



**Republic of the Philippines**

**CIVIL AVIATION REGULATIONS (CAR)**

**PART 1**

**GENERAL POLICIES, PROCEDURES, and  
DEFINITIONS**

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Republic of the Philippines  
 Department of Transportation and Communications  
**CIVIL AVIATION AUTHORITY OF THE PHILIPPINES**  
 1300 MIA Road, Pasay City, Metro Manila  
 www.caap.gov.ph

**BOARD RESOLUTION NO. 2011-025**

**WHEREAS**, the Civil Aviation Authority of the Philippines (CAAP) was created by virtue of Republic Act 9497 which took effect on 23 March 2008;

**WHEREAS**, under Section 23, paragraph (j) of the same law, the Board is empowered to promulgate rules and regulations as may be necessary in the interest of safety in air commerce pertaining to the issuance of the airman's certificate including the licensing of operating and mechanical personnel, type certificate for aircraft, aircraft engines, propellers and appliances, airworthiness certificates, air carrier operating certificates, air agency certificates, navigation facility and aerodrome certificates; air traffic routes; radio and aeronautical telecommunications and air navigation aids; aircraft accident inquiries; aerodromes, both public and private-owned; construction of obstructions to aerodromes; height of buildings, antennae and other edifices; registration of aircraft; search and rescue; facilitation of air transports; operations of aircraft, both for domestic and international, including scheduled and non-scheduled; meteorology in relation to civil aviation; rules of the air; air traffic services; rules for prevention of collision of aircraft, identification of aircraft; rules for safe altitudes of flight; and such other rules and regulations, standards, governing other practices, methods and/or procedures as the Director General may find necessary and appropriate to provide adequately for safety regularity and efficiency in air commerce and air navigation;

**WHEREAS**, in the October 2009 ICAO-USOAP and 2010 EASA Audits, it was noted that portion of the Philippine Civil Aviation Regulations (PCAR) of 2008 is outdated and requires amendments/revisions;

**WHEREAS**, the CAAP Board of Directors, in its 03 March 2011 Board Meeting, approved the request of the Director General to initiate amendments and or revision of the Philippine Civil Aviation Regulations of 2008, subject to public consultations/hearings;

**WHEREAS**, the proposed PCARs cover the following regulatory/oversight functions:

- Part I General Policies, Procedures, Definitions
- Part II Personnel Licensing
- Part III Approved Training Organizations
- Part IV Aircraft Registration and Markings

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*[Handwritten Signature]* 05-27-2011

**AIDA S. ROMULO  
 Chief, Central Records  
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Chief, Central Records  
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- Part V Airworthiness
- Part VI Approved Maintenance Organizations
- Part VII Instruments and Organization
- Part VIII Operations
- Part IX Air Operator Certification and Administration
- Part X Commercial Air Transport by Foreign Air Carriers within Republic of the Philippines
- Part XI Aerial Work and Non-certificated Aircraft: Operating Limitations

**WHEREAS**, the Board finds the 2011 Revised Philippine Civil Aviation Regulation (PCAR) sufficient in form and substance, and fully comply with the standards set forth by FAA/ICAO/EASA;

**WHEREFORE, RESOLVE**, as it is hereby **RESOLVED**, that the 2011 Revised Philippine Civil Aviation Regulations Parts I to XI be **APPROVED**, and shall be valid and effective upon completion of the requisite publication and a copy filed with the University of the Philippines Law Center-Office of the National Administrative Register (UP-ONAR);

**RESOLVED** further that the Director General shall fully implement the approved, 2011 Revised PCAR Parts I to XI with the accompanying information campaign to the Philippine civil aviation industry.

Adopted this 11<sup>th</sup> day of April 2011 at the Department of Transportation and Communications, Columbia Tower, Mandaluyong City.

