



Republic of the Philippines
Department of Transportation and Communications
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA Road, Pasay City, Philippines 1300



Manual of Standards

Aeronautical Information Services

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MANUAL OF STANDARDS FOR AIS

Foreword

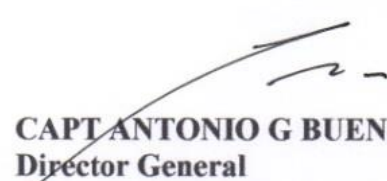
Foreword

The Civil Aviation Authority of the Philippines (CAAP), is responsible under Republic Act No. 9497 or known as the Civil Aviation Authority Act of 2008, to formulate and establish rules and regulations governing the civil aviation in the Philippines. The CAAP exercises regulatory oversight by developing and promulgating appropriate, clear and enforceable aviation safety standards.

This Manual of Standards for Aeronautical Information Services (MOS–AIS) is issued by CAAP specifying the standards, requirements and procedures pertaining to the provision of aeronautical information services by the relevant air navigation service provider within the Philippine Flight Information Region.

The standards and recommended practices in this Manual are based on those stipulated in Annexes 4 and 15 (entitled “Aeronautical Charts” and “Aeronautical Information Services”, respectively) to the Convention on International Civil Aviation as enforced and amended from time to time by the Council of the International Civil Aviation Organization (ICAO), and other relevant ICAO documents, and with such modifications as may be determined by CAAP to be applicable in the Philippines.

Amendments to this Manual of Standards – Aeronautical Information Services are the responsibility of the Chief Air Traffic Management Inspectorate Division of the Aerodrome and Air Navigation Safety Oversight Office. Readers are invited to forward advice of errors, inconsistencies or suggestions for improvement of this Manual to CAAP Director General (Attention: Chief, Aerodrome and Air Navigation Safety Oversight Office (AANSOO), Civil Aviation Authority of the Philippines, Old MIA Road corner Ninoy Aquino Avenue, Pasay City, Metro Manila, Philippines 1300.



CAPT ANTONIO G BUENDIA, JR.
Director General
Civil Aviation Authority of the Philippines

Date: 21 JUL 2016

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MANUAL OF STANDARDS FOR AIS

Definitions and Abbreviations

The amendments listed below have been incorporated into this copy of the Manual of Standards – Aeronautical Information Services.

Amdt no.	Version no.	Subject	Source	Sections affected	Entered by (Date)	Approved by (Date)	Effective date

MANUAL OF STANDARDS FOR AIS

Definitions and Abbreviations

Definitions

Accuracy

A degree of conformance between the estimated or measured value and the true value.

Aerodrome

A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome elevation

The elevation of the highest point of the landing area.

Aerodrome operating minima

The limits of usability of an aerodrome for:

- a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- b) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation;
- c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H); and
- d) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.

Aerodrome reference point

The designated geographical location of an aerodrome.

Aeronautical chart

A representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation.

Aeronautical Data

A representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing.

Aeronautical Information

Information resulting from the assembly, analysis and formatting of aeronautical data.

Aeronautical Information Publication (AIP)

A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

Aeronautical Information Circular (AIC)

A notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.

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AIP Amendment

Permanent changes to the information contained in the AIP.

AIP Supplement

Temporary changes to the information contained in the AIP which are published by means of special pages.

Aeronautical Information Services (AIS)

A service established within the defined area of coverage responsible for the provision of aeronautical information/data necessary for the safety, regularity and efficiency of air navigation.

AIRAC

An acronym (Aeronautical Information Regulation And Control) signifying a system aimed at advance notification based on common effective dates, of circumstances that necessitate significant changes in operating practices.

Aircraft stand

A designated area on an apron intended to be used for parking an aircraft.

Air defense identification zone

Special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services (ATS).

Air taxiway

A defined path on the surface established for the air taxiing of helicopters.

Air traffic service

A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Air transit route

A defined path on the surface established for the air transiting of helicopters.

Airway

A control area or portion thereof established in the form of a corridor.

Altitude

The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).

Apron

A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

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Area minimum altitude (AMA)

The minimum altitude to be used under instrument meteorological conditions (IMC), that provides a minimum obstacle clearance within a specified area, normally formed by parallels and meridians.

Arrival routes

Routes identified in an instrument approach procedure by which aircraft may proceed from the en-route phase of flight to an initial approach fix.

ASHTAM

A special series NOTAM notifying by means of a specific format change in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to aircraft operations.

ATS route

A specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services.

Note 1.— The term ATS route is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure route, etc.

Note 2.— An ATS route is defined by route specifications that include an ATS route designator, the track to or from significant points (waypoints), distance between significant points, reporting requirements and, as determined by the appropriate ATS authority, the lowest safe altitude.

ATS surveillance system

A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

Note - A comparable ground-based system is one that has been demonstrated, by comparative assessment or other methodology, to have a level of safety and performance equal to or better than monopulse SSR.

Bare Earth

Surface of the Earth including bodies of water and permanent ice and snow, and excluding vegetation and man-made objects.

Change-over point

The point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omni-directional radio ranges is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft.

Note.— Change-over points are established to provide the optimum balance in respect of signal strength and quality between facilities at all levels to be used and to ensure a common source of azimuth guidance for all aircraft operating along the same portion of a route segment.

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Clearway

A defined rectangular area on the ground or water under the control of the appropriate authority selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height.

Contour line

A line on a map or chart connecting points of equal elevation.

Cyclic redundancy check (CRC)

A mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data.

Danger area

An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

Data quality

A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution and integrity.

Digital Elevation Model (DEM)

The representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum.

Note.— *Digital Terrain Model (DTM)* is sometimes referred to as *DEM*.

Displaced threshold

A threshold not located at the extremity of a runway.

Electronic aeronautical chart display

An electronic device by which flight crews are enabled to execute, in a convenient and timely manner, route planning, route monitoring and navigation by displaying required information.

Elevation

The vertical distance of a point or a level, on or affixed to the surface of the earth, measured from mean sea level.

Final approach

That part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified,

- a) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified; or
- b) at the point of interception of the last track specified in the approach procedure; and ends at a point in the vicinity of an aerodrome from which:
 - 1) a landing can be made; or
 - 2) a missed approach procedure is initiated.

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Final approach and take-off area (FATO)

A defined area over which the final phase of the approach maneuver to hover or landing is completed and from which the take-off maneuver is commenced. Where the FATO is to be used by performance Class 1 helicopters, the defined area includes the rejected take-off area available.

Final approach fix or point

That fix or point of an instrument approach procedure where the final approach segment commences.

Final approach segment

That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

Flight information region

Airspace of defined dimensions within which flight information service and alerting service are provided.

Flight level

A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Note 1.— A pressure type altimeter calibrated in accordance with the Standard Atmosphere:

- a) when set to a QNH altimeter setting, will indicate altitude;*
- b) when set to a QFE altimeter setting, will indicate height above the QFE reference datum;*
- c) when set to a pressure of 1 013.2 hPa, may be used to indicate flight levels.*

Note 2.— The terms “height” and “altitude”, used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

Geodetic datum

A minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system/frame.

Geoid

The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents.

Note.— The geoid is irregular in shape because of local gravitational disturbances (wind tides, salinity, current, etc.) and the direction of gravity is perpendicular to the geoid at every point.

Glide path

A descent profile determined for vertical guidance during a final approach.

Height

The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

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Definitions and Abbreviations

Helicopter stand

An aircraft stand which provides for parking a helicopter and, where air taxiing operations are contemplated, the helicopter touchdown and liftoff.

Heliport

An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

Holding procedure

A predetermined maneuver which keeps an aircraft within a specified airspace while awaiting further clearance.

Hot spot

A location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

Human Factors principles

Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

Hypsometric tints

A succession of shades or color gradations used to depict ranges of elevation.

Initial approach segment

That segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or, where applicable, the final approach fix or point.

Instrument approach procedure

A series of predetermined maneuvers by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply.

Integrity (Aeronautical Data)

A degree of assurance that an aeronautical data and its value have not been lost or altered since the data origination or authorized amendment.

Intermediate approach segment

That segment of an instrument approach procedure between either the intermediate approach fix and the final approach fix or point, or between the end of a reversal, racetrack or dead reckoning track procedure and the final approach fix or point, as appropriate.

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Intermediate holding position

A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.

International NOTAM Office (NOF)

An office designated by a State for the exchange of NOTAM internationally.

Landing area

That part of a movement area intended for the landing or take-off of aircraft.

Magnetic variation

The angular difference between True North and Magnetic North.

Note.— The value given indicates whether the angular difference is East or West of True North.

Maneuvering area

That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Marking

A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

Minimum en-route altitude (MEA)

The altitude for an enroute segment that provides adequate reception of relevant navigation facilities and ATS communications, complies with the airspace structure and provides the required obstacle clearance.

Minimum obstacle clearance altitude (MOCA)

The minimum altitude for a defined segment of flight that provides the required obstacle clearance.

Minimum sector altitude

The lowest altitude which may be used which will provide a minimum clearance of 300m (1000 ft) above all objects located in an area contained within a sector of a circle of 46km (25NM) radius centered on a radio aid to navigation.

Missed approach point (MAPt)

That point in an instrument approach procedure at or before which the prescribed missed approach procedure must be initiated in order to ensure that the minimum obstacle clearance is not infringed.

Missed approach procedure

The procedure to be followed if the approach cannot be continued.

Movement area

That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the maneuvering area and the apron(s).

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NOTAM

A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

Obstacle

All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight.

Note.— The term *obstacle* is used in this Annex solely for the purpose of specifying the charting of objects that are considered a potential hazard to the safe passage of aircraft in the type of operation for which the individual chart series is designed.

Obstacle clearance altitude (OCA) or obstacle clearance height (OCH)

The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1.— Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.

Note 2.— For convenience when both expressions are used they may be written in the form “obstacle clearance altitude/height” and abbreviated “OCA/H”.

Note 3.— See Procedures for Air Navigation Services —Aircraft Operations (Doc 8168), Volume I, Part I, Section 4, Chapter 1, 1.5, and Volume II, Part I, Section 4, Chapter 5, 5.4, for specific applications of this definition.

Orthometric height

Height of a point related to the geoid, generally presented as an MSL elevation.

Point light

A luminous signal appearing without perceptible length.

Position (geographical)

Set of coordinates (latitude and longitude) referenced to the mathematical reference ellipsoid which define the position of a point on the surface of the Earth.

Precision approach procedure

An instrument approach procedure utilizing azimuth and glide path information provided by ILS or PAR.

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Definitions and Abbreviations

Procedure altitude/height

A specified altitude/height flown operationally at or above the minimum altitude/height and established to accommodate a stabilized descent at a prescribed descent gradient/angle in the intermediate/final approach segment.

Procedure turn

A maneuver in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Note 1.— Procedure turns are designated “left” or “right” according to the direction of the initial turn.

Note 2.— Procedure turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

Prohibited area

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

Reporting point

A specified geographical location in relation to which the position of an aircraft can be reported.

Required navigation performance (RNP)

A statement of the navigation performance necessary for operation within a defined airspace.

Note.— Navigation performance and requirements are defined for a particular RNP type and/or application.

Resolution

A number of units or digits to which a measured or calculated value is expressed and used.

Restricted area

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

Reversal procedure

A procedure designed to enable aircraft to reverse direction during the initial approach segment of an instrument approach procedure. The sequence may include procedure turns or base turns.

RNP type

A containment value expressed as a distance in nautical miles from the intended position within which flights would be for at least 95 per cent of the total flying time.

Example.— RNP 4 represents a navigation accuracy of plus or minus 7.4 km (4NM) on a 95 per cent containment basis.

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Runway

A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway-holding position

A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

Note.— In radiotelephony phraseologies, the expression “holding point” is used to designate the runway-holding position.

Runway strip

A defined area including the runway and stopway, if provided, intended:

- a) to reduce the risk of damage to aircraft running off a runway; and
- b) to protect aircraft flying over it during take-off or landing operations.

Runway visual range (RVR)

The range over which the pilot of an aircraft on the center line of a runway can see the runway surface markings or the lights delineating the runway or identifying its center line.

Shoulder

An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.

Significant point

A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

Station Declination

An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

Stopway

A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off.

Taxiing

Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

Taxiway

A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

- a) *Aircraft stand taxilane*. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

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b) *Apron taxiway*. A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.

c) *Rapid exit taxiway*. A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on their exit taxiways thereby minimizing runway occupancy times.

Terminal arrival altitude (TAA)

The lowest altitude that will provide a minimum clearance of 300m (1000ft) above all objects located in an arc of a circle defined by a 46-km (25 NM) radius centered on the initial approach fix (IAF), or where there is no IAF on the intermediate approach fix (IF), delimited by straight lines joining the extremity of the arc to the IF. The combined TAAs associated with an approach procedure shall account for an area of 360 degrees around the IF.

Terrain

The surface of the Earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles.

Note.— In practical terms, depending on the method of data collection, terrain represents the continuous surface that exists at the bare Earth, the top of the canopy or something in between also known as first reflective surface.

Threshold

The beginning of that portion of the runway usable for landing.

Touchdown and lift-off area (TLOF)

A load bearing area on which a helicopter may touchdown or lift off.

Touchdown zone

The portion of a runway, beyond the threshold, on which landing aeroplanes first touch the runway.

Track

The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

Transition altitude

The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

Vectoring

Provision of navigational guidance to aircraft in the form of specific headings, based on the use of an ATS surveillance system.

Visual approach procedure

A series of predetermined maneuvers by visual reference, from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, a go-around procedure can be carried-out.

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Waypoint

A specified geographical location used to define an area navigation route or the flight path of an aircraft employing area navigation.

Waypoints are identified as either:

- a.) Fly-by waypoint.** A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure; or
- b.) Flyover waypoint.** A waypoint at which a turn is initiated in order to join the next segment of a route or procedure.

