

(7) details of procedures required by rule 172.51(b) regarding the, competency, qualifications, maintenance of current operating practice, and fitness of personnel; and

(8) details of procedures required by rule 172.53 regarding the training and assessment of ATS personnel, and regarding the qualifications of ATS training personnel; and

(9) details of procedures required by rule 172.55 regarding prevention of fatigue; and

(10) a description of the display systems to be used in meeting the requirements of rule 172.57(b)(5)(i) and rule 172.57(c)(2)(i); and

(11) the information required by rule 172.59 regarding hours of service, the establishment of an air traffic service, and any transitional arrangements; and

(12) procedures regarding shift administration required by rule 172.61; and

(13) details of the procedures required by rule 172.63 regarding the control of documentation; and

(14) the contingency plans required by rule 172.65; and

(15) details of the systems and procedures required by rule 172.67 regarding co-ordination requirements; and

(16) details of the procedures required by rule 172.69 regarding the notification of facility status; and

(17) details of the systems and procedures required by rule 172.71 regarding general information requirements; and

(18) details of the systems and procedures required by rule 172.73 regarding meteorological information and reporting; and

(19) details of systems and procedures required by rule 172.75 regarding the provision of area control and approach control services; and

(20) details of systems and procedures required by rule 172.77 regarding the provision of aerodrome control service; and

(21) details of procedures required by rule 172.79 regarding separation between controlled flights and aircraft in special use airspace; and

(22) details of the procedures required by rule 172.81 regarding responsibility for control; and

(23) details of the procedures required by rule 172.83 regarding the application of priorities; and

(24) details of the procedures required by rule 172.85 regarding air traffic flow management; and

(25) details of the procedures required by rule 172.86 regarding ATS system capacity; and

(26) details of the procedures required by rule 172.87 regarding ATC clearances; and

(27) details of the procedures required by rule 172.89 regarding the allocation of cruising levels; and

(28) details of the procedures required by rule 172.91 regarding deviations from an ATC clearance; and

(29) details of systems and procedures required by rule 172.93 regarding the provision of flight information service; and

(30) details of systems and procedures required by rule 172.95 regarding the provision of aerodrome flight information service; and

(31) details of systems and procedures required by rule 172.97 regarding the provision of alerting service; and

(32) details of the procedures required by rule 172.99 regarding the processing of flight plans; and

(33) details of the procedures required by rule 172.101 regarding time; and

(34) details of altimeter setting procedures required by rule 172.103; and

(35) details of the radio and telephone procedures required by rule 172.105; and

(36) details of the procedures required by rule 172.107 regarding the provision of surveillance services; and

(37) details of the procedures required by rule 172.109 regarding aircraft emergencies and irregular operation; and

(38) details required by rule 172.111 regarding procedures following a serious incident or accident; and

(39) details of the procedures regarding incidents required by rule 172.113; and

(40) details of systems and procedures required by rule 172.115 regarding the gathering and management of records; and

(41) details of the procedures required by rule 172.117 regarding the keeping of logbooks and position logs; and

(42) details of the programme required by rule 172.119 regarding security arrangements; and

(43) details of the procedures required by rule 172.121 regarding disruptions to service; and

(44) details of the systems, procedures, and programmes required by rule 172.123 regarding safety management systems; and

(45) details of the systems, procedures, and programmes required by rule 172.125 regarding quality management system; and

(46) details of the procedures required by rule 172.126 regarding aeronautical data; and

(47) procedures to control, amend and distribute the expositions; and

(b) The applicant's exposition must be acceptable to the Director.

Subpart C — Operating Requirements

172.151 Continued compliance

(a) The holder of an air traffic service certificate shall—

(1) hold at least one complete and current copy of its exposition at each ATS unit listed in its exposition, except that manuals relating solely to a particular location need only be held at principal locations and the unit concerned; and

(2) comply with all procedures and standards detailed in its exposition; and

(3) make each applicable part of its exposition available to personnel who require those parts to carry out their duties; and

(4) continue to meet the standards and comply with the requirements of Subpart B prescribed for certification under this Part; and

(5) promptly notify the Director of any change of address for service, telephone number, or facsimile number, required by form CA172/01.