**HON. JOSE P. DE JESUS**  
Chairman/Secretary, DOTC

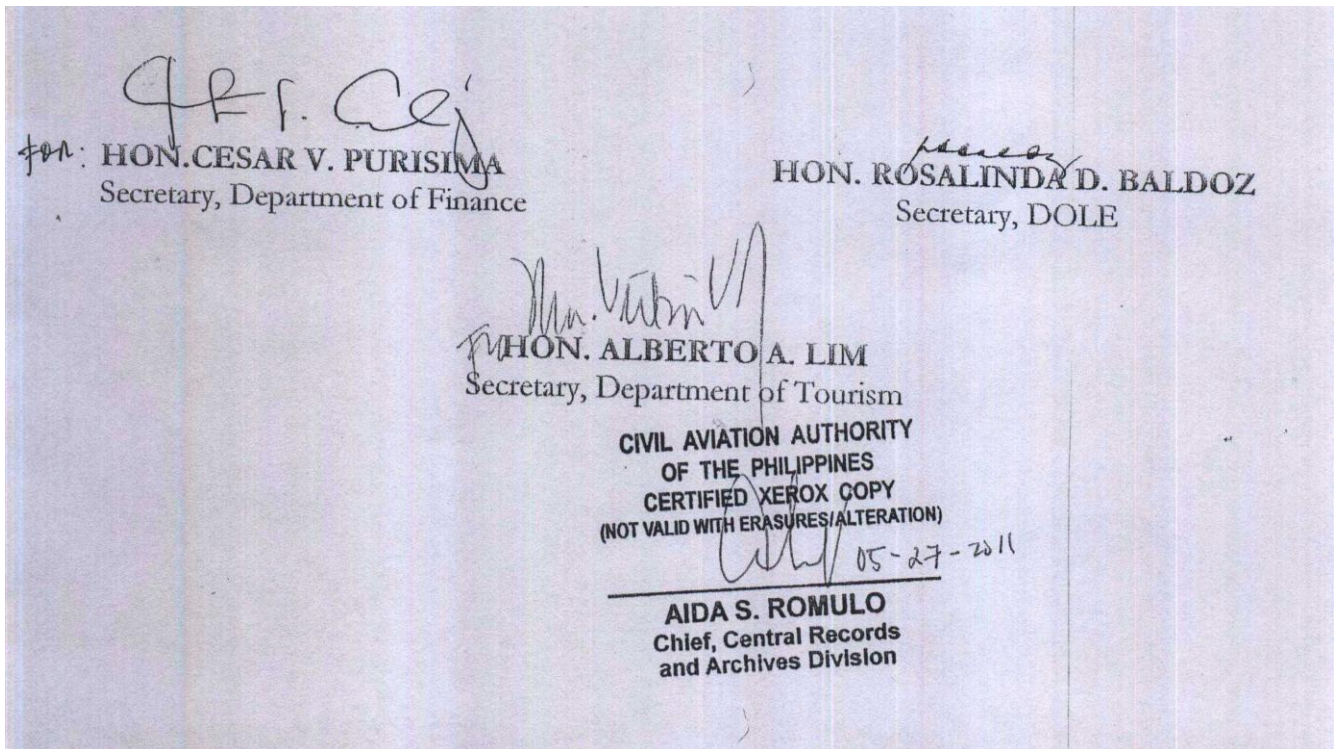
*[Signature]*

**HON. RAMON S. GUTIERREZ**  
Vice-Chairman/Director General, CAAP

**HON. LEILA M. DE LIMA**  
Secretary, Department of Justice

*[Signature]*  
**HON. ALBERT F. DEL ROSARIO**  
Secretary, Department of Foreign Affairs

**HON. JESSE M. ROBREDO**  
Secretary, DILG



## RECORD OF AMENDMENTS

Amendment No.	Date	Subject	Incorporated By
Original Issue	23 June 2008		Ruben F. Ciron
First Amendment	21 March 2011	<ul style="list-style-type: none"> <li>• Amendment to Part 1.1.1.1 (a) (6) and (b) regarding definition of Approved and Signs and Symbols.</li> <li>• Changes on the definitions of the following:               <ol style="list-style-type: none"> <li>1. Airman</li> <li>2. Approved</li> <li>3. State Safety Program</li> <li>4. Standard Atmosphere</li> </ol> </li> </ul>	Ramon S. Gutierrez
Second Amendment	01 August 2013	Inclusion of vertical bars on the previous amendments.	LT GEN William K Hotchkiss III AFP (Ret)
Third Amendment	31 October 2013	<ul style="list-style-type: none"> <li>• <b>1.5 Safety Management System</b> (new Subtitle base on Annex 6 amendment 33, 34, 35 and 36.)</li> <li>• <b>IS 1.5 Safety Management System</b></li> <li>• <b>Changes on the definitions of the following:</b> <ol style="list-style-type: none"> <li>1. Accelerate-stop distance available (ASDA)</li> <li>2. Airworthy</li> <li>3. Alternate airport/aerodrome/heliport</li> <li>4. Approach and landing operations using instrument approach procedures</li> <li>5. Continuing Airworthiness</li> <li>6. Duty</li> <li>7. Duty Period</li> <li>8. Engine</li> <li>9. Enhanced Vision System (EVS)</li> <li>10. Extended diversion time operations (EDTO)</li> <li>11. EDTO critical fuel</li> <li>12. EDTO-significant system</li> </ol> </li> </ul>	LT GEN William K Hotchkiss III AFP (Ret)

		<ul style="list-style-type: none"> <li>13. Fatigue</li> <li>14. Fatigue Risk Management System (FRMS)</li> <li>15. Flight duty period</li> <li>16. Head-up display (HUD)</li> <li>17. Isolated aerodrome</li> <li>18. Land distance available (LDA)</li> <li>19. Maximum diversion time</li> <li>20. Navigation specification</li> <li>21. Point of no return</li> <li>22. Rest period</li> <li>23. State safety program</li> <li>24. Threshold time</li> </ul>	
Fourth Amendment	21 November 2014	Appendix A: Definitions <ul style="list-style-type: none"> <li>1. Critical Engine(s)</li> </ul>	LT GEN William K Hotchkiss III AFP (Ret)
Fifth Amendment	01 July 2016	Appendix A Definitions <ul style="list-style-type: none"> <li>1. Approved Training</li> <li>2. Approved Training Organization</li> <li>3. Medical Assessor</li> </ul>	LT GEN William K Hotchkiss III AFP (Ret)
Sixth Amendment	14 July 2016	IS: 1.2.1.8 (d) Sanction Table	LT GEN William K Hotchkiss III AFP (Ret)
Seventh Amendment	24 November 2016	Appendix A: Definitions <ul style="list-style-type: none"> <li>1. Organization responsible for the type design</li> <li>2. State of Design</li> <li>3. State of Manufacture</li> <li>4. Type Certificate</li> <li>5. Type Design</li> </ul>	Captain Jim C. Sydiongco
Eight Amendment	01 July 2017	Appendix A: Definitions <ul style="list-style-type: none"> <li>1. Airport operating minima</li> <li>2. Continuous descent final approach (CDFA)</li> <li>3. Decision Altitude (DA) or Decision Height (DH)</li> <li>4. Instrument approach operations</li> <li>5. Aircraft tracking</li> <li>6. Combined vision system (CVS)</li> <li>7. COMAT</li> <li>8. Electronic flight bag (EFB)</li> </ul>	Captain Jim C. Sydiongco

		9. Enhanced vision system (EVS) 10. State of the aerodrome 11. Synthetic vision system (SVS) 12. Category A 13. Engine 14. State of manufacture	
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# CIVIL AVIATION REGULATIONS

## PART 1

### GENERAL POLICIES, PROCEDURES, and DEFINITIONS

#### Introduction

The Civil Aviation Regulations (CAR) provide the regulatory requirements dealing with aviation safety related to aircraft operations, airworthiness and personnel licensing; and are presented in Parts.