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Abbreviations

AAR	Aerodrome and Air Navigation Services Regulation
AFS	Aeronautical Fixed Services
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation and Control
AIS	Aeronautical Information Services
ATC	Air Traffic Control
ATS	Air Traffic Service
ATM	Air Traffic Management
CRC	Cyclic Redundancy Check
ICAO	International Civil Aviation Organization
NOF	International NOTAM Office
NOTAM	Notice to Airmen
SARPS	Standards and Recommended Practices
SMS	Safety Management System

MANUAL OF STANDARDS FOR AIS

Chapter 1: Introduction

1.0 Introduction

- 1.1 The Manual of Standards for Aeronautical Information Services (MOS–AIS) contains the standards, requirements and procedures pertaining to the planning and operation of aeronautical information services and the provision of aeronautical charts.
- 1.2 The Civil Aviation Authority of the Philippines (CAAP), as the regulatory body, shall remain responsible for the information published. Aeronautical information published by the AIS provider, for and on behalf of CAAP, shall clearly indicate that it is published under the authority of CAAP.
- 1.3 This Manual is based mainly on compliance with the following Philippine Civil Aviation Regulations and adherence to the ICAO SARPs and related documents:
 - 1) CAR-ANS Part 4 – Aeronautical Charts;
 - 2) CAR-ANS Part 11 – Air Traffic Services;
 - 3) CAR-ANS Part 15 – Aeronautical Information Services;
 - 4) ICAO Annex 4 – Aeronautical Charts;
 - 5) ICAO Annex 11 – Air Traffic Services;
 - 6) ICAO Annex 15 – Aeronautical Information Services;
 - 7) ICAO Doc 8126 – Aeronautical Information Services Manual;
 - 8) ICAO Doc 8697 – Aeronautical Chart Manual;
 - 9) ICAO Doc 9859 – Safety Management Manual; and
 - 10) ICAO Doc 9674 – World Geodetic System – 1984 (WGS -84) Manual
 - 11) ICAO Guidance Manual for Aeronautical Information Services (AIS) in the ASIA/PACIFIC REGION
- 1.4 Where there is a difference between a standard in this Manual and that of the above-mentioned ICAO documents, the standard in this Manual shall prevail.
- 1.5 Differences, where they exist, between the standards in this Manual and those contained in the ICAO Annexes shall be published in section GEN 1.7 of the Philippine AIP and also notified to ICAO.
- 1.6 In this Manual, standards are preceded by the word “shall”, whereas recommended practices are preceded by the word “should”. The AIS provider shall comply with all standards at all times and should endeavour to comply with all recommended practices.
- 1.7 The AIS provider shall ensure that the units of measurement as specified in CAR-ANS Part 5 - Units of Measurement to be used in the provision of aeronautical information services and aeronautical charts.
- 1.8 In addition to the MOS–AIS, the Memorandum Circular may also be issued as and when required to supplement the MOS-AIS:

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Chapter 1: Introduction

Memorandum Circular – this is published for purposes of bringing to the attention of the AIS provider educational materials related to aviation safety. The publications could be initiated as a result of ICAO State letters which do not require immediate changes to local regulations, new safety initiatives or international best practices as identified by CAAP (regulatory). The AIS provider is encouraged to review and adopt the material if practicable. Where appropriate, the material in the publications may be incorporated into subsequent amendments of the MOS-AIS.

- 1.9 When AIS provider is not able to comply with any standards specified or referenced in this Manual, the AIS provider shall file differences for deviation from the relevant standards. Applications shall be supported in writing with the reasons for such deviation including any safety assessment or other studies undertaken and where appropriate, an indication of when compliance with the current standards can be expected.
- 1.10 When AIS provider is not able to comply with any recommended practice specified or referenced in this Manual, the AIS provider shall notify CAAP (regulatory) of the non-compliance or deviation with the supporting reason including any safety assessment or other studies undertaken, and where appropriate, an indication of when compliance with the current recommended practices can be expected.
- 1.11 Any difference or deviation granted to an AIS provider shall also be recorded in the operations manual. The operations manual shall also contain the details of the differences or deviations, such as the reason that the difference or deviation was requested for and any resultant limitations or conditions imposed.

MANUAL OF STANDARDS FOR AIS

Chapter 2: Operation Requirements

2.1 General AIS provider Operation Requirements

- 2.1.1 The AIS provider shall ensure that aeronautical information/data necessary for the safety, regularity or efficiency of air navigation is made available in a form in conformity with CAR-ANS Part 15 and suitable for the operational requirements of:
- 1) those involved in flight operations, including flight crews, flight planning and flight simulators; and
 - 2) the ATS units responsible for Flight Information Service (FIS) and the services responsible for pre-flight information.
- 2.1.2 The AIS provider shall receive, and/or originate, collate, edit, format, publish/store and distribute aeronautical information/data concerning the airspace in which the CAAP has responsibility for air traffic services. Aeronautical information shall be published as an Integrated Aeronautical Information Package consisting of:
- 1) AIP, including amendment service (AIP AMDT);
 - 2) Supplements to the AIP (AIP SUP);
 - 3) NOTAM;
 - 4) Pre-flight Information Bulletins (PIB);
 - 5) Aeronautical Information Circular (AIC); and
 - 6) Checklists and lists of valid NOTAM.
- 2.1.3 The AIS provider shall ensure that published geographical coordinates indicating latitude and longitude are expressed in terms of the World Geodetic System – 1984 (WGS-84) geodetic reference datum as in ICAO Doc 9674 - World Geodetic System – 1984 (WGS-84) Manual.
- 2.1.4 Automation enabling digital data exchange should be introduced with the objective of improving the speed, quality, efficiency and cost-effectiveness of aeronautical information services.
- 2.1.5 The AIS provider shall ensure that the organization of the aeronautical information services as well as the design, contents, processing and distribution of aeronautical information/data shall take into consideration human factors principles which facilitate their optimum utilization. Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.
- 2.1.6 Metadata shall be collected for aeronautical data processes and exchange points. This metadata collection shall be applied throughout the aeronautical information data chain, from survey/origin to distribution to the next intended user. The metadata to be collected shall include, as a minimum:

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Chapter 2: Operation Requirements

- 1) the name of the organization or entity performing the function;
- 2) the function performed; and
- 3) the data and time of operation.

Note. – The function performed indicates any action of originating, transmitting or manipulating the data.

2.2 Facilities and the Work Environment

- 2.2.1 In addition to adequate numbers of suitably experienced and competent personnel, AIS provider also requires appropriate accommodation and adequate facilities to get the work done and subsequently provides quality services.
- 2.2.2 This part of the ISO Standards calls for AIS provider to determine, provide and maintain the facilities it needs to achieve product conformity, including:
 - 1) Workspace;
 - 2) Equipment, hardware and software; and
 - 3) Supporting services
- 2.2.3 In simple terms, this means that AIS provider needs to identify, provide and maintain adequate space, suitable equipment, tools and systems to enable staff to do their job.
- 2.2.4 ICAO Aeronautical Information Services Manual (Doc 8126) provides guidance on facilities and equipment for aeronautical information services.
- 2.2.5 At the most basic level, facilities for AIS provider should include:
 - 1) Suitable furniture for staff to work comfortably, efficiently and ergonomically;
 - 2) Sufficient space between work-stations to avoid disruption to other staff;
 - 3) Noisy equipment isolated away from staff or sound-proofed;
 - 4) Adequate overhead or specialist lighting to be able to easily read source document;
 - 5) A quiet area for proof-reading; and
 - 6) Suitable computing equipment for word-processing and data capture.
- 2.2.6 AIS provider organizations are moving more and more towards automated systems to improve the efficiency, accuracy and cost effectiveness of their businesses. AIS provider needs to ensure that any systems automation and services are designed with the intent of avoiding incompatibilities, divergences and unnecessary duplication of effort and importantly that there is an overall systems integration management plan in place. Standardization of procedures, products and services is essential for the successful automation of AIS.

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Chapter 2: Operation Requirements

2.3 Quality Management System

- 2.3.1 Quality Management System shall be implemented and maintained by the AIS provider encompassing all functions of an aeronautical information service, as described in paragraph 2.1.2.
- 2.3.2 Quality management should be applicable to the whole aeronautical information data chain from data origination to distribution to the next intended user, taking into consideration the intended use of data.
Note 1 – Quality management may be provided by a single quality management system or serial quality management systems.
Note 2 – Letters of agreement concerning data quality between originator and distributor and between distributor and next intended user may be used to manage the aeronautical information data chain.
- 2.3.3 The quality management system implemented in paragraph 2.2.1 shall follow the International Organization for Standardization (ISO) 9000 series of quality assurance standards, and be certified by an approved organization.
- 2.3.4 The quality management system established by the AIS provider shall include the necessary policies, processes and procedures, including those for the use of metadata, to ensure and verify that aeronautical data is traceable throughout the aeronautical information data chain so as to allow any data anomalies or errors detected in use to be identified by root cause, corrected and communicated to affected users.
- 2.3.5 The quality management system established by the AIS provider shall provide the users with the necessary assurance and confidence that the aeronautical information and aeronautical data satisfy the aeronautical data quality for accuracy, resolution and integrity as specified in 2.5 Tables 2-1 to 2-5, and the data traceability requirements through the provision of appropriate metadata as specified in 2.1.5. The system shall also provide assurance of the applicability period of intended use of aeronautical information/data as well as that the agreed distribution dates will be met.
- 2.3.6 The AIS provider shall comply with the order of accuracy for aeronautical information/data as specified in CAR-ANS Part 11.2.19 and CAR-ANS Part 14. The order of publication resolution and data integrity of aeronautical information/data shall comply with CAR-ANS Part 15, paragraph 15.3.2.9 and Tables 2-1 to 2-5 in this Chapter.
- 2.3.7 The AIS shall ensure that electronic aeronautical data sets shall be protected by the inclusion in the data sets of a 32-bit cyclic redundancy check (CRC) implemented by the application dealing with the data sets.

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Chapter 2: Operation Requirements

2.4 Operations Manual

- 2.4.1 The AIS shall submit an Operations Manual to CAAP (regulatory). The information presented in the manual shall serve to demonstrate how the AIS will comply with the requirements of this manual. It also serves as a reference document agreed between the AIS and CAAP (regulatory) with respect to the standards, conditions and level of service to be maintained for the provision of aeronautical information service.
- 2.4.2 The AIS Operations Manual shall contain:
- a) the information required of the AIS as mentioned in this Manual of Standards for AIS;
 - b) an organization chart of the AIS that shows the name and the position of each personnel, training records, experiences, duties and responsibilities of personnel who are responsible for ensuring the compliance of the organizations requirements in sub-paragraph (a);
 - c) an operation plan for the aeronautical information service; and
 - d) information on the compliance of the aeronautical information service with the applicable requirements of CAR-ANS Part 4 and CAR-ANS Part 15.
- 2.4.3 The operations manual may consist of a main manual covering the main areas that need to be addressed, as well as separate supporting documents and manuals.
- 2.4.4 The operations manual is an important document and shall be issued under the authority of the AIS. The AIS shall control the distribution of the operations manual and ensure that it is amended whenever necessary to maintain the accuracy of the information in the operations manual and to keep its contents up to date.

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Chapter 2: Operation Requirements

2.5 Aeronautical Data Publication Resolution and Integrity Classification (Reference: Appendix 15F of CAR-ANS Part 15)

Table 2-1. LATITUDE AND LONGITUDE

<i>Latitude and Longitude</i>	<i>Publication resolution</i>	<i>Integrity classification</i>
Flight information region boundary points	1 min	routine
P, R, D area boundary points (outside CTA/CTR boundaries)	1 min	routine
P, R, D area boundary points (inside CTA/CTR boundaries)	1 sec	essential
CTA/CTR boundary points	1 sec	essential
En-route NAVAIDS and fixes, holding, STAR/SID points	1 sec	essential
Obstacles in Area 1 (the entire State territory)	1 sec	routine
Aerodrome/heliport reference point	1 sec	routine
NAVAIDS located at the aerodrome/heliport	1/10 sec	essential
Obstacles in Area 3	1/10 sec	essential
Obstacles in Area 2	1/10 sec	essential
Final approach fixes/points and other essential fixes/points comprising the instrument approach procedures	1/10 sec	essential
Runway threshold	1/100 sec	critical
Runway end	1/100 sec	critical
Runway holding position	1/100 sec	critical
Taxiway center line points/parking guidance line points	1/100 sec	essential
Taxiway intersection marking line	1/100 sec	essential
Exit guidance line	1/100 sec	essential
Aircraft standpoints /INS checkpoints	1/100 sec	routine
Geometric center of TLOF or FATO thresholds, heliports	1/100 sec	critical
Apron boundaries (polygon)	1/10 sec	routine

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Table 2-2. ELEVATION / ALTITUDE / HEIGHT

<i>Elevation / Altitude / Height</i>	<i>Publication resolution</i>	<i>Integrity classification</i>
Aerodrome/heliport elevation	1 m or 1 ft	essential
WGS-84 geoid undulation at aerodrome/heliport elevation position	1 m or 1 ft	essential
Runway or FATO threshold, non-precision approaches	1 m or 1 ft	essential
WGS-84 geoid undulation at runway or FATO threshold, TLOF geometric center, non-precision approaches	1 m or 1 ft	essential
Runway or FATO threshold, precision approaches	0.1 m or 0.1 ft	critical
WGS-84 geoid undulation at runway or FATO threshold, TLOF geometric center, precision approaches	0.1 m or 0.1 ft	critical
Threshold crossing height, precision approaches	0.1 m or 0.1 ft	critical
Obstacles in Area 2	1 m or 1 ft	essential
Obstacles in Area 3	0.1m or 0.1ft	essential
Obstacles in Area 1 (the entire State territory)	1 m or 1 ft	routine
Distance Measuring Equipment/Precision (DME/P)	3 m (10 ft)	essential
Distance Measuring Equipment (DME)	30m (100ft)	essential
Minimum altitudes	50m or 100ft	routine

Table 2-3. DECLINATION AND MAGNETIC VARIATION

<i>Declination and Magnetic Variation</i>	<i>Publication resolution</i>	<i>Integrity classification</i>
VHF NAVAID station declination used for technical line-up	1 degree	essential
NDB NAVAID magnetic variation	1 degree	routine
Aerodrome/heliport magnetic variation	1 degree	essential
ILS localizer antenna magnetic variation	1 degree	essential
MLS azimuth antenna magnetic variation	1 degree	essential

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Chapter 2: Operation Requirements

Table 2-4. BEARING

<i>Bearing</i>	<i>Publication resolution</i>	<i>Integrity classification</i>
Airway segments	1 degree	routine
En-route and terminal fix formations	1/10 degree	routine
Terminal arrival/departure route segments	1 degree	routine
Instrument approach procedure fix formations	1/100 degree	essential
ILS localizer alignment (True)	1/100 degree	essential
MLS zero azimuth alignment (True)	1/100 degree	essential
Runway and FATO bearing (True)	1/100 degree	routine

Table 2-5. LENGTH/DISTANCE/DIMENSION

<i>Length / Distance / Dimension</i>	<i>Publication resolution</i>	<i>Integrity classification</i>
Airway segment length	1/10 km or 1/10 NM	routine
En-route fix formation distance	1/10 km or 1/10 NM	routine
Terminal arrival/departure route segments length	1/100 km or 1/100 NM	essential
Terminal and instrument approach procedure fix formation distance	1/100 km or 1/100 NM	essential
Runway and FATO length, TLOF dimensions	1 m or 1 ft	critical
Runway width	1 m or 1 ft	essential
Displaced threshold distance	1 m or 1 ft	routine
Clearway length and width	1 m or 1 ft	essential
Stopway length and width	1 m or 1 ft	critical
Landing distance available	1 m or 1 ft	critical
Take-off run available	1 m or 1 ft	critical
Take-off distance available	1 m or 1 ft	critical
Accelerate-stop distance available	1 m or 1 ft	critical
Runway shoulder width	1 m or 1 ft	essential
Taxiway width	1 m or 1 ft	essential
Taxiway shoulder width	1 m or 1 ft	essential
ILS localizer antenna – runway end, distance	1 m or 1 ft	routine
ILS glide slope antenna – threshold, distance along center line	1 m or 1 ft	routine
ILS markers – threshold distance	1 m or 1 ft	essential
ILS DME antenna – threshold, distance along center line	1 m or 1 ft	essential
MLS azimuth antenna – runway end, distance	1 m or 1 ft	routine
MLS elevation antenna – threshold, distance along center line	1 m or 1 ft	routine
MLS DME/P antenna – threshold, distance along center line	1 m or 1 ft	essential

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Chapter 3: Organization of AIS

3.1 Introduction

- 3.1.1 The objective of Aeronautical Information Services (AIS), as stated in CAR-ANS Part 15, is to ensure the flow of information necessary for the safety, regularity and efficiency of international civil aviation.