(b) The holder of an air traffic service certificate shall notify the Director of aircraft movement data in the upper airspace on a monthly basis, no later than the tenth of the following month.

(c) The following data is required for notification under paragraph (b) for each flight;

(1) Aircraft call-sign and registration

(2) name of international air operator;

(3) date of flight;

(4) tracked distance of flight; and

(5) aircraft maximum take-off weight.

172.153 Operations manuals

(a) The holder of an air traffic service certificate shall provide, for compliance by its personnel, an operations manual or system of manuals for the services listed in its exposition.

(b) The holder certificated to provide more than one air traffic service, or an air traffic service or services from more than one location, may publish a core manual together with manual supplements specific to each service or location.

172.155 Safety risk assessment

(a) The holder of an air traffic service certificate shall carry out a safety risk assessment in respect of proposal for significant airspace reorganisation, changes in provision of ATS procedures and for the introduction of new equipment, systems or facilities such as:

(1) a reduced separation minimum to be applied within an airspace or at an aerodrome;

(2) a new operating procedure, including departure and arrival procedures, to be appliedwithin an airspace or at an aerodrome;

(3) a reorganisation of the ATS route structure;

(4) a re-sectorisation of an airspace;

(5) implementation of new communications, surveillance or other safety-significantsystems and equipment, including those providing new functionality or capabilities;

(6) activities potentially hazardous to civil aircraft;

to demonstrate that an acceptable level of safety will be met.

(b) The certificate holder must ensure that users of the services are consulted when carrying out the safety assessment as required under paragraph (a).

(c) The certificate holder, where appropriate, must ensure that adequate provision is made for post-implementation monitoring to verify that the defined level of safety continues to be met.

(d) For activities potentially hazardous to civil aircraft, the certificate holder must –

(1) implement appropriate mitigation measures, and

(2) initiate the promulgation of the information.

172.157 Trials

(a) The Director may, upon application in writing from the holder of an air traffic service certificate, approve, subject to such conditions on that approval as the Director considers necessary in the interests of aviation safety, the conduct of trials regarding—

(1) separation minima; or

(2) standard phraseology; or

(3) surveillance procedures.

(b) A trial may be approved by the Director for a single period of no longer than 3 months, and upon further application in writing by the certificate holder, be extended by the Director for a single period of no longer than 3 months.

(c) A trial approved under this rule may be terminated by the Director at any time.

172.159 Denial of ATC clearance

(a) The holder of an air traffic service certificate in respect of an aerodrome control service shall not deny the pilot of an aircraft an ATC clearance on the basis of non-payment of charges owed to the certificate holder unless—

(1) the aircraft is on the ground; and

(2) that clearance is for entry onto the manoeuvring area.

(b) The certificate holder shall continue to provide normal ATC service for any aircraft entering the manoeuvring area without an ATC clearance.

172.161 Suspension of VFR operations

The holder of an air traffic service certificate for an approach control service or aerodrome control service may, when appropriate for safety reasons, suspend any or all controlled VFR operations within a control zone.

172.163 Changes to certificate holder's organisation

(a) The holder of an air traffic service certificate shall ensure that its exposition is amended so as to reflect a current description of the holder's organisation and services.

(b) The certificate holder shall ensure that any amendments made to the holder's exposition—

(1) meet the applicable requirements of this Part; and

(2) comply with the amendment procedures contained in the holder's exposition.

(c) The certificate holder shall provide the Director with a copy of each amendment to the holder's exposition as soon as practicable after its incorporation into the exposition, except that, for the holder's operational manual or manuals, the certificate holder shall forward to the Director—

(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) Where a certificate holder proposes to make a change to any of the following, prior notification to and acceptance by the Director is required—

(1) the Chief Executive; or

(2) the listed senior persons; or

(3) any aspect of air traffic management that may have an adverse impact on air traffic services provided by States responsible for adjacent airspace.

(e) The Director may prescribe conditions under which a certificate holder may operate during or following any of the changes specified in paragraph (d).

(f) The certificate holder shall comply with any conditions prescribed under paragraph (e). Where any of the changes referred to in this rule require an amendment to the certificate, the certificate holder shall forward the certificate to the Director as soon as practicable.