Of special interest are the Implementing Standards that accompany each Part. These Implementing Standards provide detailed requirements that support the intent of a regulation presented in a Part, but gain the force and effect of the governing regulations only if specifically referred to in the governing regulation.

Implementing Standards are used in these Regulations to allow the flexibility to incorporate new practices or procedures as they become available without the procedures required for promulgation of legally binding regulations.

Part 1 *General Policies, Procedures and Definitions*, sets forth the basic rules of construction and application of the regulations, definitions applicable to more than one Part, and the rules governing the administration of licenses and certifications. All of the definitions of ICAO Annexes 1 through 16 Volume 2 and ICAO Annex 18 are listed in Appendix A to Part 1 of these regulations.

## 1.1 RULES OF CONSTRUCTION

### 1.1.1.1 RULES OF CONSTRUCTION

- (a) Throughout these regulations the following word usage applies:
- (1) *Shall* indicates a mandatory requirement.
  - (2) The words "no person may..." or "a person may not..." mean that no person is required, authorized, or permitted to do an act described in a regulation.
  - (3) *May* indicates that discretion can be used when performing an act described in a regulation.
  - (4) *Will* indicates an action incumbent upon the Authority.
  - (5) *Includes* means "includes but is not limited to."
  - (6) *Approved* means approved by or on behalf of the Civil Aviation Authority in accordance with the pertinent requirements of national regulations.
  - (7) *Acceptable* means the Authority has reviewed the method, procedure, or policy and has neither objected to nor approved its proposed use or implementation.
  - (8) *Prescribed* means the Authority has issued written policy or methodology which imposes either a mandatory requirement; if the written policy or methodology states "shall." or a discretionary requirement if the written policy or methodology states "may."
  - (9) *Should* indicate a recommended practice.
  - (10) *Civil Aviation Act* means Republic Act No. 9497, otherwise known as Civil Aviation Authority Act of 2008.
- (b) Signs and Symbols
- (1) A vertical bar covering a sentence or paragraph indicates that the said sentence or paragraph has been amended which is followed by an enclose parenthesis indicating the date of amendment.

### 1.1.1.2 APPLICABILITY

- (a) These regulations shall apply to all persons operating or maintaining the following:
- (1) Republic of the Philippines registered aircraft;
  - (2) Aircraft registered in another Contracting State that are operated by a person licensed by Republic of the Philippines, and must be maintained in accordance with the standards of the aircraft State of Registry, wherever that maintenance is performed;
  - (3) Aircraft of other Contracting States operating in Republic of the Philippines.
- (b) Those regulations addressing persons certificated under any Part of these regulations apply also to any person who engages in an operation governed by any Part of these regulations without the appropriate certificate, license, operations specification, or similar document required as part of the certification
- (c) Regulations addressing general matters establish minimum standards for all aircraft operated in Republic of the Philippines. Specific standards applicable to the holder of a certificate shall apply if they conflict with a more general regulation.

- (d) Foreign air operators, who conduct commercial air transport into, from or within the Republic of the Philippines, shall be governed by the provisions of the Operations Specification issued by the Authority, and by those provisions in Parts 7, 8, and 10 that specifically address commercial air transport. Regulations that address AOC holders apply only to operators certificated by the Republic of the Philippines.

### 1.1.1.3 ORGANIZATION OF REGULATIONS

- (a) These regulations are subdivided into five hierarchical categories:
  - (1) *Part* refers to the primary subject area.
  - (2) *Subpart* refers to any subdivision of a Part.
  - (3) *Section* refers to any subdivision of a Subpart.
  - (4) *Subsection* refers to the title of a regulation and can be a subdivision of a Subpart or Section,
  - (5) *Paragraph* refers to the text describing the regulations. All paragraphs are outlined alphanumerically in the following hierarchical order: (a), (1), (i); (A).
- (b) Abbreviations used within each Part are defined at the beginning of those Parts, and if a definition is supplied, a note will indicate the Part where the definition is located.
- (c) Notes appear in Subsections to provide exceptions, explanations, and examples to individual requirements.
- (d) Regulations may refer to Implementing Standards, which provide additional detailed requirements that support the purpose of the subsection, and unless otherwise indicated, have the legal force and effect of the referring regulation. The rules of construction, Subpart 1.1.1.1, apply to Implementing Standards.

### 1.1.2.1 REGULATIONS AMENDMENT PROCEDURE

- (a) The following procedure is prescribed to incorporate an amendment to these Regulations.
- (b) There shall be a Regulations Review Committee (the RR-Committee), consisting of the representatives from the Flight Standards Inspectorate Service (FSIS), the Enforcement and Legal Service (ELS), the Office of ICAO and External Relations (IER), and the concerned Services/Directorates of the Authority. The concerned Service/Directorate shall file a requirement for an amendment to these Regulations to the RR-Committee. An operator or a member of public may send their request for an amendment to these Regulations to the Director General for the attention of the RR-Committee. The Amendment Cycle shall be twice every year, in January and July, commencing in January 2009. When there is a requirement to issue an immediate amendment to the Regulations, it can be done by promulgating a "Temporary Amendment" in colored pages by a Memorandum Circular. Such a Temporary Amendment shall be merged in the next regular Amendment Cycle, and the Temporary Amendment/Memorandum Circular shall stand automatically cancelled thereafter. An example of processing an amendment is stated in the succeeding paragraphs
- (c) For example, as and when the International Civil Aviation Organization (ICAO) issues an amendment to Annexes 1, 6, 8, 7 or other safety-related Annexes, the FSIS shall review the contents of each amendment with the corresponding Part(s) of CAR, assess its applicability to Republic of the Philippines, and accordingly advise the RR-Committee. The other Services/Directorates shall do the same in respect of their