3.2 Establishment of the AIS

- 3.2.1 The AIS should be established as a separate entity within a civil aviation administration. This could be as an entity with direct responsibility to the head of the civil aviation administration or as an entity at the same level of other Air Navigation Services, such as the Aerodrome Services, or Air Traffic Services (ATS). It should not be established as a part of any of these services. In addition, AIS/Charting officers should be remunerated at least at the same level as personnel in the ADMS, ATS and CNS. (suggestion in Figure 3-1 in this Chapter)

3.3 Technical orientation and status

- 3.3.1 The main user of aeronautical information is the pilot. Another category of user represents those engaged in airline operational control, aeronautical charts provider and document producing agencies, and air traffic services. The aeronautical information service is technically oriented in the nature of the services it provides.
- 3.3.2 In this connection it must be emphasized that:
- a) the CAAP is responsible for the aeronautical information provided by the AIS provider;
 - b) the role and the importance of aeronautical information changed significantly with the implementation of area navigation (RNAV), required navigation performance (RNP) and airborne computer-based navigation systems; and
 - c) corrupt or erroneous aeronautical information can potentially affect the safety of air navigation.
- 3.3.3 Consequently, it is essential to establish a high level of technical proficiency within the AIS provider. In addition, the AIS should be given the appropriate status in the civil aviation administration in accordance with the important role it has in the provision of accurate aeronautical information.

3.4 Organization - Size and scope of the AIS provider

- 3.4.1 The volume of aircraft operations and the extent to which civil aviation facilities are provided with aeronautical information and aeronautical data will determine the size and scope of the AIS provider. While the amount of information to be processed will vary from State to State, the nature of the responsibilities remains basically the same.

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Chapter 3: Organization of AIS

3.5 Working arrangements

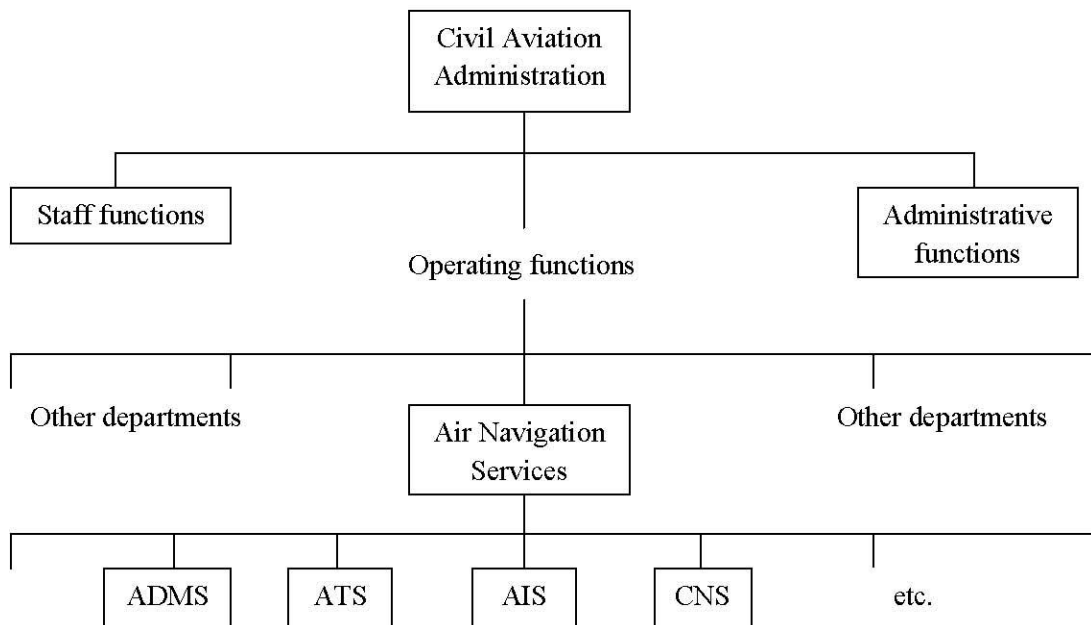
- 3.5.1 Efficient working arrangements within CAAP have underlined a number of common factors which contribute to a sound organizational base. The main considerations are the coordination of AIS provider with:
- a) related technical services;
 - b) the international NOTAM office (NOF);
 - c) aerodrome/heliport operators;
 - d) cartographic services (if provided by separate entity);
 - e) printing and distribution services; and efficient communication facilities, particularly AFTN links, telefax and connection to the Internet (e-mail) for this coordination to function effectively (see Figure 3-1 in this Chapter).

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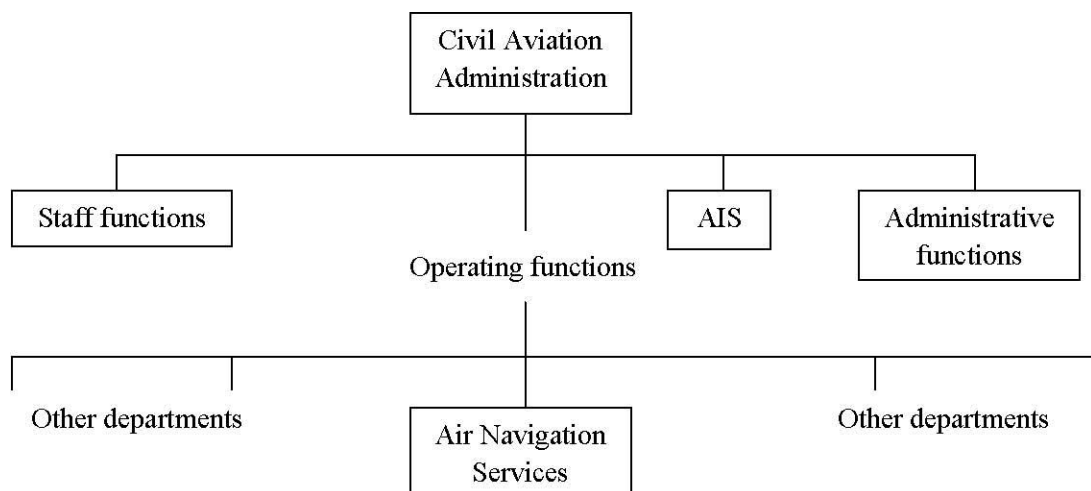
Chapter 3: Organization of AIS

Figure 3-1. Location of AIS within the aviation administration

Alternative 1



Alternative 2



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Chapter 4: Training, Competency and Staffing

4.1 Training, Awareness and Competency

- 4.1.1 This part of the standard requires an organization to:
- a) determine competency needs for personnel performing activities affecting quality;
 - b) provide training to satisfy those needs;
 - c) evaluate the effectiveness of the training provided;
 - d) ensure that its employees are aware of the relevance and importance of their activities and how they contribute to the achievement of quality objectives; and
 - e) maintain appropriate records of education, experience, training and qualifications.

4.2 Checking Competence and Training

- 4.2.1 AIS provider Chief or the designated training officer needs to regularly review the competence, experience, qualifications, capabilities and abilities of its staff to ensure that any skills and qualifications needed by the AIS technical staff are available for the tasks to be completed.
- 4.2.2 Training is required when deficiencies are noted, or when new employees start working with AIS provider. Any training that is required may be carried out in stages, and may be in the workplace, in-house or at an external location.
- 4.2.3 The scope of the training and checking is largely a matter for the organization to determine, but generally, training for AIS technical personnel would include the following topics:
- a) Principles of the Aeronautical Information Service;
 - b) General Specifications of Aeronautical Charts;
 - c) Organization of AIS;
 - d) Responsibilities and Functions of AIS;
 - ICAO Documents
 - AIS Products
 - Responsibilities and Limitations
 - e) The Integrated AIP Package;
 - f) Relationships with External Agencies;
 - g) Change Management;
 - Applicable Policies and Procedures
 - Standard Operating Procedures
 - Quality Processes
 - Coordination Requirements
 - Collation and Processing
 - Data Entry and Verification
 - Data Structures
 - Formats to be used

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Chapter 4: Training, Competency and Staffing

- Checking Procedures and Processes
- File Management
- Record Keeping
- Publication and Production
- Distribution

f) AIS Automation.

- 4.2.4 Records should be maintained to show what competences staff possess, and to show what training has been carried out, and the results of that training. Records that demonstrate successful completion, i.e. effectiveness, of a training program and the competence of staff can and should be kept simple.

4.3 Training Requirements

- 4.3.1 The AIS provider shall establish procedures to ensure that all the AIS technical staff possesses the skills and competencies required in the provision of aeronautical information services. The AIS provider should develop an overall training policy and programme and detailed job descriptions for its staff. The training policy and programme should lay down the training courses that different levels of staff have to undergo to perform their duties, including initial, recurrent and specialized training. The job description should depict the job purpose and key responsibilities of each staff.
- 4.3.2 The AIS provider shall ensure that their staff should undergo a suitable period of supervised on-the-job training before being deployed for duties.
- 4.3.3 The AIS provider shall maintain individual training records for each of its staff, which should include a training plan detailing the courses completed by each staff as well as the time-frame for attending future courses as required under his training plan.
- 4.3.4 The AIS provider shall conduct a yearly review of the training plan for each staff at the beginning of the year to identify any gaps in competency, changes in training requirement and prioritize the type of training required for the coming year.

4.4 Staffing

- 4.4.1 The structure and level of staffing of the AIS will depend on the volume of work to be handled. The AIS should be headed by a qualified, experienced and knowledgeable person. Such person may have ATS management, flight operations, and air traffic control or airway communication backgrounds.

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Chapter 4: Training, Competency and Staffing

The AIS Operations should be staffed with qualified and trained Air Traffic Management Officers.

- 4.4.2 The AIS provider shall employ sufficient number of competent personnel preferably graduates of BATS-AIS/BATS/CATS training conducted at CATC and/or ATS Course or its equivalent training under the former ATO to perform the operation of the service.
- 4.4.3 The AIS provider shall provide in the operations manual an analysis of the number of personnel required to perform the aeronautical information service taking into account the duties and workload required.

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Chapter 5: Aeronautical Information Publication

5.1 Introduction

- 5.1.1 The AIP forms the basic element of the Integrated Aeronautical Information Package. It contains aeronautical information of a permanent nature and temporary changes to this information of long duration. It is the task of the AIS provider to provide a comprehensive document, to maintain it up-to-date and to make it simple to use.
- 5.1.2 The content of an AIP is governed by Chapter 4 Section 4.1 to 4.2 and Appendix 15A of CAR-ANS Part 15, supplemented by the guidance in this manual as to how the requirements might best be met. Taking into consideration the increased use of automation in aeronautical information service, the information contained in the AIP was arranged in such a manner that automation could be used, both for the production of the “paper” AIP as well as for creation of a database for retrieval of that information. In addition, duplication of information was avoided. To the extent possible, the AIP was also designed to facilitate its use in flight.
- 5.1.3 The AIP must contain concise, current information relating to, and arranged under, the subject headings listed in CAR-ANS Part 15, Appendix 15A. This facilitates both in locating information under a specific heading and the storage/retrieval of the information using automated processing. If no facilities or services are provided or no information is available for publication in respect of one of the categories of information specified in CAR-ANS Part 15, Appendix 15A, an indication should be given as to which of these circumstances applies (e.g. “NIL” or “Not AVBL”).
- 5.1.4 The basic structure and referencing must be common to all AIP but at the same time it should allow for the specific requirements of CAAP with respect to quantity and nature of information to be included. Each of the specified “compulsory” reference numbers of a section and/or subsection must relate to the same topic in every AIP, except that it might be noted as “not applicable” in some cases and have larger or smaller quantities of information in others.

5.2 Content and Format

- 5.2.1 The AIP must be self-contained and include a table of contents. It should be published in loose-leaf form, unless the complete publication is re-issued at frequent intervals.

- 5.2.2 The AIP is divided into three parts:

PART 1 — GENERAL (GEN), consisting of five sections, contains information of an administrative and explanatory nature which is not of such significance/importance that NOTAM need be issued;

PART 2 — EN-ROUTE (ENR), consisting of seven sections, contains information concerning airspace and its use; and

PART 3 — AERODROMES (AD), consisting of four sections, contains information concerning aerodromes/heliports and their use.

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Chapter 5: Aeronautical Information Publication

- 5.2.3 Many States may be able to produce the AIP in one volume. Where this is not practicable and the AIP is produced and made available in more than one volume, each volume must include a separate amendment and supplement service, and the following separate sections must be included in each volume:
- Preface
 - Record of AIP Amendments
 - Record of AIP Supplements
 - Checklist of AIP pages
 - List of current hand amendments.
- 5.2.4 When the AIP is published as one volume, the above-mentioned subsections appear only in Part 1 — GEN and the annotation “not applicable” must be entered against each of these subsections in Parts 2 and 3.
- 5.2.5 Each AIP must be dated. In the case of AIP issued in loose-leaf form, each page must be dated. The date, consisting of the day, month (by name) and year, must be the publication date or the effective date (AIRAC) of the information.