(g) The certificate holder shall make such amendments to the holder's exposition as the Director may consider necessary in the interests of aviation safety.

172.165 Withdrawal or transfer of service

(a) A holder of an air traffic service certificate who wishes to permanently withdraw an air traffic service shall give the Director 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) A certificate holder who intends to permanently reduce the hours of operation of an air traffic service shall provide to the Director advance notice of, and the reasons for, the proposed reduction.

172.167 Performance-based navigation (PBN) operations.

A holder of an air traffic service certificate shall, in applying performance-based navigation (PBN) -

(1) prescribe navigation specifications; and

(2) when applicable, prescribe the navigation specification(s) for designated areas, tracks or ATS routes on the basis of regional air navigation agreements; and

(3) ensure the prescribed navigation specification is appropriate to the level of communications, navigation and air traffic services provided in the airspace concerned.

172.169 Performance-based communications (PBC) operations.

A holder of an air traffic service certificate shall, in applying performance-based communications (PBC)-

(1) prescribe RCP specifications; and

(2) when applicable, prescribe the RCP specifications on the basis of regional air navigation agreements; and

(3) the prescribed RCP specification shall be appropriate to the air traffic services provided.

172.171 Performance-based surveillance (PBS) operations

A holder of an air traffic service certificate shall, in applying performance-based surveillance (PBS) –

(1) prescribe RSP specifications; and

(2) when applicable, prescribe the RSP specification(s) on the basis of regional air navigation agreements; and

(3) The prescribed RSP specification shall be appropriate to the air traffic services provided; and

(4) Where an RSP specification has been prescribed for PBS, ATS units shall be provided with equipment capable of performance consistent with the prescribed RSP specification(s).

172.172 Monitoring programme

A holder of an air traffic service certificate shall establish performance monitoring programmes-

(1) for all airspace where a reduced vertical separation minimum of 300 m (1 000 ft.) is applied between FL 290 and FL 410 inclusive, for monitoring the height-keeping performance of aircraft operating at these levels, in order to ensure that the continued application of this vertical separation minimum meets the safety objectives, and the scope of monitoring programmes must be adequate to conduct analyses of aircraft group performance and evaluate the stability of altimetry system error; and

(2) where RCP/RSP specifications are applied, for monitoring the performance of the infrastructure and the participating aircraft against the appropriate RCP and/or RSP specifications, to ensure that operations in the applicable airspace continue to meet safety objectives, and the scope of monitoring programmes must be adequate to evaluate communication and/or surveillance performance, as applicable.

172.173 Establishment and identification of ATS routes.

A holder of an air traffic service certificate shall establish procedures to ensure that:

(1) when ATS routes are established, a protected airspace along each ATS route and a safe spacing between adjacent ATS routes are provided; and

(2) ATS routes are identified by designators; and

(3) Designators for ATS routes other than standard departure and arrival routes are selected in accordance with the principles set forth in Appendix 1 of Annex 11; and

(4) standard departure and arrival routes and associated procedures are identified in accordance with the principles set forth in Appendix 3 of Annex 11.

172.175 Establishment and identification of significant points.

A holder of an air traffic service certificate shall establish procedures to ensure that:

(1) significant points are established for the purpose of defining an ATS route or instrument approach procedure and/or in relation to the requirements of air traffic services for information regarding the progress of aircraft in flight; and

(2) significant points are identified by designators; and

(3) significant points are established and identified in accordance with the principles set forth in Appendix 2 of Annex 11.

172.177 Voice-Automatic terminal information service (Voice-ATIS)

(a) The holder of an air traffic service certificate shall establish procedures to provide Voice- ATIS at aerodromes where there is a requirement to reduce the communication load on the ATS VHF air-ground communication channels.