related Annexes. The RR-Committee shall deliberate and decide whether to “accept” the Annex-amendment or to file a difference with the ICAO, and advise the Director General accordingly. When the Annex-amendment is to be “accepted”, the IER shall arrange to notify the ICAO accordingly, and file difference(s), if any, separately with ICAO, in accordance with the prescribed procedure. The secretariat of the RR-Committee shall maintain necessary documentation related to each Annex-amendment and CAR-amendment, including the records (such as, record of discussions in respect of industry and other consultations).

- (d) The FSIS shall work out a suitable amendment text for the CAR, based on the “accepted” part of the Annex-amendment and put up to the Director General, through the RR-Committee. As prescribed by the Civil Aviation Authority Act of 2008 (Republic Act No. 9497) Sections 24 (j) and 25, on recommendation of the Director General, the Board will approve the CAR-amendment for promulgation. The CAAP will then publish the CAR-amendment in accordance with the prescribed procedure.
- (e) The RR-Committee shall ensure that whenever an amendment to these Regulations is issued, the copy of CAR on the website is updated accordingly.
- (f) The FSIS shall ensure that the CAR-amendments are distributed among the recipients/copy-holders of CAR in a timely manner.
- (g) The Technical Library shall maintain a current copy of these regulations (CAR), fully updated, at all times.
- (h) A typical CAR-amendment shall contain the following:
  - (1) Letter of Transmittal: A letter to all recipients/CAR copy-holders, describing the purpose and location of the amendment in relation to the existing Regulation(s).
  - (2) Instructions: The instructions to “insert” and/or “delete” the affected pages of each Part stating page number(s) and their effective date(s).
  - (3) Replacement pages of CAR: The replacement pages of CAR giving effect to the Annex-amendment. As these regulations are printed on both sides of paper, whenever some text undergoes a change, the reverse side will also need a reprint, except that the effective date of the reverse side page may remain unchanged.
  - (4) Updated Table of Contents: The effective dates of changed pages shall be incorporated in the Contents of each Part as well as in the main Table of Contents.
  - (5) Recording of Amendments: Instructions for recording the insertion of the CAR-amendment in the “Record of Amendment” in the Table of Contents Part.
  - (6) Updating a Controlled Document: The prescribed procedure for updating a “Controlled Document” shall be adhered to while transmitting and incorporating each CAR-amendment.

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## **1.2 GENERAL ADMINISTRATIVE RULES GOVERNING TESTING, LICENSES, AND CERTIFICATES**

### **1.2.1.1 DISPLAY AND INSPECTION OF LICENSES AND CERTIFICATES**

(a) Pilot license:

- (1) To act as a pilot of a civil aircraft of Republic of the Philippines registry, a pilot shall have in his or her physical possession or readily accessible in the aircraft a valid pilot license or special purpose authorization issued under these regulations.
- (2) To act as a pilot of a civil aircraft of foreign registry within Republic of the Philippines, a pilot shall be the holder of a valid pilot license, and have the pilot license in his or her physical possession or readily accessible in the aircraft.

(b) Flight instructor license: A person who holds a flight instructor license shall have that license, or other documentation acceptable to the Authority, in that person's physical possession or readily accessible in the aircraft when exercising the privileges of that license.

(c) Other airman license: A person required by any part of these regulations to have an airman's license shall have it in their physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that license.

(d) Medical certificate: A person required by any part of these regulations to have a current medical certificate shall have it in their physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that certificate.

(e) Approved Training Organization (ATO) certificate: Each holder of a certificate shall display that certificate in a place in the school that is normally accessible to the public and that is not obscured.

(f) Aircraft Certificate of Registration: Each owner or operator of an aircraft shall carry the aircraft certificate of registration on the aircraft and available for inspection.

(g) Aircraft Airworthiness Certificate: Each owner or operator of an aircraft shall display that certificate in the cabin of the aircraft or at the entrance to the aircraft flight deck.

(h) Approved Maintenance Organization (AMO) Certificate: Each holder of an AMO certificate shall prominently display that certificate in a place accessible to the public in the principal business office of the AMO.

(i) Aerial work certificate: Reserved.

(j) Air operator certificate: Reserved.

(k) Inspection of license: Each person who holds an airman or crew member license, medical certificate, or authorization required by these regulations shall present it for inspection upon a request from: the Authority; or any national or local law enforcement officer.

### **1.2.1.2 CHANGE OF NAME**

(a) A holder of a license or certificate issued under these regulations may apply to change the name on a license or certificate. The holder shall include with any such request

- (1) The current license or certificate: and

- (2) A copy of the marriage license, court order, or other document verifying the name change.
- (b) The Authority will return to the airman the documents specified in paragraph (a) of this subsection.

### **1.2.1.3 CHANGE OF ADDRESS**

- (a) The holder of an airman license or certificate, or approved training organization certificate who has made a change in permanent mailing address may not, after 30 days from that date, exercise the privileges of the license or certificate unless the holder has notified the Authority in writing of the new permanent mailing address, or current residential address if the permanent mailing address includes a post office box number.