5.3 Charts to be included in the AIP

The following charts for aerodromes/heliports listed in Part 3 — Aerodromes (AD) — must, when available, form part of the AIP unless distributed through a separate subscription service. When included in the AIP, these charts should be in Part 3 — Aerodromes (AD), Section 2, Subsection 24 for aerodromes, or Section 3, Subsection 23 for heliports, immediately following the tabulations for the aerodrome or heliport concerned. The charts, as appropriate, should be included in the following sequence:

- 1) Aerodrome/Heliport Chart — ICAO
- 2) Aircraft Parking/Docking Chart — ICAO
- 3) Aerodrome Ground Movement Chart — ICAO
- 4) Aerodrome Obstacle Chart — ICAO Type A (for each runway)
- 5) Precision Approach Terrain Chart — ICAO (precision approach Cat II and III runways)
- 6) Area Chart — ICAO (departure and transit routes)
- 7) Radar Minimum Altitude Chart — ICAO
- 8) Standard Departure Chart — Instrument (SID) — ICAO
- 9) Area Chart — ICAO (arrival and transit routes)
- 10) Standard Arrival Chart — Instrument (STAR) — ICAO
- 11) Instrument Approach Chart — ICAO (for each runway and procedure type)
- 12) Visual Approach Chart — ICAO
- 13) Bird concentrations in the vicinity of the aerodrome.

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Chapter 5: Aeronautical Information Publication

5.4 Notification of differences in the AIP

- 5.4.1 The primary purpose of reporting differences is to promote safety and efficiency in air navigation by ensuring that governmental and other agencies, including operators, concerned with international civil aviation are made aware of all national rules and practices in so far as they differ from those prescribed in the ICAO Annexes, Procedures for Air Navigation Services and Regional Supplementary Procedures. If identified in AIP, significant differences would not only provide a clear picture of the operational significance of the differences to users of that document, but facilitate the process of isolating and eliminating those that do not have an important bearing on the safety of air navigation or are inconsistent with the objectives of the ICAO provisions.
- 5.4.2 CAR-ANS Part 15 requires that a Contracting State shall record in its AIP any significant differences between its national regulations and practices and the related ICAO provisions. It is intended that any such differences be included in GEN 1.7 of the AIP. This is to ensure that an AIP will provide up-to-date information on the status of implementation of Standards, Recommended Practices and Procedures (SARPs), particularly those concerned with aircraft operations and the provision of facilities and services. Any deviation from SARPs that needs to be taken into account in aircraft operations, as indicated below, constitutes a “significant difference”.
- 5.4.3 All significant differences notified to ICAO must also be included in the AIP in a form that will enable a user to differentiate easily between the national rules and practices of CAAP and the related ICAO provisions. They comprise differences from:
- a) any of the International Standards;
 - b) Recommended Practices that are important for the safety of air navigation or, in the case of facilitation, for the speedy handling and clearance through customs, immigration, etc. of aircraft and the loads they carry;
 - c) Procedures for Air Navigation Services (PANS) that are important for the safety of air navigation; and
 - d) Regional Supplementary Procedures (SUPPS) those are important for the safety of air navigation.

5.5 AIP Requirements

- 5.5.1 The AIS provider shall publish an Aeronautical Information Publication (AIP) containing current information, data and aeronautical charts relating to the airspace in which Philippines has responsibility for air traffic services. The contents of the AIP shall be in accordance with CAR-ANS Part 15.4
- 5.5.2 The AIS provider shall ensure that the AIP to be published is self-contained and includes:
- a) a statement of the competent authority responsible for the air navigation facilities, services or procedures covered by the AIP;

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- b) the general condition under which the services or facilities are available for international use;
- c) a list of the significant differences with the ICAO SARPS that Philippines has filed with ICAO with regards to its own regulations and practices;
- d) a summary of any significant regulations and practices followed by Philippines where the ICAO SARPS allow alternative course of action.

5.5.3 The AIS provider shall establish a system to disseminate and make the AIP, AIP Amendment and AIP Supplement available to AIS contracting states and its subscribers (paying and complimentary).

5.6 AIP Amendment

5.6.1 The AIS provider shall ensure that permanent changes to the AIP are published as AIP Amendments. Each AIP Amendment shall be allocated with a serial number, which shall be consecutive. Each AIP Amendment page, including the cover sheet, shall display a publication date. A brief description of the subjects affected by the amendment shall be given on the AIP Amendment cover sheet.

5.7 AIP Supplement

5.7.1 The AIS provider shall ensure that temporary changes of long duration (three months or longer) and information of short duration which contains extensive text and/or graphics are published as AIP Supplement.

5.7.2 Each AIP Supplement shall be allocated with a serial number which shall be consecutive and based on the calendar year. AIP Supplement pages shall be kept in the AIP as long as all or some of their contents remain valid.

5.7.3 The AIS provider shall issue a checklist of valid AIP Supplements at the first month of the year for distribution. The NOTAM summary with the list of valid AIP supplements and AIC, shall be issued either through the medium of the monthly printed plain language or electronic copy available on-line at ats.caap.gov.ph.

5.8 Electronic AIP (eAIP)

5.8.1 The AIS provider shall publish the AIP, AIP Amendment, AIP Supplement and AIC in a format that allows for displaying on a computer screen and printing on paper.

Note 1. – This composite electronic document is named “Electronic AIP” (eAIP) and may be based on a format that allows for digital data exchange.

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- 5.8.2 When provided, the information content of the eAIP and the structure of chapters, sections and sub-sections shall follow the content and structure of the paper AIP.
- 5.8.3 When provided, the eAIP shall be available in the physical form CD, DVD and on-line thru the internet for paid subscribers and complimentary subscribers local and international only. The AIP amendment is available at the ats.caap.gov.ph website.

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Chapter 6: NOTAM

6.1 General NOTAM Requirements

- 6.1.1 The NOF shall promptly originate and issue a NOTAM (including ASHTAM) whenever the information to be distributed is of a temporary nature and of short duration or when operationally significant permanent changes or temporary changes of long duration are made at short notice, except for extensive text and/or graphics.

6.2 Duration of NOTAM

- 6.2.1 Although not directly specified in CAR-ANS Part 15, NOTAM should not remain in force for more than three months. If the circumstances to be notified are expected to exceed three months, an AIP Supplement must be published. When a temporary change in AIP information issued by NOTAM unexpectedly exceeds the three month period, a new or replacement NOTAM may be issued, but only in those cases where a condition is expected to last for a further period of a maximum of one to two months. If it is expected that the condition will last for a longer period of time, an AIP Supplement must be issued.
- 6.2.2 The CAAP shall ensure that the NOTAM Office in the Philippines shall:
- a) operate the NOF on a 24-hour basis;
 - b) establish agreements with other international NOTAM offices for the exchange of NOTAM;
 - c) use appropriate telecommunication facilities to issue and receive NOTAM;
 - d) issue a checklist of the NOTAM's that are currently in force, at intervals of not more than one month; and
 - e) issue promptly NOTAM in a format in accordance with CAR-ANS Part 15.

6.3 Information to be promulgated by NOTAM

- 6.3.1 NOTAM is issued when it is necessary to distribute information of direct operational significance which is:
- a) of short duration; or
 - b) appropriate for inclusion in the AIP but needs immediate distribution.
- 6.3.2 A NOTAM shall be originated and issued concerning the following information:
- a) establishment, closure or significant changes in operation of aerodrome(s)/heliport(s) or runways;
 - b) establishment, withdrawal and significant changes in operation of aeronautical services (AGA, AIS, ATS, COM, MET, SAR, etc.);

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- c) establishment, withdrawal and significant changes in operational capability of radio navigation and air-ground communication services. This includes: interruption or return to operation, change of frequencies, change in notified hours of service, change of identification, change of orientation (directional aids), change of location, power increase or decrease amounting to 50 percent or more, change in broadcast schedules or contents, or irregularity or unreliability of operation of any radio navigation and air-ground communication services;
- d) establishment, withdrawal or significant changes made to visual aids;
- e) interruption of or return to operation of major components of aerodrome lighting systems;
- f) establishment, withdrawal or significant changes made to procedures for air navigation services;
- g) occurrence or correction of major defects or impediments in the maneuvering area;
- h) changes to and limitations on availability of fuel, oil and oxygen;
- i) major changes to search and rescue facilities and services available;
- j) establishment, withdrawal or return to operation of hazard beacons marking obstacles to air navigation;
- k) changes in regulations requiring immediate action, e.g. prohibited areas for SAR action;
- l) presence of hazards which affect air navigation (including obstacles, military exercises, displays, races and major parachuting events outside promulgated sites);
- m) erecting, or removal of, or changes to, obstacles to air navigation in the take-off/climb, missed approach, approach areas and runway strip;
- n) establishment or discontinuance (including activation or deactivation) as applicable, or changes in the status of prohibited, restricted or danger areas;
- o) establishment or discontinuance of areas or routes or portions thereof where the possibility of interception exists and where the maintenance of guard on the VHF emergency frequency 121.500 MHz is required;
- p) allocation, cancellation or change of location indicators;
- q) significant changes in the level of protection normally available at an aerodrome for rescue and fire fighting purposes. NOTAM shall be originated only when a change of category is involved and such change of category shall be clearly stated (see CAR-ANS Part 14, Volume I, Chapter 9);
- r) presence or removal of, or significant changes in, hazardous conditions due to slush, or water on the movement area;
- s) outbreaks of epidemics necessitating changes in notified requirements for inoculations and quarantine measures;

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- t) forecasts of solar cosmic radiation, where provided;
- u) an operationally significant change in volcanic activity, the location, date and time of volcanic eruptions and/or horizontal and vertical extent of volcanic ash cloud, including direction of movement, flight levels and routes or portions of routes which could be affected;
- v) release into the atmosphere of radioactive materials or toxic chemicals following a nuclear or chemical incident, the location, date and time of the incident, the flight levels and routes or portions thereof which could be affected and the direction of movement;
- w) establishment of operations of humanitarian relief missions, such as those undertaken under the auspices of United Nations, together with procedures and/or limitations which affect air navigation; and
- x) implementation of short-term contingency measures in cases of disruption, or partial disruption, of air traffic services and related supporting services.
Note.— See CAR-ANS Part 11, 2.28.”

6.3.3 The following information shall not be notified by NOTAM:

- a) routine maintenance work on aprons and taxiways which does not affect the safe movement of aircraft;
- b) runway marking works, when aircraft operations can safely be conducted on other available runways, or the equipment used can be removed when necessary;
- c) temporary obstructions in the vicinity of aerodromes that do not affect the safe operation of aircraft;
- d) partial failure of aerodrome lighting facilities where such failure does not directly affect aircraft operations;
- e) partial temporary failure of air-ground communications when suitable alternative frequencies are known to be available and are operative;
- f) the lack of apron marshalling services and road traffic control;
- g) the unserviceability of location, destination or other instruction signs on the aerodrome movement area;
- h) parachuting when in uncontrolled airspace under VFR [see 6.3.2. (l)], when controlled, at promulgated sites or within danger or prohibited areas;
- i) other information of a similar temporary nature.

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6.4 ASHTAM

- 6.4.1 A special series NOTAM, called ASHTAM, is used to notify an operationally significant change in volcanic activity, the location, date and time of volcanic eruptions and/or horizontal and vertical extent of volcanic ash cloud, including direction of movement, flight levels and routes or portions of routes which could be affected. A specific format (see 6.8 ASHTAM Format) is prescribed for this purpose. Use of the NOTAM Code and plain language is also permissible. When the ASHTAM Format is used, the information must be given in the order shown in that Format. The maximum period of validity of the ASHTAM is 24 hours. A new ASHTAM must be issued whenever there is a change in the level of alert. Instructions for the completion of the ASHTAM Format are reproduced in Appendix A of ICAO Doc 8126.
- 6.4.2 Information about volcanic activity or the presence of volcanic ash plumes may also be reported by NOTAM. To ensure speedy transmission of initial information to aircraft, the first ASHTAM or NOTAM issued may not contain more information than the fact that an eruption and/or ash cloud is reported at a given location at a given date and time.

6.5 Content of an ASHTAM

- 1) An ASHTAM should include the following items.
- 2) FIR
- 3) Date And Time
- 4) Volcano Name and Number
- 5) Volcano Latitude and Longitude
- 6) Volcano Level of Alert Colour Code
- 7) Existence and Horizontal / Vertical Extent of the Volcanic Ash Cloud [usually from the PHIVOLCS]
- 8) Direction of Movement of the Ash Cloud
- 9) Air Routes or Portions of them and Flight Levels Affected
- 10) Closure of Airspace and Air Routes and Alternatives if available
- 11) The Source of the Information
- 12) Any Plain Language Remarks

ASHTAM are valid for a maximum of 24 hours but can be issued as often as is necessary when there is a change in the nature of the volcanic ash cloud.

6.6 Distribution of NOTAM and or ASHTAM

- 6.6.1 The NOF shall ensure that each NOTAM is distributed on the basis of a request and where possible be distributed as a single telecommunication message.
- 6.6.2 The NOF shall ensure that whenever practicable, the AFS is employed for NOTAM distribution. A predetermined distribution system for NOTAM transmitted on the AFS shall be used, subject to agreement established with other international NOTAM offices.

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- 6.6.3 The NOF shall ensure that a monthly either printed or electronic copy plain language list of valid NOTAM, including indications of the latest AIP Amendments, AIC issued and a checklist of AIP Supplements is prepared with a minimum of delay and forwarded by the most expeditious means to recipients of the Integrated Aeronautical Information Package.