(b) The procedures must ensure that –

(1) discrete VHF frequency is used for Voice-ATIS broadcasts; or

(2) where discrete frequency is not available, transmission is made on the voice channel(s)of the most appropriate terminal navigation aid(s), preferably a VOR, provided the range and readability are adequate and the identification of the navigation aid is sequenced with the broadcast so that the latter is not obliterated; and

(3) Voice-ATIS broadcasts are not transmitted on the voice channel of an ILS; and

(4) Voice-ATIS broadcasts are continuous and repetitive; and

(5) Voice-ATIS is available in the English language; and

(6) the information contained in the current broadcast is immediately made known to the ATS unit(s) concerned with the provision to aircraft of information relating to approach, landing and take-off, whenever the message has not been prepared by that (those) unit(s); and

(7) when rapidly changing meteorological conditions make it inadvisable to include a weather report in the ATIS, the broadcast shall indicate that the relevant weather information will be given on initial contact with the appropriate ATS unit; and

(8) information contained in a current ATIS, the receipt of which has been acknowledged by the aircraft concerned, need not be included in a directed transmission to the aircraft, with the exception of the altimeter setting, which shall be provided; and

(9) if an aircraft acknowledges receipt of an ATIS that is no longer current, any element of information that needs updating shall be transmitted to the aircraft without delay.

(c) The provisions of information and messages contained in an ATIS must be in accordance with Appendix A.

172.179 Data link communication

(a) The holder of an air traffic service certificate shall establish systems and procedures for data link communication. -

(b) The procedures required by paragraph (a) shall include –

(1) data link connection forwarding between ATS units;
(2) initiation, restoration and re-initiation and verification that the aircraft is initiating a data link request following the failure of data link
(3) the exchange of operational CPDLC messages;
(4) transfer of CPDLC;
(5) free text message elements;
(6) failure of CPDLC; and
(7) intentional shutdown of CPDLC

(c) The certificate holder shall ensure the logon address and procedures associated with an ATS unit is published in the Aeronautical Information Publication.

(d) The certificate holder shall establish procedures to ensure that ATC unit will only request a CPDLC connection with an aircraft if the unit is the current controlling authority or is expecting to become the next data authority;

(e) The procedures shall be established to ensure that the controller is alerted as soon as the CPDLC failure is detected and –

(1) to take action in the event of the failure of a single CPDLC message;
(2) the resumption of the data link services; and
(3) testing of CPDLC

Subpart D — Other Air Traffic Services

172.201 General

(a) A person may request the Minister to determine whether an aviation related service is an air traffic service under paragraph (7) of the definition of the term in the Act by application in writing, including a definition, and details of, the proposed service.

(b) The Minister may, in consultation with such persons as the Minister considers necessary, determine whether any aviation related service is an air traffic service under paragraph (7) of the definition of the term.

172.203 Requirement

No person shall provide a service that the Minister determines to be an air traffic service in accordance with rule 172.201 except under the authority of, and in accordance with, the provisions of an air traffic service certificate issued under this Subpart.

172.205 Application

An applicant for an air traffic service certificate for an air traffic service under paragraph (7) of the definition of the term shall complete form CA 172/01 and submit the completed form to the Director together with—

(1) such other details regarding the applicant's organisation and the air traffic service as the Director may require; and

(2) a payment of the appropriate application fee prescribed by regulations made under the Act.

172.207 Issue of certificate

(a) An applicant is entitled to an air traffic service certificate for an air traffic service under paragraph (7) of the definition of the term if the Director is satisfied that the—

(1) applicant is a fit and proper person; and

(2) granting of the certificate is not contrary to the interests of aviation safety.

(b) The Director may attach such conditions to the certificate as the Director thinks necessary in the interests of safety.

172.209 Operating conditions

The holder of a certificate issued under this Subpart shall provide the air traffic service in accordance with the conditions attached to the certificate.

Subpart E — Separation Criteria

172.251 Composite visual separation

An aerodrome controller may apply a composite of geographical and visual separation, provided instructions are issued as necessary to maintain adequate separation, between—

(1) an aircraft continuously in sight of the controller, and within 10 nm of the aerodrome; and

(2) an aircraft not in sight of the controller, but whose current position has been determined by surveillance systems or a pilot position report.

172.253 Visual separation beyond the vicinity of an aerodrome

Separation minima may be reduced by approving visual separation when, by day—

(1) a specific request is made by a pilot; and

(2) each aircraft is under the control of—

(i) the same operating position; or

(ii) physically adjacent operating positions, provided both controllers agree; and

(3) each aircraft remains in VMC; and

(4) either—

(i) each aircraft is continuously visible to the pilot of the other aircraft and both pilots concur with the application of visual separation; or

(ii) the pilot of a following aircraft reports the preceding aircraft is in sight and that pilot can maintain visual separation from the preceding aircraft.