### **1.2.1.4 REPLACEMENT OF A LOST OR DESTROYED AIRMAN LICENSE OR MEDICAL CERTIFICATE OR KNOWLEDGE TEST REPORT**

- (a) An applicant who has lost or destroyed one of the following documents issued under these regulations shall request a replacement in writing from the office designated by the Authority:
  - (1) An airman license.
  - (2) A medical certificate.
  - (3) A knowledge test report.
- (b) The airman or applicant shall state in the request letter:
  - (1) The name of the airman or applicant;
  - (2) The permanent mailing address, or if the permanent mailing address includes a post office box number, the person's current residential address;
  - (3) The social security number or equivalent national identification number;
  - (4) The date and place of birth of the airman or applicant; and
  - (5) Any available information regarding the
    - (i) Grade, number, and date of issuance of the license, and the ratings, if applicable;
    - (ii) Date of the medical examination, if applicable; and
    - (iii) Date the knowledge test was taken, if applicable.
- (c) After receiving a facsimile from the Authority confirming that the lost or destroyed document was issued, an airman may carry the facsimile in lieu of the lost or destroyed document for up to 60 days pending the airman's receipt of a duplicate document.

### **1.2.1.5 FALSIFICATION, REPRODUCTION, OR ALTERATION OF APPLICATIONS, LICENSES, CERTIFICATES, LOGBOOKS, REPORTS, OR RECORDS**

- (a) No person may make or cause to be made concerning any license, certificate, rating, qualification, or authorization, application for or duplicate thereof, issued under these regulations:

- (1) Any fraudulent or intentionally false statement;
  - (2) Any fraudulent or intentionally false entry in any logbook, record, or report that these regulations require, or used to show compliance with any requirement of these regulations,
  - (3) Any reproduction for fraudulent purpose; or any alteration.
- (b) Any person who commits any act prohibited under paragraph (a) of this section may have his or her airman license, rating, certificate, qualification, or authorization revoked or suspended.

#### **1.2.1.6 ADMINISTRATIVE ACTION**

- (a) If it is determined that a violation or an alleged violation of the Civil Aviation Act, or an order or regulation issued under it; is appropriate for administrative action, the Authority may be taken by one of the following actions:
- (1) A "Warning Notice" that shall recite available facts and information about the incident or condition and indicate that it may have been a violation; or
  - (2) A "Letter of Correction" which confirms the Authority's decision in the matter and states the necessary corrective action the alleged violator has taken or agreed to take. If the agreed corrective action is not fully completed, formal certificate action may be taken in accordance with 1.2.1.7.
- (b) An administrative action under this section does not constitute a formal adjudication of the matter.

#### **1.2.1.7 CERTIFICATE ACTION**

##### **1.2.1.7.1 SUSPENSION OR REVOCATION OF A LICENSE OR CERTIFICATE FOR VIOLATION OF THE REGULATIONS.**

- (a) The holder of any license or certificate issued under these regulations who violates any provision of the Civil Aviation Act, as amended, or any regulation or order issued thereunder, is subject to suspension or revocation of the license or certificate, in accordance with the provisions of Section 35 (i) and Section 71 (a) and (b) of the Civil Aviation Act.
- (b) Any license or certificate issued under these regulations ceases to be effective, if it is surrendered, suspended, or revoked.
- (c) The holder of any license or certificate issued under these regulations that has been suspended or revoked shall return that license to the Authority when requested to do so by the Authority.

##### **1.2.1.7.2 RE-EXAMINATION OR RE-INSPECTION OF A CERTIFICATE OR LICENSE FOR LACK OF QUALIFICATION.**

- (a) Under Section 71 the Authority may re-inspect any civil aircraft, aircraft engine, propeller, appliance, air operator, school, or approved maintenance organization, or any civil airman holding a certificate or license issued under Section 35 of the Act.
- (b) If, as a result of that re-inspection or re-examination, or any other investigation made by the Authority, the Authority determines that a lack of qualification exists, and that safety in air transport and the public interest requires it, the Authority may issue an order to amend, modify, suspend, or revoke the license or certificate in whole or in part.

- (c) Procedures for the re-examination of personnel licenses, ratings, authorizations, or certificates are set forth in Part 2 of these Regulations.

#### **1.2.1.7.3 NOTICE AND OPPORTUNITY TO BE HEARD**

- (a) Unless safety in air transport requires immediate action, prior to a final determination under this section 1.2.1.7, the Authority shall provide the person with an opportunity to be heard as to why such certificate or license should not be amended, modified, suspended, or revoked, in accordance with Part 71 (c) of the Civil Aviation Act.

#### **1.2.1.8 CIVIL PENALTIES**

- (a) Any person, other than a person conducting an operation in commercial air transport or international commercial air transport, who violates any provision of the Civil Aviation Act, these Aviation Safety Regulations; or any order issued there under, is subject to a civil penalty imposed by the Authority in accordance with Section 81 of the Civil Aviation Act.
- (b) Any person conducting an operation in commercial air transport or international commercial air transport, who violates any provision of the Civil Aviation Act, these Aviation Safety Regulations, or any order issued there under, is subject to a civil penalty imposed by the Authority in accordance with Section 81 of the Civil Aviation Act.
- (c) Civil penalties may be assessed instead of or in addition to any license or certificate action described in 1.2.1.7.
- (d) Guidelines for civil penalties and certificate actions are listed in: Section 81 of the Civil Aviation Act.

*Note: IS 1.2.1.8 (d) contains a sample of a sanction guidance table which can be modified to conform to the penalty provisions in the Civil Aviation Act and to reflect the Authority's enforcement policy.*

#### **1.2.1.9 CRIMINAL PENALTIES**

The Civil Aviation Authority Act (Republic Act No. 9497) of 2008 established criminal penalties for any person who knowingly and willfully violates specified provisions of the Act, or any regulation or order issued thereunder.