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6.7 ASHTAM Format

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSEE INDICATOR(S))		
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)		
(Abbreviated Heading)	(Volcano SERIAL NUMBER) VA_____	(LOCATION INDICATOR)	DATE/TIME ISSUANCE	(OPTIONAL GROUP)

ASHTAM	(SERIAL NUMBER)	
(FLIGHT INFORMATION REGION AFFECTED)		A)
(DATE/TIME (UTC) OF ERUPTION)		B)
(VOLCANO NAME AND NUMBER)		C)
(VOLCANO LATITUDE/LONGITUDE OR VOLCANO RADIAL AND DISTANCE FROM NAVAID)		D)
(VOLCANO LEVEL OF ALERT COLOUR CODE, INCLUDING ANY PRIOR LEVEL OF LAERT COLOUR CODE)		E)
(EXISTENCE AND HORIZONTAL/VERTICAL EXTENT OF VOLCANIC ASH CLOUD)		F)
(DIRECTION OF MOVEMENT OF ASH CLOUD)		G)
(AIR ROUTES OR PORTIONS OF AIR ROUTES AND FLIGHT LEVELS AFFECTED)		H)
(CLOSURE OF AIRSPACE AND/OR AIR ROUTES OR PORTIONS OF AIR ROUTES, AND ALTERNATE AIR ROUTES AVAILABLE)		I)
(SOURCE OF INFORMATION)		J)
(PLAIN LANGUAGE REMARKS)		K)
NOTES: 1. A predetermined distribution system for NOTAM/ASHTAM transmitted on the AFS shall be used. 2. Enter ICAO nationality letter as given in ICAO Doc 7910, Part 2. 3. See Table 6 below. 4. Advice on the existence, extent and movement of volcanic ash cloud G) and H) may be obtained from the Volcanic Ash Advisory center(s) responsible for the FIR concerned. 5. Item titles in brackets () not to be transmitted		

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Table 6. Color code for level of alert indicating volcanic activity

Level of alert color code	Status of activity of volcano
RED ALERT	Volcanic eruption in progress. Ash plume/cloud reported above FL250 or Volcano dangerous, eruption likely, with ash plume/cloud expected to rise above FL 250.
ORANGE ALERT	Volcanic eruption in progress but ash plume/cloud not reaching nor expected to reach FL 250. or Volcano dangerous, eruption likely but ash plume/cloud not expected to reach FL 250.
YELLOW ALERT	Volcano known to be active from time to time and volcanic activity has recently increased significantly, volcano not currently considered dangerous but caution should be exercised. or (After an eruption, i.e. change in alert to yellow from red or orange.) Volcanic activity has decreased significantly, volcano not currently considered dangerous but caution should be exercised.
GREEN ALERT	Volcanic activity considered to have ceased and volcano reverted to its normal state.

Note. – The color code for the level of alert indicating the status of activity of the volcano and any change from a previous status of activity should be provided to the area control center by the Philippine Institute of Volcanology and Seismology (Phivolcs) in the Philippines, e.g. “RED ALERT FOLLOWING YELLOW” OR “GREEN ALERT FOLLOWING ORANGE”.

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Chapter 7: Provision of Pre-Flight Information Service

7.1 Requirement

- 7.1.1 CAR-ANS Part 15 specifies that pre-flight information must be made available at each aerodrome/heliport normally used for international operations. This includes all aerodromes/heliports designated for regular use by international commercial air transport as listed in the relevant ICAO regional plans and any aerodromes/heliports serving as alternates to these regular aerodromes/heliports.
- 7.1.2 The following guidance material is primarily intended to assist CAAP in organizing the pre-flight information service. It should be noted that this service is required by all operators and particularly those who have not made specific arrangements to obtain such information. The service should also be arranged so as to supplement existing arrangements where these do not fully meet the operators' requirements.

7.2 Responsibility for execution

- 7.2.1 The CAAP-administered AIS, or other agency appointed by the CAAP (regulatory), is responsible for the execution of the above requirement. The AIS provider established for this purpose should be organized and administered on the basis of the amount and type of traffic normally expected to use the aerodrome/heliport and on the length and number of the air routes originating at the aerodrome/heliport. Such units should be staffed by qualified AIS technical personnel, since a complete and responsible briefing can only be provided by staff possessing the requisite knowledge in this field. It may be necessary, however, to delegate such responsibility to an air traffic services (ATS) unit or other operational service at an aerodrome/heliport where minimal traffic requires personnel to perform more than one task.

7.3 Location of the AIS provider Unit

- 7.3.1 AIS provider units should be situated close to aerodrome/heliport flight services and to airline flight operations offices to facilitate pre-flight functions by flight crews with maximum efficiency and without their being compelled to cover undue distances. Ideally, all such services, namely meteorological briefing, flight clearance and the collection of fees and charges (if any), should be established in a group of soundproof offices located on the ground floor of the terminal building, preferably near the apron.
- 7.3.2 In order to reduce ground time, particularly for flights continuing without a change of crew, arrangements should be made for access to pre-flight information services without the necessity of customs clearance and/or other formalities. For the convenience of crews unfamiliar with the aerodrome/heliport, a diagram indicating the location of the Pre-Flight Information Service unit should be placed at the apron entrance(s) to the terminal building.

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- 7.3.3 Where the aerodrome/heliport is the site of a flight information center or area control center, it may be advisable to locate the ATS unit and the AIS provider unit in close proximity (providing the principles outlined above are not compromised).

7.4 Wall displays

- 7.4.1 Wall displays normally should consist of the following, although the extent of the coverage zone, the availability of suitable charts and the size of the available wall area may necessitate some deviation:

a) two sets of charts of the coverage zone at small scale (1:1,000,000 to 1:3,000,000) showing:

- 1) the ATS system, aerodromes/heliports and radio aids to navigation;
- 2) areas over which the flight of aircraft is dangerous, restricted or prohibited;

Note.— The areas contained in navigation warning bulletins should be plotted on glass or transparent plastic sheeting and superimposed on this chart.

b) a 1:500,000 or larger scale chart of the Philippines in which the aerodrome/heliport is located;

Note.— In larger States this may be limited to the flight information region (FIR) in which the aerodrome/heliport is located and adjacent FIR.

c) an outline chart of the coverage zone at small scale with an index to the area or route breakdown used in distributing briefing material. This chart should show the FIRs and items that would be mentioned in a briefing bulletin;

d) a large scale chart or series of charts of the aerodrome/heliport traffic area showing controlled areas, approach aids, and holding, approach and departure procedures (the scale should be as large as practicable);

e) an Aerodrome Obstacle Chart;

f) a large scale chart (approximately 1:3,000) of the aerodrome/heliport movement area and approaches (in so far as necessary to include all lighting aids) showing the location of all technical services and the normal taxiing routes to be followed from apron to take-off positions; and

g) a large scale diagram of the terminal area showing location of various offices and facilities of interest to visiting flight crews.

7.5 Updating of charts

- 7.5.1 Due to the frequent changes in the ATS system, the information about the current situation can best be indicated by the use of coloured tapes, pins, markers, etc., superimposed on a chart. Such a presentation can be amended from day to day and is much more intelligible to flight crews.

7.6 Access to basic documents

- 7.6.1 Basic documents (such as up-to-date AIP, AIP Supplements, AIC and ICAO documents) should be stored in such a way as to facilitate access to those wishing to refer to them. Whatever filing system a unit chooses to adopt for its reference library should be such that it is immediately identifiable to the intended user and thereby help to promote self-briefing.

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7.7 Sale of aeronautical charts

- 7.7.1 At AIS provider arrangements could be made, where practicable, to have appropriate aeronautical charts available for sale. The quantity maintained on hand should be kept to the minimum consistent with the potential demand in order to avoid, as much as possible, the effect of obsolescence.

7.8 Verbal briefing

- 7.8.1 Verbal briefing should be adjusted to the pilot's requirements depending upon familiarity with the route. A checklist may be used by the briefing officer to ensure that the briefing is as comprehensive as necessary; the completeness of a briefing should not be dependent upon the unaided memory of the briefing officer. The items to be included in such a checklist will vary according to the local situation. A list of items upon which the checklist may be based is given in Figure 7-2. If there is any reason to doubt published information, e.g. on aerodromes/heliports or aerodrome/heliport facilities, the briefing officer should not hesitate to telephone the appropriate authority for the latest information. To facilitate SAR action, the briefing officer must ensure that the exact location of the intended landing places of the flight which is being briefed is known, particularly in the case of light aircraft not equipped with a two-way radio. When it is impracticable to obtain information for the complete flight planned route, or when it is more expeditious for information concerning part of the route to be provided by or through another unit, the briefing officer must ensure that the pilot knows where to obtain information for the next route segment. It may be necessary, in exceptional cases, to supplement the normal bulletins and verbal briefing with additional written material specially prepared for a pilot totally unfamiliar with the route to be flown.

7.9 Self-briefing - Pre-flight information bulletins

- 7.9.1 The provision of daily bulletins is of primary significance in a self-briefing service. Manually prepared, printed plain-language bulletins for collection by pilots, containing current information on the status of facilities and services should be provided. Additionally, amendments to the information contained in bulletins should be made available in the form of hand-out sheets or updated PIB.

7.10 Scope of bulletins

- 7.10.1 Bulletins may take the simple form of a list of current NOTAM covering selected routes or areas, or at the discretion of CAAP, may be presented in a more elaborate form. A list of the types of bulletins that can be made available is found in 7.12.

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7.11 Central bulletin production

7.11.1 Where aerodrome/heliport AIS units have overlapping coverage zones or route stages, central bulletin production offers the most efficient method of providing PIB. For this purpose, sufficiently rapid and reliable air or surface (electronic) communications must be available for bulletin distribution. The local AIS unit will have to update the bulletin, whenever necessary, with the latest information. The date and time of issue should therefore be given in each bulletin. The use of automated processes is ideally suited to central bulletin production, since the information content is continually changing; direct line communications are, of course, essential for distribution purposes. This method of producing PIB can offer considerable savings in staffing requirements and enhance the consistency and consequent operational reliability of published information. The advantages of such a system are covered in greater detail in Chapter 9 of DOC 8126.

7.12 Bulletin types

7.12.1 There are two broad categories of bulletins, the “**area**” and “**route**” types, as well as a variety of subdivisions of each of these. The common set of NOTAM qualifiers, as explained in the instructions for completing the NOTAM Format (see Chapter 6, Appendix A of Doc 8126), enables a system to provide this range of bulletins. From the foregoing it can be seen that NOTAM are the principal source of information which affect the contents of PIB and data can be structured to meet the needs of any user(s), based on specific operational requirements.

7.12.2 Depending on the requirements of users, PIB should be made available in the form of:

- a) area type bulletins;
- b) route type bulletins;
- c) aerodrome type bulletins;
- d) immediate automatic notification of items of urgent operational significance; and
- e) administrative bulletins.

7.13 Area type bulletins (FIR, groups of FIR or State(s))

7.13.1 The following area type bulletins can be made available from within an automated system:

- a) all PIB information;
- b) IFR PIB information;
- c) VFR PIB information;
- d) OPSIG information;
- e) IMMEDIATE NOTIFICATION information;
- f) only en-route information (IFR, VFR, OPSIG, IMMEDIATE NOTIFICATION, LOWER/UPPER);
- g) selected lists by aerodrome location indicators; and
- h) any combination of the above.

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7.14 Route type bulletins

- 7.14.1 The following route type bulletins can contain the same type of information as the area type bulletins in the form of:
- a) *FIR route specific*: i.e. providing information regarding FIR crossed and specific departure, destination and alternate aerodromes/heliports; and
 - b) *Narrow path route specific*: i.e. providing information only for an area determined by a strip defined geographically about the route with departure, destination and alternate aerodromes/heliports.
- 7.14.2 A benefit of route-specific bulletins based on FIR is that they can also include information for the return flight which does not always follow the same routing for the outgoing one. Also, when there is a choice of two or more routings between one city pair, for which a narrow path bulletin could be inadequate, a bulletin based on FIR may be preferable. There could be a requirement, in addition to the above, for the provision of more refined data retrieval which requires the introduction of a geographical reference feature. This form of retrieval can provide narrow-path route-specific bulletins which may be required for RNAV operations and to cater to a higher level of automation within certain air navigation services and user systems.

7.15 Aerodrome type bulletins

- 7.15.1 Essentially, aerodrome type bulletins should contain information on selected aerodromes/heliports as may be necessary. Depending on user requirements, such bulletins can contain data on aerodromes/heliports within one or more FIR, for specified sectors or for destination and alternate aerodromes/heliports only. These requirements should be established through agreement between the AIS authority and the operator(s) concerned.

7.16 Immediate automatic notification of items of urgent operational significance

- 7.16.1 Items of urgent operational significance, which are listed separately in the NOTAM Selection Criteria (see Chapter 6 and Appendix B of DOC 8126), must be brought to the attention of operators concerned even after the pre-flight briefing stage.

7.17 Administrative bulletins

- 7.17.1 The following administrative bulletins must be provided:
- a) checklists of all current NOTAM by AIS provider/FIR/aerodrome/heliport; and
 - b) all NOTAM input since a specified date-time group.
(This procedure greatly facilitates briefings.)

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Figure 7-1: Information coverage zone form

<i>Operator</i>	<i>Destination</i>	<i>Alternates</i>	<i>ATS Route(s)</i>	<i>FIR</i>	<i>NOF</i>	<i>Frequency</i>	<i>Departure Time</i>	<i>Remarks</i>

Explanatory notes on information required under column headings

1. *Operator.* All operators using or intending to use the aerodrome/heliport at which the aerodrome/heliport AIS unit is located.
2. *Destination.* The aerodrome of first intended landing on the air route stage originating at the aerodrome at which the aerodrome/heliport AIS unit is located.
3. *Alternates.* The alternate aerodrome(s)/heliport(s) for the destination given in the preceding column, specified by the operator.
4. *ATS route(s).* The air traffic service (ATS) route(s), as applicable, specified by the operator for flight to the destination and alternate(s).
5. *FIR.* The flight information region(s) through which the flight to the destination and alternate(s) is planned, together with those adjacent FIRS which contain information significant to the flight.
6. *NOF.* The international NOTAM offices responsible for the provision of aeronautical information in the FIR specified in the preceding column.
7. *Frequency.* The number of flights, specified as per day or per week, for the given air route stage.
Note.— This will determine the pre-flight information bulletin reproduction requirements.
8. *Departure time(s).* The scheduled departure time(s) for the given air route stage.
Note.— This will determine the pre-flight information bulletin optimum release time.
9. *Remarks.* Any additional information concerning the given air route stage; e.g. pre-flight information required for lower airspace only.