172.255 Reserved

172.257 Reserved

172.259 Reserved

172.261 Separation between aircraft on an instrument approach

Separation minima applicable between aircraft on an instrument approach shall be as prescribe in Doc 4444 Ch 6.

172.263 Reduced surveillance-based Separation

The Director may approve a reduction of the standard 5 nm minimum radar and/or ADS-B based separation prescribed in Document 4444 Chapter 8, in accordance with paragraph 8.7.3.2 of that document.

172.265 Radar and/or ADS-B based separation from an unidentified controlled flight

(a) A minimum radar and/or ADS-B based separation of 5 nm may be applied between an identified aircraft and an unidentified controlled flight entering or about to enter surveillance coverage, in accordance with the provisions of Document 4444 Chapter 8, paragraph 8.7.2.8 a) and b); or

(b) Radar and/or ADS-B based separation may be applied between a previously identified aircraft which has since passed out of surveillance cover, and a following identified

aircraft, provided the following aircraft can achieve the appropriate vertical separation at least 5 nm before the position at which the preceding aircraft passed out of surveillance cover; or

(c) Radar and/or ADS-B based separation may be applied between aircraft on reciprocal tracks, when an identified aircraft is at least 5 nm past the position at which a previously identified aircraft passed out of surveillance cover.

172.267 Radar and/or ADS-B based separation from holding aircraft

A minimum radar and/or ADS-B based separation of 5 nm may be applied between an identified aircraft that is not holding, and other identified aircraft that are holding, notwithstanding that individual identity of the holding aircraft may be lost.

172.269 Formation flights

Separation need not be applied between individual aircraft in formation flight when—

(1) prior notice of the flight has been given to ATC by the formation leader; or

(2) the flight consists of an aircraft in distress and its escort.

172.271 Reduced runway separation minima between aircraft using the same runway

In the application of reduced runway separation, the criteria and minima used shall be those prescribed in Doc 4444 Ch 7.

172.273 Reserved

172.275 Reserved

172.277 Reserved

172.279 Separation from an aircraft dumping fuel

(a) When advised by flight crew of the need to dump fuel in controlled airspace, ATC shall coordinate with the flight crew:

(1) the route to be flown, which, if possible, should be clear of cities and towns, preferably over water and away from areas where thunderstorms have been reported or are expected; and

(2) the level to be used, which shall be not less than 6 000 ft; and

(3) the duration of the fuel dumping.

(b) Other known traffic shall be separated from the aircraft dumping fuel by:

(1) at least 10 NM horizontally, but not behind the aircraft dumping fuel;

(2) vertical separation if behind the aircraft dumping fuel within 15 minutes flying time or a distance of 50 NM by:

(i) at least 1 000 ft if above the aircraft dumping fuel; or

(ii) at least 3 000 ft if below the aircraft dumping fuel.

(c) If the aircraft will maintain radio silence during the fuel dumping operation, the frequency to be monitored by the flight crew and the time when radio silence will terminate should be agreed. A warning message shall be broadcast on appropriate

frequencies for non-controlled traffic to remain clear of the area concerned.

(d) Adjacent ATS units and control sectors should be informed of the fuel dumping taking place and requested to broadcast on applicable frequencies an appropriate warning message for other traffic to remain clear of the area concerned. Upon completion of the fuel dumping, adjacent ATS units and control sectors should be advised that normal operations can be resumed.

172.281 Separation involving military aircraft

The separation criteria and minima prescribed in these rules shall be applied to military aircraft unless there is written agreement between the ATS provider and the Papua New Guinea Defence Force, or a military agency of a foreign state, authorising the use of reduced military separation when it is—

(1) between military aircraft; and

(2) agreed to by the pilots of the aircraft involved; and

(3) in accordance with the written agreement.

172.283 Separation of successive IFR departures

When applying separation between successive IFR departures, the minima and criteria prescribed in Doc 4444 Ch 5, shall be used.