#### **1.2.1.10 SURRENDER, SUSPENSION, OR REVOCATION OF LICENSE OR CERTIFICATE**

- (a) Any license or certificate issued under these regulations ceases to be effective if it is surrendered, suspended, or revoked.
- (b) The holder of any license or certificate issued under these regulations that has been suspended or revoked shall return that license or certificate to the Authority when requested to do so by the Authority.

#### **1.2.1.11 REAPPLICATION AFTER REVOCATION**

- (a) Unless otherwise authorized by the Authority, a person whose license, certificate, rating, or authorization has been revoked may not apply for any license, certificate, rating, or authorization for 1 year after the date of revocation.

**1.2.1.12 REAPPLICATION AFTER SUSPENSION**

- (a) Unless otherwise authorized by the Authority, a person whose license has been suspended may not apply for any license, rating, or authorization during the period of suspension.

**1.2.1.13 VOLUNTARY SURRENDER OR EXCHANGE OF LICENSE**

- (a) The holder of a license or certificate issued under these regulations may voluntarily surrender it for:
- (1) Cancellation;
  - (2) Issuance of a lower grade license; or
  - (3) Another license with specific ratings deleted.
- (b) If the license is surrendered for a voluntary suspension, the holder may not be required to take any theoretical examination when the said holder desires to renew his license but must comply with the other requirements of this Part.
- (c) An applicant requesting voluntary surrender of a license shall include the following signed statement or its equivalent: "This request is made for my own reasons, with full knowledge that my (insert name of license or rating, as appropriate) may not be reissued to me unless I complete the requirements prescribed for its issuance".

**1.2.1.14 PROHIBITION ON PERFORMANCE DURING MEDICAL DEFICIENCY**

- (a) A person who holds a current medical certificate issued under these regulations shall not act in a capacity for which that medical certificate is required while that person:
- (1) Knows or has reason to know of any medical condition that would make the person unable to meet the requirements for the required medical certificate; or
  - (2) Is taking medication or receiving other treatment for a medical condition that results in the person being unable to meet the requirements for the required medical certificate.

**1.2.1.15 PSYCHOACTIVE SUBSTANCE TESTING AND REPORTING**

- (a) Any person who performs any function requiring a license, rating, qualification, or authorization prescribed by these regulations directly or by contract for a certificate holder under the provisions of these regulations may be tested for usage of psychoactive substances.
- (b) Chemicals considered psychoactive substances are listed in IS 1.2.1.15(a).
- (c) Any person subject to these regulations who refuses to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer or the Authority, or refuses to furnish or to authorize the release of the test results requested by the Authority may:
- (1) Be denied any license, certificate, rating, qualification, or authorization issued under these regulations for a period of up to 1 year after the date of that refusal; or
  - (2) Have his or her license, certificate, rating, qualification, or authorization issued under these regulations suspended or revoked.

- (d) Any person subject to these regulations who refuses to submit to a test to indicate the presence of narcotic drugs; marijuana, or depressant or stimulant drugs or substances in the body, when requested by a law enforcement officer or the Authority, or refuses to furnish or to authorize the release of the test results requested by the Authority may:
  - (1) Be denied any license, certificate, rating, qualification, or authorization issued under these regulations for a period of up to 1 year after the date of that refusal; or
  - (2) Have his or her license, certificate, rating, qualification, or authorization issued under these regulations suspended or revoked.
- (e) Any person subject to these regulations who is convicted for the violation of any local or national statute relating to the growing; processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, or depressant or stimulant drugs or substances, may:
  - (1) Be denied any license, certificate, rating, qualification, or authorization issued under these regulations for a period of up to 1 year after the date of final conviction; or
  - (2) Have his or her license, certificate, rating, qualification, or authorization issued under these regulations suspended or revoked.



**1.3 EXEMPTIONS**

**1.3.1 APPLICABILITY**

- (a) This subpart prescribes procedures for the request, review, and denial or issuance of exemptions from the Regulations of these Parts, as provided by the Civil Aviation Authority Act (Republic Act No. 9497) of 2008.

**1.3.2 GENERAL**

- (a) Any interested person may apply to the Director General for an exemption from these Regulations.
- (b) Only the Director General may issue exemptions, and no person may take or cause to be taken any action not in compliance with these Regulations unless the Authority has issued an applicable exemption to the person.
- (c) Exemptions will only be granted in extraordinary circumstances and providing that said grant of an exemption is not prejudicial to flight safety;

**1.3.3 REQUIREMENTS FOR APPLICATION**

**1.3.3.1 GENERAL**

- (a) Applications for an exemption should be submitted at least 60 days in advance of the proposed effective date, to obtain timely review.
- (b) The request shall contain:
  - (1) The Applicant's name;
  - (2) Street address and mailing address, if different;
  - (3) Telephone number, and fax number if available;
  - (4) E-mail address if available; and
  - (5) Agent for all purposes related to the application.
- (c) If the applicant is not a citizen or legal resident of the Republic of the Philippines, the application must specify a Republic of the Philippines agent for service.

**1.3.3.2 SUBSTANCE OF THE REQUEST FOR EXEMPTION**

- (a) Applications must contain the following:
  - (1) A citation of the specific requirement from which the applicant seeks relief;
  - (2) Description of the type of operations to be conducted under the proposed exemption;
  - (3) The proposed duration of the exemption;
  - (4) An explanation of how the exemption would be in the public interest, that is, benefit the public as a whole.
  - (5) A detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the Regulation in question.
  - (6) A review and discussion of any known safety concerns with the requirement, including information about any relevant accidents or incidents of which the applicant is aware.