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Figure 7-2. Briefing checklist

1. *Regulations and procedures*
 - a) Basic publications and recent amendments and supplements
 - b) Procedures applicable to airspace to be used
 - c) ATS procedures
 - d) Altimeter setting
2. *Meteorological information*
 - a) Availability of MET facilities, forecasts and weather reports
 - b) Provision of relevant available meteorological information where there is no meteorological office at the aerodrome/heliport, including weather information reported by en-route aircraft
3. *Route and destination information*
 - a) Suggestions concerning available routes
 - b) Tracks, distances, general topography and terrain features and information required to maintain safe levels en route
 - c) Availability and serviceability state of aerodromes/heliports and aerodrome/heliport facilities
 - d) Availability and serviceability state of navigation aids
 - e) SAR procedures and facilities and functions of the SAR organization
4. *Communication facilities and procedures*
 - a) Availability and serviceability of air/ground communication facilities
 - b) Procedures
 - c) Radio frequencies and hours of operation
 - d) Communication facilities available to aircraft not equipped with radio for forwarding movement reports
5. *Hazards to air navigation*
6. *Any other essential information* (including that requested by a pilot which might not be available locally but which can be obtained from the appropriate source)

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Figure 7-3. Sample of pre-flight information bulletin — navigation warnings

Pre-flight information bulletin	AERONAUTICAL INFORMATION SERVICE		Date and time of issue	Route or area Coverage
NAVIGATION WARNINGS			22/8/03 1200 UTC	NORTH ATLANTIC
FIR/UIR	Period	Area and nature of activity		Upper limit Lower limit
Ref.	Time (UTC)			
SHANNON FIR A2	<u>28/8/03</u> 0945-1015	10 KM radius of 532800N 0105600W. Demolition of explosives.		<u>2 000 M MSL</u> GND
SHANNON OCEANIC FIR A5	<u>23/8/03</u> 0700-1600	Sector: 573000N 0111500W GEO BRG 200° and 280°, distance 45 KM. Firing on towed target.		<u>4 500 M MSL</u> SFC
A7	<u>21-25/8/03</u> 0800-2200	Area: 503600N 0114200W 502000N 0115300W 503300N 0125200W 505000N 0124500W 503600N 0114200W In-flight refuelling.		<u>FL 180</u> FL 120

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Figure 7-4. Sample of pre-flight information bulletin — information other than navigation warnings

Pre-flight information bulletin	AERONAUTICAL INFORMATION SERVICE		Date and time of issue	Route or area Coverage
			22/8/03 1200 UTC	NORTH ATLANTIC
Location	Facility	Information		
LONDON FIR				
LONDON/Heathrow EGLL	RWY 05/23	Closed for maintenance 2100 – 0500 on nights of 7, 8 and 9 Nov.		
MANILA FIR				
MANILA/NAIA RPLL	ILS	AVBL for RWY 06 only.		
MANILA FIR				
MACTAN/MCIA RPVM	VOR	114.3 MHZ Voice unserviceable.		

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Chapter 8: Aeronautical Information Regulation and Control (AIRAC)

8.1 The need for control

8.1.1 Information concerning changes in facilities, services or procedures in most cases requires amendments to be made to airline operations manuals or other documents produced by various aviation agencies. The organizations responsible for maintaining these publications up to date usually work to a pre-arranged production programme. If AIP Amendments or AIP Supplements concerning such information were published indiscriminately with a variety of effective dates, it would be impossible to keep the manuals and other documents up to date. Alternatively, if a schedule of predetermined dates on which changes were to become effective were fixed throughout the year, it would be possible for a production programme to take account of or be based on these predetermined dates.

8.2 Regulated system

8.2.1 Since many of the changes to facilities, services and procedures can be anticipated and become effective in accordance with a predetermined schedule of effective dates, CAR-ANS Part 15.6, calls for the use of a regulated system designed to ensure, unless operational considerations make it impracticable, that:

- a) information concerning any circumstances listed in 8.12 will be issued as AIP Amendments or AIP Supplements. These amendments and supplements must be identified by the acronym “AIRAC” and distributed at least 42 days in advance of the effective date for usual changes and 58 days in advance for major changes with the objective of reaching recipients at least 28 days in advance for usual changes and 44 days in advance for major changes;
- b) the AIRAC effective dates must be in accordance with the predetermined, internationally agreed schedule of effective dates based on an interval of 28 days, including 29 January 1998; and
- c) information so notified must not be changed further for at least another 28 days after the indicated effective date, unless the circumstance notified is of a temporary nature and would not persist for the full period.

8.2.2 Essentially, implementation dates other than AIRAC effective dates **must not be used** for pre-planned, operationally significant changes requiring cartographic work and/or updating of navigation databases.

8.2.3 The processing cycle for airborne navigation databases requires the database to be delivered at least seven days before the effective date. At least eight days are necessary to prepare the data in the database; therefore, the navigation data houses generally exercise a cut-off 20 days prior to the effective date in order to ensure that the subsequent milestones are met. Data supplied after the 20-day cut-off will generally not be included in the database for the next cycle (see Figure 8-1).

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- 8.2.4 In addition to the use of a predetermined schedule of effective AIRAC dates, Coordinated Universal Time (UTC) must also be used to indicate the time when the AIRAC information will become effective. Since CAR-ANS Part 15, paragraph 15.3.7.3, specifies that the Gregorian calendar and UTC must be used as the temporal reference system for international civil aviation, in addition to AIRAC dates, when an effective time other than 0000 UTC is used, the effective time must be included explicitly with the AIRAC information.

8.3 Schedule of AIRAC effective dates

- 8.3.1 The schedule of predetermined, internationally agreed AIRAC effective dates for the years 2014 to 2018 inclusive is given in Table 8-1.

8.4 Coordination

- 8.4.1 In order for the AIRAC system to operate satisfactorily, it is essential that the technical branches of the CAAP that are assigned the responsibility of supplying raw data to the AIS provider be thoroughly familiar with the AIRAC system. In particular, they must be aware not only of the effective dates but also the latest dates on which the raw data must reach the AIS in order for an AIP Amendment or AIP Supplement to be published and reach recipients at least 28 days in advance of the effective date. It is the responsibility of the AIS to determine these latest dates in order to publish amendments/supplements that will meet the corresponding AIRAC effective dates. A convenient way of informing technical branches of these dates is for the dates to be printed on the reverse side of the aeronautical information promulgation advice form (see Figure 2-1, verso DOC 8126). In addition, the AIS publishes on a yearly basis, usually in the form of an AIC, a list of AIRAC effective dates, publication dates and latest dates on which raw material has to reach the AIS. Technical branches should endeavour to forward raw data to the AIS as early as possible and not wait until the latest date. This applies particularly where lengthy or complicated drafts are concerned. Early receipt will allow the AIS to process the data at a normal speed, whereas late receipt will normally mean that processing will be rushed, increasing the possibility of error.

8.5 Significant dates

- 8.5.1 There are three significant dates associated with the AIRAC system:
- a) the effective date;
 - b) the publication date; and
 - c) the latest date for raw data to reach the AIS.
- 8.5.2 There must be an interval of 42 days between the distribution date and the effective date. This allows for a period of up to 14 days' distribution time, **by the most expeditious means**, in order for recipients to receive the information at least 28 days in advance of the effective date.

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8.5.3 In cases where major changes (i.e. extensive changes to procedures or services which will impact international air transport) are planned and more advance notice is desirable and practicable, a distribution date of 56 days (or even longer) in advance of the effective date should be used. Examples of major changes are:

- a) the introduction of a new aerodrome;
- b) the introduction of new approach and/or departure procedures at international aerodromes; and
- c) the introduction of new ATS routes.

8.5.4 When the AIS does not receive AIRAC material from the responsible authorities/agencies for publication on the next scheduled AIRAC effective date, it must issue a NIL notification by NOTAM (or other means) at least one cycle (28 days or more) before the AIRAC effective date concerned.

8.6 Use of the AIRAC system during holiday periods

8.6.1 In some areas of the world the use of an AIRAC effective date that falls within major holiday periods (e.g. Christmas/New Year, Haj, Mardi Gras, summer vacations) creates difficulties in processing the material received because of reduced staff during these periods. In addition, the increased burden on postal services during such periods frequently delays delivery of AIRAC material, causing considerable problems to users.

8.6.2 To improve the situation during the year-end holiday period, it is recommended that the AIRAC cycle date occurring in the 28-day period from 21 December to 17 January inclusive should not be used for AIRAC effective dates for the introduction of significant operational changes.

8.6.3 It should be emphasized, however, that the AIRAC system provides for considerable flexibility in its application, with a choice of thirteen AIRAC effective dates each calendar year. Bearing in mind that many significant changes to facilities, services and procedures can be anticipated well in advance, a suitable effective date can be selected which does not conflict with a major holiday period. In addition, a publication date can be selected that provides for as much advance notice as possible. CAR-ANS Part 15.6.2, specifies that AIRAC material must reach recipients at least 28 days in advance of the AIRAC effective date. Preferably such material should reach recipients more than 28 days before the effective date (for instance, 42 or 56 days or more). Under the AIRAC system the maximum period of advance notification is essential. If this policy is applied it will give users ample time for processing changes to essential information, even if the effective date falls within a major holiday period.

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8.7 Provision of aeronautical information in paper copy and electronic forms

- 8.7.1 The AIRAC system has proved to be an effective means of regulating and controlling the provision of aeronautical information affecting operation of aircraft. In addition, the AIRAC system has been used as a basic source of information for the updating of computer-based navigation systems. Recently, CAAP have introduced or are increasingly introducing automation with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services. Aeronautical information may soon be provided to the user on line and in real time, which may change the AIRAC system. However, a large sector of the aviation community will continue to require aeronautical information (documentation) in paper copy form and CAAP introducing provision of aeronautical information in electronic form must continue to provide it in paper copy form as well. Therefore, the AIRAC system must apply to the provision of aeronautical information in both the paper and electronic environments.
- 8.7.2 In view of the above, under the AIRAC system information must always be published in paper copy form and be distributed by the AIS at least 42 days in advance of the AIRAC effective date, to reach the user at least 28 days in advance of the effective date.
- 8.7.3 The automated AIS systems must ensure that the effective dates of information in the database are the same as the AIRAC effective dates used for the provision of information in paper copy form. AIS must ensure that AIRAC material provided in electronic form is received by the user at least 28 days in advance of the AIRAC effective date. Where major changes are planned and more advance notice is desirable and practicable, information provided in electronic form should be issued at least 56 days before the AIRAC effective date.

8.8 Example

- 8.8.1 An example of the application of the AIRAC system follows:
- On 1 January 2003 the appropriate authority of a State aviation administration decides that it will place in service a new final approach aid at a particular aerodrome within the next three months.
 - This authority consults the schedule of AIRAC effective dates and decides that 15 May 2003 would be the most suitable.
 - It further notes that the corresponding publication date is 3 April 2003 and that the information it wishes to issue must be provided to the AIS not later than 27 March 2003, i.e. a week before the date of publication.
 - The information is provided to the AIS on 25 March 2003, is published along with other similar information on 3 April 2003, and all matters covered by the AIP Amendment or AIP Supplement concerned become effective on the same effective date — 15 May 2003.

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8.9 Significance

- 8.9.1 It will be apparent from this example that the benefits to be derived from such a system are almost entirely dependent upon the degree to which the AIRAC effective dates are observed and used by the authorities that are responsible for originating changes in facilities, services or procedures. Such changes must be anticipated by these authorities, and AIRAC effective dates must be selected from the schedule of AIRAC effective dates sufficiently in advance to permit issue of the relevant information in accordance with the prescribed procedure. AIRAC effective dates are used by ICAO, when appropriate, as the date of implementation for amendments to ICAO Standards, Recommended Practices and Procedures.

8.10 Late receipt of AIRAC publications

- 8.10.1 When AIRAC AIP Amendments or Supplements are not received at least 28 days in advance of the AIRAC effective date, it is the responsibility of the recipient AIS to investigate whether late receipt is due to local postal, customs or administrative delays and, if so, to take remedial action as required. Otherwise, the recipient AIS will report this to the originating AIS, whose duty it will be to investigate and eliminate the cause of the delay.

8.11 Postponement of changes to aeronautical information

- 8.11.1 Postponement of changes to circumstances listed in 8.12 has the effect of cancelling information notified by AIRAC and reinstating previously valid information. Doing so by NOTAM less than 28 days before the effective date for changes to circumstances listed in 8.12, Parts 1 and 3, does not generally allow sufficient time for previously valid information to be reinstated in airborne navigation databases, with the result that erroneous information would be presented to flight crews. Furthermore, since charts used by flight crews and ATC are updated on a different schedule than airborne navigation databases, it is possible that valid information which is not reflected in the airborne database may nevertheless appear on charts. The resulting mismatch of information would give rise to considerable operational difficulties and potential safety hazards. In the worst case, RNAV procedures that require a navigation database may not be flown (operated).
- 8.11.2 In order to avoid negative consequences to the safety and efficiency of flights, all possible measures should be taken to ensure that changes to circumstances listed in 8.12, Parts 1 and 3, take place as notified on the AIRAC date. This will require thorough planning of aeronautical information changes and the cooperation of all parties involved, including AIS.

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8.11.3 It is important to recognize that a change to the effective date (or postponement) is information to be notified by AIRAC and therefore constitutes “withdrawal” as stated in 8.12. Postponement by NOTAM should be issued more than 28 days in advance of the previously indicated effective date unless the circumstances are of a temporary nature and would not persist for the full period.

8.12 Information to be notified by AIRAC

(See CAR-ANS Part 15, Chapter 6 and Appendix 15C)

Part 1

1. The establishment and withdrawal of, and premeditated significant changes (including operational trials) to:
 - 1.1 Limits (horizontal and vertical), regulations and procedures applicable to:
 - a) flight information regions;
 - b) control areas;
 - c) control zones;
 - d) advisory areas;
 - e) ATS routes;
 - f) permanent danger, prohibited and restricted areas (including type and periods of activity when known) and ADIZ;
 - g) permanent areas or routes or portions thereof where the possibility of interception exists.
 - 1.2 Positions, frequencies, call signs, identifiers, known irregularities and maintenance periods of radio navigation aids, communication and surveillance facilities.
 - 1.3 Holding and approach procedures, arrival and departure procedures, noise abatement procedures and any other pertinent ATS procedures.
 - 1.4 Transition levels, transition altitudes and minimum sector altitudes.
 - 1.5 Meteorological facilities (including broadcasts) and procedures.
 - 1.6 Runways and stopways.
 - 1.7 Taxiways and aprons.
 - 1.8 Aerodrome ground operating procedures (including low visibility procedures).
 - 1.9 Approach and runway lighting.
 - 1.10 Aerodrome operating minima if published in the AIP.

Part 2

2. The establishment and withdrawal of, and pre-meditated significant changes to:
 - 2.1 Position, height and lighting of navigational obstacles.
 - 2.2 Hours of service of aerodromes, facilities and services.
 - 2.3 Customs, immigration and health services.
 - 2.4 Temporary danger, prohibited and restricted areas and navigational hazards, military exercises and mass movements of aircraft.
 - 2.5 Temporary areas or routes or portions thereof where the possibility of interception exists.

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Part 3

3. The establishment of, and pre-meditated changes to:

3.1 New aerodromes for international IFR operations.

3.2 New runways for IFR operations at international aerodromes.

3.3 Design and structure of the air traffic services route network.

3.4 Design and structure of a set of terminal procedures (including change of procedure bearings due to magnetic variation change).

3.5 Circumstances listed in Part 1 if the entire State or any significant position thereof is affected or if cross-border coordination is required.