172.285 Helicopters and unpowered aircraft

The runway separation required by 172.77(a)(4) may be waived or varied to take account of the particular operating characteristics of helicopters and unpowered aircraft, provided safety is not jeopardised.

172.287 Wake turbulence separation

(a) Application of wake turbulence separation required by this rule shall be in accordance with those prescribed in Doc 4444 Chapter 5 and Chapter 8;

(b) A specific pilot request for a waiver from any wake turbulence separation may be granted provided—

(1) the air traffic controller does not prompt, instigate, or invite a pilot to request a waiver from wake turbulence separation; and

(2) when the other aircraft is an ICAO heavy category aircraft, the air traffic controller reminds the pilot requesting the waiver of the category or type of the other aircraft.

172.289 Separation from active special use airspace

Controlled flights shall be kept clear of active special use airspace designated under Part 71, except when—

(1) in the case of a danger area, the pilot of a VFR flight has notified an express intention to operate in the area, and accepted the responsibility to maintain own separation from the airspace; or

(2) in the case of a restricted or prohibited area, the administering authority has given approval; or

(3) achieved by the use of minima or procedures approved by the Director.

Subpart F — (Reserved)

Subpart G — Surveillance Procedures

172.401 Verification of pressure-altitude-derived level information

(a) Subject to paragraph (b), approach control may verify the pressure-altitude-derived level information of a departing aircraft when the approach surveillance indicates a positive rate of climb from the aerodrome elevation.

(b) Pressure-altitude-derived level information shall not be used when the displayed level varies by more than 300 feet from the aerodrome elevation during the take-off roll.

172.403 Speed control

Speed control shall not be applied or continued after a point 4 nm from the runway threshold on final approach.

Appendix A

A1. Automatic terminal information service (voice and/or data link)

Whenever Voice-ATIS and/or D-ATIS is provided, the information and messages must meet the following criteria-

(a) the information relates to a single aerodrome;

(b) the information is updated immediately a significant change occurs;

(c) the certificate holder is responsible for the preparation and dissemination of the ATIS message;

(d) individual ATIS messages are identified by an ICAO designator and in alphabetical order;

(e) aircraft must acknowledge receipt of the information on first contact with the ATS unit providing approach control service or the aerodrome control tower, as appropriate

(f) when replying to the message in e) above or, in the case of arriving aircraft, at such other time prescribed by this Part, the appropriate ATS unit must provide the aircraft with the current altimeter setting; and

(g) the meteorological information must be extracted from the local meteorological routine or special report

Note. — In accordance with Sections 4.1 and 4.3 of Appendix 3 to Annex 3, the surface wind direction and speed and runway visual range (RVR) are to be averaged over 2 minutes and 1 minute, respectively; and the wind information is to refer to conditions along the runway for departing aircraft and to conditions at the touchdown zone for arriving aircraft. A template for the local meteorological report, including the corresponding ranges and resolutions of each element, are in Appendix 3 to Annex 3. Additional criteria for the local meteorological report are contained in Chapter 4 of, and in Attachment D to, Annex 3.

A2. ATIS for arriving and departing aircraft

ATIS messages for arriving and departing aircraft must contain the following elements in the order listed:

(a) name of aerodrome;

(b) designator;

(c) time of observation, if appropriate;

(d) type of approach(es) to be expected;

(e) the runway(s) in use; status of arresting system constituting a potential hazard, if any;

(f) significant runway surface conditions and, if appropriate, braking action;

(g) holding delay, if appropriate;

(h) transition level, if applicable;

(i) other essential operational information;

(j) surface wind direction (in degrees magnetic) and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;

(k) * visibility and, when applicable, RVR and, if visibility/RVR sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;

(l) * present weather;

(m) * cloud below 5 000 ft. or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available;

(n) air temperature;

(o) dew point temperature;

(p) altimeter setting(s);

(q) any available information on significant meteorological phenomena in the approach and climb out areas including wind shear, and information on recent weather of operational significance;

(r) trend forecast, when available; and

(s) specific ATIS instructions.