- (7) If the applicant seeks to operate under the proposed exemption outside of Republic of the Philippines airspace, the application must also indicate whether the exemption would contravene any provision of the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO).
- (b) If the applicant seeks emergency processing, the application must contain supporting facts and reasons that the application was not timely filed, and the reasons it is an emergency. The Authority may deny an application if the Authority finds that the applicant has not justified the failure to apply in a timely fashion.

#### **1.3.4 REVIEW, PUBLICATION, AND ISSUE OR DENIAL OF THE EXEMPTION**

##### **1.3.4.1 INITIAL REVIEW BY THE AUTHORITY**

- (a) The Authority will review the application for accuracy and compliance with the requirements of Subpart 1.3.3.
- (b) If the application appears on its face to satisfy the provisions of Subpart 1.3.3 and the Authority determines that a review of its merits is justified, the Authority will publish a detailed summary of the application for comment and specify the date by which comments must be received by the Authority for consideration.
- (c) If the filing requirements of Subpart 1.3.3 have not been met, the Authority will notify the applicant and take no further action until the applicant complies with the requirements of Subpart 1.3.3

##### **1.3.4.2 EVALUATION OF THE REQUEST**

After initial review, if the filing requirements have been satisfied, the Authority shall conduct an evaluation of the request to include:

- (a) A determination of whether an exemption would be in the public interest,
- (b) A determination, after a technical evaluation, of whether the applicant's proposal would provide a level of safety equivalent to that established by the Regulation;  
*Note: If it appears to the Authority that a technical evaluation of the request would impose a significant burden on the Authority's technical resources, the Authority may deny the exemption on that basis.*
- (c) A determination, if the applicant seeks to operate under the exemption outside of Republic of the Philippines airspace, of whether a grant of the exemption would contravene the applicable ICAO Standards and Recommended Practices.
- (d) An evaluation of comments received from interested parties concerning the proposed exemption.
- (e) A recommendation, based on the preceding elements, of whether the request should be granted or denied, and of any conditions or limitations that should be part of the exemption.

##### **1.3.4.3 NOTIFICATION OF DETERMINATION**

- (a) The Authority shall notify the applicant by letter and publish a detailed summary of its evaluation and decision to grant or deny the request. The summary shall specify the duration of the exemption and any conditions or limitations to the exemption.

- (b) If the request is for emergency relief, the Authority will publish the application and/or the Authority's decision as soon as possible after processing the application.
- (c) If the exemption affects a significant population of the aviation community of Republic of the Philippines the Authority shall also publish the summary in its aeronautical information publications.

**1.3.4.4 EXTENSION OF THE EXEMPTION TO OTHER INTERESTED PARTIES**

- (a) If the Authority determines that an exemption should be granted, other persons or organizations may apply to the Authority to be included in the relief granted.
- (b) Such applications shall be in accordance with the requirements of Subpart 1.3.3.
- (c) If the Authority determines that the request merits extension of the exemption to the applicant, it shall notify the applicant by letter, specifying the duration of the exemption, and listing any additional conditions that may pertain to the applicant that are not addressed in the underlying exemption.

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**1.4 DEFINITIONS**

- (a) For the purpose of these regulations, when the terms listed in Appendix A in this part shall have the meaning as stated in the appendix. However, the individual Parts will state the definitions applicable to that Part.

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## 1.5 SAFETY MANAGEMENT SYSTEM

The AOC, ATO, and AMO shall implement a safety management system acceptable to the Authority that as a minimum:

- (1) Identifies safety hazards;
- (2) Ensures the implementation of remedial action necessary to maintain agreed safety performance;
- (3) Provides for continuous monitoring and regular assessment of the safety performance; and
- (4) Aims at a continuous improvement of the overall performance of the safety management system.

The safety management system shall clearly define lines of safety accountability throughout the approved training organization, including a direct accountability for safety on the part of senior management.

The safety management system shall contain the components and elements listed in IS: 1.5.

*Note 1: Guidance on defining safety performance is contained in ICAO Doc 9859 Safety Management Manual.*

*Note 2: The framework for the implementation and maintenance of a safety management system is contained in ICAO Doc 9859 Safety Management Manual, Appendix 4.*

*Note 3: The framework for a STATE Safety Program (SSP) is contained in ICAO Annex 1: Attachment C and ICAO Annex 6, Part I: Attachment I.*

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# **CIVIL AVIATION REGULATIONS**

## **PART 1: IS**

### **GENERAL POLICIES, PROCEDURES, and DEFINITIONS: IMPLEMENTING STANDARDS**

**31 OCTOBER 2013**

For ease of reference, the number assigned to each Implementing Standard corresponds to its associated regulation. For example, IS: 1.2.1.8 would reflect a standard required in CAR: 1.2.1.8.

**IS 1.2.1.8(d) SANCTION TABLES**

This table provides a recommended approach to assessment of sanctions for violations of these Aviation Regulations.