8.13 AIRAC predetermined dates

Operational changes to which the regulated system (AIRAC) is applied will be issued as AIP Amendments or Supplements.

The sample table below illustrates the latest dates by which raw data should reach the AIS in order to be promulgated on one of the selected publication dates. When possible, raw data should always be forwarded well ahead of these dates. In order to ensure that charts and route manuals are correct on the date of publication, it is essential that an effective date should not be notified until a high degree of certainty that it will be met exists. A complete list of AIRAC effective dates for the years 2009 to 2018 may be found in Doc 8126, Chapter 2.

Date to reach the AIS for major changes	Publication date for major changes*	Date to reach the AIS for normal changes	Publication date normal (Thursday)	Effective date (Thursday)
5 February 2009	12 February 2009	19 February 2009	26 February 2009	9 April 2009
5 March 2009	12 March 2009	19 March 2009	26 March 2009	7 May 2009
2 April 2009	9 April 2009	16 April 2009	23 April 2009	4 June 2009
30 April 2009	7 May 2009	14 May 2009	21 May 2009	2 July 2009

etc.

* These dates are intended to take account of the time required for processing and subsequent mail delivery to the user, so as to provide adequate advance notice; they may need to be adjusted in light of practical experience.

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Chapter 8: Aeronautical Information Regulation and Control (AIRAC)

Figure 8-1 Processing Cycle for Airborne navigation databases

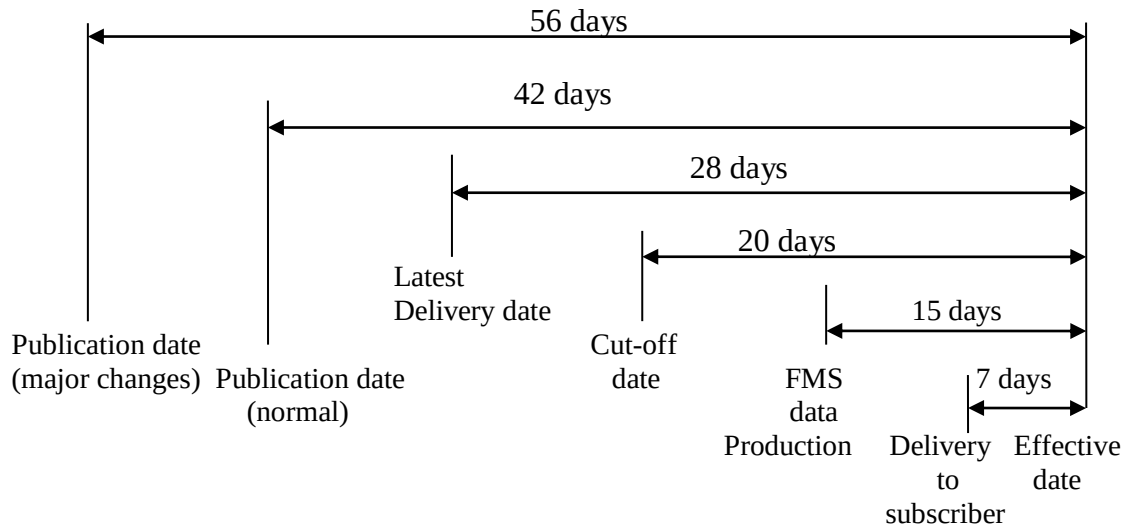


Table 8-1 AIRAC effective dates

<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>
9 January	8 January	7 January	5 January	4 January
6 February	5 February	4 February	2 February	1 February
6 March	5 March	3 March	2 March	1 March
3 April	2 April	31 March	30 March	29 March
1 May	30 April	28 April	27 April	26 April
29 May	28 May	26 May	25 May	24 May
26 June	25 June	23 June	22 June	21 June
24 July	23 July	21 July	20 July	19 July
21 August	20 August	18 August	17 August	16 August
18 September	17 September	15 September	14 September	13 September
16 October	15 October	13 October	12 October	11 October
13 November	12 November	10 November	9 November	8 November
11 December	10 December	8 December	7 December	6 December

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Chapter 9: Aeronautical Information Circular (AIC)

9.1 General

The AIS shall originate an AIC whenever it is necessary to promulgate aeronautical information, mainly of an administrative nature, which does not qualify for inclusion in the AIP or NOTAM. An AIC shall be originated whenever it is desirable to promulgate:

- 1) a long-term forecast of any major change in legislation, regulations, procedures or facilities;
- 2) information of a purely explanatory or advisory in nature liable to affect flight safety;
- 3) information or notification of an explanatory or advisory in nature concerning technical, legislative or purely administrative matters.

9.2 Information appropriate for AIC

In such cases, rather than overburden the AIP and/or NOTAM service, the information must be distributed by means of an AIC which is an element of the Integrated Aeronautical Information Package. The types of information appropriate for AIC are as follows:

- 1) forecasts of important changes in the air navigation procedures, services and facilities provided (e.g. new layout of control sectors or implementation plan for a radar network);
- 2) forecasts of implementation of new navigational systems (VOR, DME, etc.);
- 3) significant information arising from aircraft accident/incident investigation that has a bearing on flight safety;
- 4) information on regulations relating to the safeguarding of international civil aviation against acts of unlawful interference;
- 5) advice on medical matters of special interest to pilots;
- 6) warnings to pilots concerning the avoidance of physical hazards;
- 7) effect of certain weather phenomena on aircraft operations;
- 8) information on new hazards affecting aircraft handling techniques;
- 9) regulations relating to the carriage of restricted articles by air;
- 10) reference to the requirements of, and publication of changes in, national legislation;
- 11) aircrew licensing arrangements;
- 12) training of aviation personnel;
- 13) application of, or exemption from, requirements in national legislation;
- 14) advice on the use and maintenance of specific types of equipment;
- 15) actual or planned availability of new or revised editions of aeronautical charts;
- 16) carriage of radio equipment;
- 17) explanatory information relating to noise abatement;
- 18) selected airworthiness directives;
- 19) changes in NOTAM series or distribution, new editions of AIP or major
- 20) changes in their contents, coverage or format;
- 21) other information of a similar nature.

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Chapter 9: Aeronautical Information Circular (AIC)

9.3 AIC serial number

Each AIC shall be issued in printed form and be allocated a serial number which should be consecutive and based on the calendar year.

9.4 Annual review and checklist

- 9.4.1 AIC should be numbered consecutively on a calendar year basis. Since AIC formation is often effective for long periods and requires little amendment, it will usually be found that AIC can, if necessary, remain outstanding for several years without inconvenience. A review and re-issue on a yearly basis is however advisable. In any case, a checklist of AIC currently in force must be issued as an AIC (see Figure 8-1) at least once a year. Further, if AIC are issued in more than one series, each series must be identified by a letter (A 2/02, B 4/02, etc.)

9.5 Distribution

- 9.5.1 The originating AIS providers select the AIC that are to be given international distribution. AIC thus selected must be given the same distribution as the AIP, AIP Amendments and AIP Supplements. In addition, it is highly recommended that AIC be colour coded by subject where there are sufficient circulars in force to warrant such identification, e.g.:

- a) white — administrative;
- b) yellow — ATC;
- c) pink — safety;
- d) mauve — danger area map; and
- e) green — maps/charts.

- 9.5.2 Distribution of AIC on a national basis is left to the discretion of the originating AIS provider.

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Chapter 9: Aeronautical Information Circular (AIC)

Figure 8-2. Format for an Aeronautical Information Circular

TEL:(632) 879- 9159 FAX:(632) 879- 9288 AFTN: RPLLYOYX E-mail: ais@ats.caap.gov.ph	REPUBLIC OF THE PHILIPPINES CIVIL AVIATION AUTHORITY OF THE PHILIPPINES AERONAUTICAL INFORMATION SERVICE MIA ROAD, PASAY CITY	AIC Series A 11/03 14 OCT

Note.— Sheet size should be A4

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Chapter 10: Documentation and Records

10.1 Documents and Records to be maintained

10.1.1 The AIS shall maintain all documents and records which are necessary for the operation of the service. Copies of these documents shall also be made available to personnel when needed. These documents shall include but not limited to:

- 1) the Manual of Standards for Aeronautical Information Services;
- 2) the AIS operations manual;
- 3) CAR-ANS Part 4 and Part 15, Doc 8126, Doc 9859 and other relevant ICAO documents;
- 4) records of all incoming and outgoing aeronautical information to be identified by serial number and date;
- 5) records of each person who is authorized to check, edit and publish aeronautical information;
- 6) records of internal quality and safety audit reports;
- 7) records of reporting, investigation and correction of error;
- 8) records of job description, training programme and plan of each staff.

10.2 Document Control

10.2.1 The AIS shall establish a process for the authorization and amendment of the documents stipulated in paragraph 9.1.1 to ensure that they are constantly updated. The AIS shall establish a system to ensure that:

- 1) the currency of the documents can be readily determined;
- 2) amendments to the documents are controlled in accordance with established quality management principles; and
- 3) only current versions of documents are available.

10.2.2 The AIS shall ensure that where documents are held as computer based records and where paper copies of computer based records are made, they are subjected to the same control as paper documents.

10.3 Documentation

10.3.1 AIS shall establish a system for the recording and retention of data. Records shall include but not limited to:

- 1) ATS data;
- 2) procedure design documentation;

10.3.2 AIS shall establish mechanism that ensures reports and personnel records are maintained and updated and shall include:

- 1) details of personnel qualification and experience;
- 2) job descriptions;
- 3) training reports and training records of all members of the organization, including management;
- 4) internal and external audit reports; and
- 5) management review meetings and reports.

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Chapter 10: Documentation and Records

10.4 General Documentation Requirements

- 10.4.1 Documentation for a Quality Management System must include:
- 1) documented procedures; and
 - 2) documents required by the organization to ensure the effective operation and control of its processes.
- 10.4.2 The extent of the Quality Management System is, however, dependent on the following, and may be in any form or type of medium:
- 1) size and type of the organization;
 - 2) complexity and interaction of the processes; and
 - 3) competence of personnel.

10.5 Documented Procedures

- 10.5.1 ISO requirements for a Quality System call for six (6) Quality Management System procedures to be in place. These are mandatory written procedures that describe how your organization performs the activities described in each of the six Quality Management System procedures described below:
- 1) Control of Documents;
 - 2) Control of Quality Records;
 - 3) Internal Audit;
 - 4) Control of Non-conformity;
 - 5) Corrective Action; and
 - 6) Preventative Action.
- 10.5.2 Documented Procedures should indicate who does what, where and when they do it, why they do it, and how. It is up to the organization itself to decide the level of detail that is included in the Documented Procedures. Largely, this will depend on:
- 1) methods used;
 - 2) skills needed;
 - 3) training; and
 - 4) extent of supervision required.
- 10.5.3 Documented Procedures should not contain what you would like to happen in the organization, but rather an accurate description of what really happens. A robust Quality Management System will involve staff, to the extent that they can contribute, in the writing of Documented Procedures. The earlier and the more staff that are involved will lead to greater staff involvement, understanding and “buy-in” to the procedures and practices.

10.6 Control of Quality Records

- 10.6.1 Records exist in all organizations. Quality Records are required to provide evidence of conformance with requirements and of effective operation of the quality management system. Procedures must be documented for the identification, storage, retrieval, protection, retention time and disposition of quality records.

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Chapter 10: Documentation and Records

10.6.2 A Quality Record is a record produced following a procedure in a Quality System document. This record provides a reference when reviewing progress and/or performance, and is often a form.

Each Quality System document must include definitions of the Quality Records to be produced and kept.

Quality records will provide AIS with information to help manage the business better. This is the part that enables you to “show how you did it”.

In some instances, retention periods will be dictated by legal or regulatory requirements, financial requirements or customer’s specifications. Details about specific retention periods should be recorded in the documented procedures.

10.6.3 Examples of Quality Records include:

- 1) customer orders, specifications and requirements;
- 2) meeting notes, *e.g.* Management review;
- 3) audit reports;
- 4) non-conformance records (service failure reports, customer complaints);
- 5) corrective action records;
- 6) files on suppliers, *e.g.* evaluation of suppliers and their performance history;
- 7) process control records;
- 8) inspection and testing reports;
- 9) training records; and
- 10) records of goods received and delivered.

10.6.4 Records, indexing and filing can be in any appropriate form; hard copy, or electronic. Storage needs to be appropriate to the circumstances and the medium and should be such that the risk of deterioration, damage or loss is minimized.

- a) The International Standards also call for the organization to identify and document who has access to the quality records.

10.6.5 To help in deciding what quality records need to be kept, it is useful to consider that all quality records can be considered under the three (3) different categories:

- 1) What is received before a procedure starts;
- 2) What is produced to show intermediary steps have been completed; and
- 3) What is produced to show a procedure has been completed.

10.6.6 Quality records are usually produced internally however, they may also be produced outside the AIS, for example a customer’s order, or an external auditor’s report.

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Chapter 10: Documentation and Records

For each quality record identified, the following aspects need to be defined:

- 1) What the record is;
- 2) Who is responsible for its filing;
- 3) How long the record is required to be kept;
- 4) Where the record will be kept; and
- 5) Who is responsible for the record's disposal?

10.6.7 A tabular layout may be useful to present the information required.

Record	Responsibility	Minimum Retention Period	Location
What the record is?	Who is responsible for its filing? Who is responsible for its eventual disposition?	The minimum time the record must be retained for.	Where the record is kept?

10.6.8 In some ways, by default, the person deemed responsible for the records filing is also responsible for and authorized to dispose of the record. In this case, one position can be listed as responsible for the record, and for the filing and disposition.

- 1) A minimum period is specified to supply an audit trail for accountability purposes. The audit trail may be required for official inquiries or litigation.
- 2) Specification of a minimum retention period allows us to keep records longer if required. Records are often kept on hand for as long as there is space to accommodate them.
- 3) In summary, the records management process ensures that all quality records are identified and controlled, in order to provide a ready reference to the effectiveness of our Quality System documents.
- 4) The records management process occurs over an extended period and interleaves with other processes, particularly with those for document development and control.