**Note: Replaced by the term "CAVOK" and the term is defined in CAR Part 1.*

A.1 Examples of weather significant to aviation:

(a) Precipitation
- Drizzle
- Rain
- Ice pellets
- Hail

(b) Obscurations (hydrometeors)
- Fog
- Mist

(c) Obscurations (lithometeors)
- Haze
- Smoke
- Volcanic ash

(d) Other phenomena
- Squall
- Funnel cloud (tornado or waterspout)
- Thunderstorm

Appendix B – ATS Training

B.1 Issue of approval

The issuance of an approval for a training organization and the continued validity of the approval shall depend upon the training organization being in compliance with the requirements of Part 141.

B.2 Training and procedures manual

2.1 The training organisation shall provide a training and procedures manual for the use and guidance of personnel concerned. This manual may be issued in separate parts and shall contain at least the following information:

(a) a general description of the scope of training authorized under the organization's terms of approval;
(b) the content of the training programs offered including the courseware and equipment to be used;
(c) a description of the organization's quality assurance system in accordance with B.4;
(d) a description of the organization's facilities;
(e) the name, duties and qualification of the person designated as responsible for compliance with the requirements of the approval in B.6 6.1;
(f) a description of the duties and qualification of the personnel designated as responsible for planning, performing and supervising the training in B.6 6.2;
(g) a description of the procedures used to establish and maintain the competence of instructional personnel as required by B.6 6.3;
(h) a description of the method used for the completion and retention of the training records required by B.7;
(i) a description, when applicable, of additional training needed to comply with the ATSP's procedures and requirements; and
(j) a description of the selection, role and duties of the authorized personnel, and the applicable requirements established by the Licensing Authority.

2.2 The training organisation must ensure that the training and procedures manual is amended as necessary to keep the information contained therein up to date.

2.3 Copies of all amendments to the training and procedures manual must be furnished promptly to all organizations or persons to whom the manual has been issued.

B.3 Training programs

3.1 When a training programme for the issue of an ATS licence is approved, the ATSP must demonstrate to the satisfaction of the Director that the training provides a level of competency in accordance with requirements under Part 65.

3.2 The training programme established by the training organization must include training in knowledge and skills related to human performance.

Note.— Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual *(Doc 9683).*

B.4 Quality assurance system

4.1 The ATSP must establish a quality assurance system for the training organization, that ensures that training and instructional practices comply with all relevant requirements.

4.2 The quality assurance system must be acceptable to the Director.

B.5 Facilities

5.1 The facilities and working environment must be appropriate for the task to be performed and be acceptable to the Director.

5.2 The ATSP must have, or have access to, the necessary information, equipment, training devices and material to conduct the courses for which it is approved.

5.3 Synthetic training devices which includes the simulators and target generator officers shall be qualified according to requirements described below and their use must be acceptable to the Director to ensure that they are appropriate to the task.

(a) Suitability of the general environment, which should provide an environment in which simulator exercises may be run without undue interference from unrelated activities;

(b) Suitability of the equipment to meet the training objectives, including:

(i) the simulator layout;

(ii) the equipment provided;

(iii) the display presentation, functionality, and updating of operational information;

(iv) data displays, including strip displays, where appropriate;

(v) co-ordination facilities; the ability of the simulated environment to enable students to meet the stated objectives of the practical training exercises;

(vi) aircraft performance characteristics, including the availability of manoeuvres, eg holding or ILS operation, required for a particular simulation;

(vii) the availability of real-time changes during an exercise;

(viii) the ability of the simulator and its exercises to enable the performance objectives to be assessed to the level determined in the unit training plan;

(ix) the ability of the simulated environment to enable students to meet the stated objectives of the practical training exercises;

(c) The processes by which the Service Provider can be assured that staff associated with the conduct of the simulation are competent.

B.6 Personnel

6.1 The ATSP shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organization.

6.2 The ATSP shall employ the necessary personnel to plan, perform and supervise the training to be conducted.

6.3 The competence of instructional personnel shall be in accordance with procedures and to a level acceptable to the Director.

6.4 The ATSP must ensure that all instructional personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities.

B.7 Records

7.1 The training branch shall retain detailed student records to show that all requirements of the training course have been met.