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Chapter 11: Automated AIS System

11.1 Basic Principles

- 11.1.1 The principal objective of developing an automated AIS system is to improve, through automation, the overall speed, efficiency, accuracy and cost-effectiveness of the AIS.
- 11.1.2 For an automated or computer-based AIS system, the following material focuses on the advantages and flexibility to be derived from such an application. Essentially, an automated AIS system should be capable of providing a more flexible pre-flight information service by tailoring its automation processes to cater to a wider spectrum of users. As such, the tailoring/selection functions required for this service should be performed by the automated AIS system with a minimum of manual intervention so that duplication of work can be reduced if not eliminated entirely. For reasons of cost-effectiveness, such a service must strike a balance between the degree of sophistication of the system required and the amount of information to be accepted in the various categories of bulletins. It is necessary therefore to:
- 1) select a simple, flexible and efficient system for storage and retrieval of information; and
 - 2) develop methods of providing a greater selectivity of information in accordance with user requirements.
- 11.1.3 As such, the system should be designed with the intent of avoiding incompatibilities, divergences and unnecessary duplication of effort thereby ensuring standardization of procedures, products and services to end-users. It is highly desirable that all AIS systems be automated along the same or similar lines in order to ensure compatibility.

11.2 User's operational requirements in an automated AIS system

- 11.2.1 The overall system should provide a service that is capable of satisfying users' operational requirements, which include:
- 1) availability of the latest PIB of the specific type needed (e.g. route or area);
 - 2) provision of information on specific items for given areas required by flight planning services, ATS, AIS or other users;
 - 3) availability of NOTAM entered into the system after a specific date-time group, to facilitate briefing; and
 - 4) provision of immediate notification capability for items of urgent operational significance.
- 11.2.2 Automated pre-flight information systems for the supply of aeronautical information/data for self-briefing, flight planning and flight information service should:
- 1) provide for continuous and timely updating of the system database and monitoring of the validity and quality of the aeronautical information stored;

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Chapter 11: Automated AIS System

- 2) permit access to the system by flight operations personnel, including flight crew members, aeronautical personnel concerned and other aeronautical users, through a suitable means of telecommunications;
- 3) ensure provision, in paper copy form, of the aeronautical information/data accessed, as required;
- 4) use access and interrogation procedures based on abbreviated plain language and ICAO location indicators, as appropriate, or based on a menu-driven interface or other appropriate mechanism as agreed between the civil aviation authority and operator(s) concerned; and
- 5) provide for rapid responses to user requests for information.

11.2.3 On the basis of the foregoing, an automated AIS system should be able to provide end-users, such as pilots, ATS and military, with PIB geared to meet their specific requirements.

11.3 Types of information to be provided

11.3.1 The system should provide NOTAM covering the area of service, the area of responsibility and the area of coverage. The system should additionally provide the following PIB and lists:

- a) route type bulletin containing NOTAM relevant to the aerodrome/heliport of departure, the planned route based on FIR crossed, the aerodrome/heliport of destination, and alternate aerodromes/heliports;
- b) area type bulletin containing NOTAM relevant to FIR;
- c) aerodrome type bulletin containing NOTAM concerning any aerodrome/heliport or group of aerodromes/heliports;
- d) immediate notification items;
- e) checklists of NOTAM, FIR and aerodrome/heliport; and
- f) list of NOTAM for a specific period or NOTAM entered into the system after a specific date-time group.

11.3.2 The updating of PIB should be covered by the items listed in 11.3.1 d), e) and f), or by request for a new PIB. The system features described in 11.2 should permit PIB to be tailored to the needs of users and should provide flexible options for information content ranging from full system data coverage to data of urgent operational significance. PIB should be provided in a standard format.

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Chapter 11: Automated AIS System

11.4 Database contents

11.4.1 The following lists the types of data which can be made available in an automated AIS system centre database. These data are divided into three categories:

a) ***Static data***

Data common to civil aviation and documented in AIP or other related documents. Such data include FIR, aerodromes, navaids, areas, maps, rules, and NOTAM related to these subjects;

b) ***Basic data***

Data required by an AIS system to enable NOTAM processing, i.e. reference lists, standard routes, distribution files, the NOTAM Selection Criteria, association criteria as well some static data.

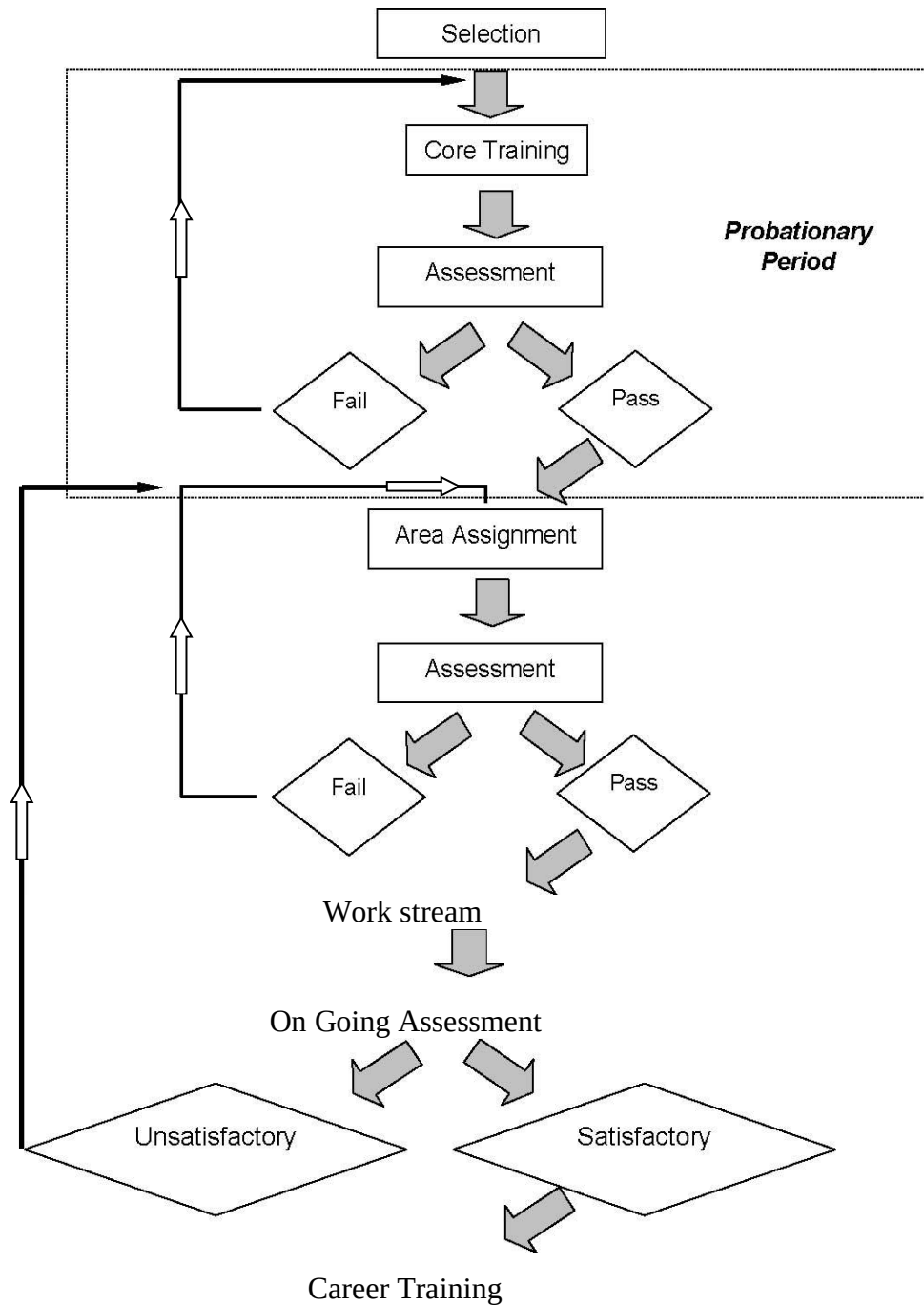
c) ***Dynamic data***

National and foreign (worldwide NOTAMN, NOTAMC, NOTAMR, ASHTAM, all checklists received, all system messages exchanged, and other aeronautical information such as AIC).

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Appendix 1 - Sample Selection and Training Process



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Appendix 2. Training Checklists

Computer Operation Checklist

Topics	Competent (Yes)	Date	On-the-Job Training (FTO initials)	Individual Undertaking Training's initials
Log On/ Password				
Read Message				
Print Message				
Refile Message				
Create Message				
Answer sender/all				

Fault Reporting Checklist

Topics	Competent (Yes)	Date	On-the-Job Training (FTO initials)	Individual Undertaking Training's initials
Fault reporting – Supervisor on duty				
Fault reporting – Outside Supervisor hours				

Local Arrangements Checklist

Topics	Competent (Yes)	Date	On-the-Job Training (FTO initials)	Individual Undertaking Training's initials
Temporary Local Instructions(TLI) record				
Workstation Information Book Database Change Procedures				
Personal Up to date Record				
Military Flight Information Service				
Airspace and Location Geography				
Military Prohibited, Restricted and Danger				
Airspace Groups				

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Appendix 3. Trainee Assessment Debrief Form

Trainee:	Facility Training Officer:	Position:	Date:
Pre-flight Briefing and Flight Plan Acceptance			1 2 3 4 5
Understanding of briefing material		Understanding of Flight planning requirements (Domestic/International)	
Clear understanding of pilots requirements		Aware of technical elaboration responsibilities	
Correctly handles data errors and omissions		Application of standard briefings	
Flight Plan Processing and Message Handling			1 2 3 4 5
Correct endorsement of processed messages			
Correct message addressing			
Standard flight plans			
Uses correct procedures			
Timely and accurate message distribution			
Efficient use of PDAs			
Military addressing			
ZP procedures			
Phraseologies and Communications			1 2 3 4 5
Uses standard phraseologies		Clear concise delivery	
Adjusts briefing style to suit recipient		Confident delivery, adlibs as required	
Equipment Handling			1 2 3 4 5
Briefing system	Phone/PABX	Fax	
Fault reporting	Frequency management		

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Appendix 3. cont.

Airspace/Geographical Knowledge		1 2 3 4 5
Classes of airspace	Prohibited, Restricted and Danger areas	
Areas of responsibility	Locations	
Documents and Local Procedures		1 2 3 4 5
Knowledge of briefing documents	Local instructions	
Maps and Charts	Disaster recovery	
Coordination		1 2 3 4 5
Coordination	Handover/takeover	
Off normal situations	Other agencies Keeps Supervisor informed	
Workload Management		1 2 3 4 5
Prioritizes tasks Speed and accuracy Keep Supervisor informed		
Teamwork		
Co-operation & teamwork		
Customer Service		
Public relations Politeness Enthusiasm		
Trainee Comments		
Training Officer Comments		
Areas identified as requiring more work		
Action plan for remedial training		
Trainee's Signature & Date		Training Officer's Signature & Date
This signifies agreement with the remedial program by both parties		

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Appendix 4. Competency Areas: Sample Grading Criteria

Competency Area	Grading Criteria
Pre-flight Briefing and Flight Plan Acceptance	The officer must demonstrate a thorough understanding of all-briefing material and flight planning requirements. The officer must obtain a clear understanding of the pilot's requirements, correctly handle data errors and omissions and demonstrate awareness of technical elaboration responsibilities.
Grading	1 Lack of basic knowledge and understanding of pre-flight briefing and flight plan acceptance responsibilities results in unsatisfactory performance. 3 Demonstrated sufficient knowledge and understanding of pre-flight briefing and flight plan acceptance. 5 Demonstrated a complete knowledge and understanding of all aspects of pre-flight briefing and flight plan acceptance.

Competency Area	Grading Criteria
Flight Plan Processing and Message Handling	The officer must process all flight plans and messages quickly and without error, using correct procedures, message addressing and endorsement of processed messages.
Grading	1 Fails to correctly process flight plans and messages without assistance and guidance. 3 Demonstrates satisfactory ability to process flight plans and messages. 5 Flight plans and messages processed quickly and correctly at all times using correct procedures, addressing and endorsements.

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Competency Area	Grading Criteria
Equipment Handling	The officer must be able to competently manipulate the equipment applicable to the operating position. The officer must be able to use backup systems in the event of equipment failure and carry out correct fault reporting procedures.
Grading	1 Unable to use essential equipment effectively. 3 Demonstrated ability to use essential equipment effectively. 5 Sound understanding and demonstrated optimum use of all equipment at all times.

Competency Area	Grading Criteria
Workload Management	The officer must demonstrate the application of a logical work plan, based on current workload, so that tasks are prioritized and completed with sufficient speed and accuracy.
Grading	1 Unable to prioritize tasks effectively to cope with normal workload. Makes frequent errors. Work rate was too slow and little ability to adjust to increasing work rate was evident. 3 Ability to process information correctly with sufficient priority, speed and accuracy to cope with average workload demands. 5 Able to prioritize tasks, maintain accuracy and adjust work rate to cope with all workload demands with ease and confidence.

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Appendix 5. Performance Appraisal Form

EMPLOYEE NAME:	POSITION TITLE:
FACILITY:	LOCATION:
RATER:	DATE OF APPOINTMENT:

APPRAISAL PERIOD: FROM: **TO:**.....

INSTRUCTIONS

- 1) Performance is to be formally assessed at least once per year with a review of performance occurring at least halfway through the assessment period.
- 2) Performance should be evaluated against both annual objectives set by agreement between the staff member and manager/supervisor at the beginning of the assessment period and/or the Key Result Areas contained in the staff member's job description.
- 3) The staff member and manager/supervisor should separately complete their own assessment of performance, training and development requirements prior to the interview.
- 4) Once the appraisal comments are completed and the appraisal formally reviewed, a copy of the completed form should be forwarded for filing in the staff member's personal file.
- 5) Only two copies of the completed form are to be made. One is held by the staff member and the other on the staff member's personal file. Access is on a strict need-to-know basis. Forms are to be destroyed TWO years after the date of appraisal.

PERFORMANCE RATINGS

1	Outstanding	Performance objectives consistently met at outstanding level.
2	Superior	Performance objectives consistently met, frequently exceeds competent level.
3	Satisfactory	Fully competent and performance objectives met to acceptable level.
4	Adequate	For performance which does not always meet the required standards. <i>Persons promoted to the level within the last six months and who may be regarded as novices in the role should be rated at this level.</i>
5	Unsatisfactory	Performance regularly falls below minimum acceptable level. Performance objectives frequently not met. Persons should be participating in discipline counselling process.

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PERFORMANCE SUMMARY

OVERALL PERFORMANCE RATING:

1	2	3	4	5

SUPERVISOR/RATERs COMMENTS

Comments must be related to the evaluation of performance and interview discussion.

--

RATERS SUPERVISOR Name Title

Signature Date

EMPLOYEE COMMENTS

--

EMPLOYEE Name Title

Signature..... Date

REVIEWER COMMENTS

--

REVIEWER Name Title

Signature Date

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Appendix 6. Marginal Note Layout

Designation or title of the chart series	Unit of measurement used to express elevation	AIP page and Date
Name of producing organization	AIRAC Amendment no.	