7.2 The training branch shall maintain a system for recording the qualifications and training of instructional and examining staff, where appropriate.

7.3 The records required by 7.1 shall be kept for a minimum period of two years after completion of the training. The records required by 7.2 shall be retained for a minimum period of two years after the instructor or examiner ceases to perform a training function.

B.8 Oversight

The Licensing Authority shall maintain an effective oversight programme of the approved training organization to ensure continuing compliance with the approval requirements.

B.9 Evaluation and checking

When a State has authorized an approved training organization to conduct the testing required for the issuance of a licence or rating, the testing shall be conducted by personnel authorized by the Licensing Authority or designated by the training organization in accordance with criteria approved by the Licensing Authority.

Appendix C – ATS Safety Reviews

C.1 General requirements

Safety reviews of ATS units shall be conducted on a regular and systematic basis by personnel qualified through training, experience and expertise and having a full understanding of relevant Standards and Recommended Practices, Procedures for Air Navigation Services, safe operating practices and Human Factors principles.

C.2 Scope

The scope of ATS unit safety reviews shall include at least the following issues:

C2.1 Regulatory issues to ensure that:

(a) ATS operations manuals, ATS unit instructions and air traffic control coordination procedures are complete, concise and up-to-date;

(b) the ATS route structure, where applicable, provides for:

(i) adequate route spacing; and

(ii) crossing points for ATS routes located to reduce the need for controller intervention and for inter- and intra-unit coordination;

(c) the separation minima used in the airspace or at the aerodrome are appropriate and all the provisions applicable to those minima are being complied with;

(d) where applicable, provision is made for adequate observation of the manoeuvring area, and procedures and measures aimed at minimizing the potential for inadvertent runway incursions are in place. This observation may be performed visually or by means of an ATS surveillance system;

(e) appropriate procedures for low visibility aerodrome operations are in place;

(f) traffic volumes and associated controller workloads do not exceed defined, safe levels and that procedures are in place for regulating traffic volumes whenever necessary;

(g) procedures to be applied in the event of failures or degradations of ATS systems, including communications, navigation and surveillance systems, are practicable and will provide for an acceptable level of safety; and

(h) procedures for the reporting of incidents and other safety-related occurrences are implemented, that the reporting of incidents is encouraged and that such reports are reviewed to identify the need for any remedial action.

C2.2 Operational and technical issues to ensure that:

(a) the environmental working conditions meet established levels for temperature, humidity, ventilation, noise and ambient lighting, and do not adversely affect controller performance;

(b) automation systems generate and display flight plan, control and coordination data in a timely, accurate and easily recognizable manner and in accordance with Human Factors principles;

(c) equipment, including input and output devices for automation systems, are designed and positioned in the working position in accordance with ergonomic principles;

(d) communications, navigation, surveillance and other safety significant systems and equipment:

(i) are tested for normal operations on a routine basis;

(ii) meet the required level of reliability and availability as defined by the appropriate authority;

(iii) provide for the timely and appropriate detection and warning of system failures and degradations;

(iv) include documentation on the consequences of system, subsystem and equipment failures and degradations;

(v) include measures to control the probability of failures and degradations; and

(vi) include adequate backup facilities and/or procedures in the event of a system failure or degradation; and

(e) detailed records of systems and equipment serviceability are kept and periodically reviewed.

Note.— In the context above, the terms reliability and availability have the following meanings:

(1) Reliability. The probability that a device or system will function without failure over a specified time period or amount of usage; and

(2) Availability. The ratio of percentage of the time that a system is operating correctly to the total time in that period.

C2.3 Licensing and training issues to ensure that:

(a) controllers are adequately trained and properly licensed with valid ratings;

(b) controller competency is maintained by adequate and appropriate refresher training, including the handling of aircraft emergencies and operations under conditions with failed and degraded facilities and systems;

(c) controllers, where the ATC unit or control sector is staffed by teams, are provided relevant and adequate training to ensure efficient teamwork;

(d) the implementation of new or amended procedures, and new or updated communications, surveillance and other safety significant systems and equipment is preceded by appropriate training and instruction;

(e) controller competency in the English language is satisfactory in relation to providing ATS to international air traffic; and

(f) standard phraseology is used.