Introduction. The Sanction Guidance Table describes civil penalties as minimum, moderate, or maximum for a single violation of a particular regulation, in accordance with the Civil Aviation Authority Act (RA-9497) of 2008. These terms are defined as follows:

**TABLE-1 CIVIL PENALTIES**

<b>Party Committing Violation</b>	<b>Amount of Monetary Penalty/Basis</b>		
AOC Holders	Maximum	:500T	Paragraph (4) Sec. 81 of Republic Act No. 9497
	Moderate	:400T	
	Minimum	:300T	
Airport Operators	Maximum	:500T	Pertinent provisions of Sec. 81, R.A. No. 9497
	Moderate	:400T	
	Minimum	:300T	
AOC holder Personnel	Maximum	:500T	Pertinent provisions of Sec. 81, R.A. No. 9497
	Moderate	:400T	
	Minimum	:300T	
General Aviation Owners, Operators, Mechanics, and non – licensed persons	Maximum	:500T	Pertinent provisions of Sec. 81, R.A. No. 9497
	Moderate	:400T	
	Minimum	:300T	
Approved Maintenance Organizations	Maximum	:500T	Paragraph (4) Sec. 81 of Republic Act No. 9497
	Moderate	:400T	
	Minimum	:300T	
Approved Training Organizations	Maximum	:500T	Paragraph (4) Sec. 81 of Republic Act No. 9497
	Moderate	:400T	
	Minimum	:300T	

**TABLE-2 SANCTIONS**

<b>Violation</b>	<b>Sanction per Violation</b>
<b>I. Air operators and airport operators</b>	
<b>1. Maintenance Manual</b>	
a. Failure to maintain a current manual	a. Suspend until manuals are current to 7 day
b. Failure to provide adequate instructions & procedures in manual	Suspension and thereafter until manuals are made current
c. Failure to distribute manual to appropriate Personnel	b. Moderate to maximum civil penalty c. Moderate civil penalty
d. Release of aircraft without required equipment	d. Maximum civil penalty to 7-day suspension

<b>Violation</b>	<b>Sanction per Violation</b>
<b>2. Failure to comply with Airworthiness Directives</b>	<b>Moderate to maximum civil penalty</b>
<b>3. Operations Specification</b>	
a. Failure to comply with inspection and overhaul time limitations	a. Maximum civil penalty to 7-day suspension
b. Operations contrary to operations specifications	b. Maximum civil penalty
<b>4. Failure to provide adequately for proper</b>	Maximum civil penalty to suspension until

<b>servicing, maintenance, repair, and inspection of facilities and equipment</b>	proper servicing maintenance, repair, and inspection of facilities and equipment is provided.
<b>5. Failure to provide or maintain a maintenance &amp; inspection organization</b>	Maximum civil penalty to suspension until appropriate maintenance and inspection organization is provided.
<b>6. Training program</b> a. Failure to have or maintain an effective training program b. Failure to train specific personnel adequately	a. Maximum civil penalty to suspension until compliance is demonstrated b. Moderate to maximum civil penalty
<b>7. Failure to ensure that maintenance release is completed and signed</b>	Moderate to maximum civil penalty
<b>8. Failure to ensure that maintenance release is completed and signed</b>	Moderate to maximum civil penalty
<b>9. Performance of maintenance by unauthorized persons</b>	Maximum civil penalty
<b>10. Failure to perform or improper performance of maintenance</b>	Maximum civil penalty
<b>11. Failure to revise aircraft data after repair</b>	Moderate to Maximum civil penalty
<b>12. Records and Reports</b>	
a. Failure to make accurate mechanical interruption summary report	Moderate to Maximum civil penalty
b. Failure to make available reports of major alterations or repairs	Moderate to Maximum civil penalty
c. Failure to make accurate mechanical reliability reports	Moderate to Maximum civil penalty
d. Failure to keep maintenance records	Maximum civil penalty to 7-day suspension and thereafter until aircraft is in airworthy condition
e. Failure to make required entry in aircraft log	Moderate to Maximum civil penalty
f. Failure to make available pilot records	Moderate to Maximum civil penalty
g. Failure to make available load manifests	Moderate to Maximum civil penalty
<b>13. Operation of an un-airworthy aircraft</b>	
a. Technical non-conformity to type certificate, but no likely effect (potential or actual) on safe operation.	Minimum civil penalty
b. Non-conformity which may have an adverse effect on safety of an operation	Moderate civil penalty
c. Non-conformity which has an adverse effect actual or potential un safe operation	Maximum civil penalty
<b>14. Serving alcoholic beverages to or boarding a person appears to be intoxicated</b>	Maximum civil penalty
<b>15. Using an unqualified crewmember</b>	Maximum civil penalty
<b>16. Improperly returning an aircraft to service</b>	Maximum civil penalty
<b>17. Illegal carriage of controlled substance with knowledge of carrier, i.e., knowledge of management personnel</b>	Revocation
<b>18. Security violation</b>	

a. Failure to properly screen baggage or each passenger	Maximum civil penalty
b. Unauthorized access to airport operations are	Maximum civil penalty
c. Failure to comply with air carrier security program, including failure to detect weapons, incendiary and other dangerous devices	Maximum civil penalty
d. Management personnel coerce, condone, or encourage falsification of records/reports	Revocation
e. Deliberate failure to maintain employee records	Maximum civil penalty
f. Failure to challenge	Moderate civil penalty
g. Failure to test screeners or test equipment	Moderate civil penalty
h. Failure to properly train	Moderate civil penalty
i. Unintentional failure to maintain screener test records	Minimum to Moderate civil penalty
j. Failure to display identification	Minimum to Moderate civil penalty
k. Failure to manage/control identification system	Maximum civil penalty
l. Failure to conduct background check	Minimum to Moderate civil penalty
m. Failure to detect test objects	Maximum civil penalty
n. Failure to comply with approved or current security program	Maximum civil penalty
<b>Violation</b>	<b>Sanction per Violation</b>
<b>II. Personnel of air operators</b>	
<b>1. Maintenance performed by unauthorized personnel:</b>	
a) Without certificate	Maximum civil penalty
b) Exceeding limitations	30 to 45 day suspension
<b>2. Failure to properly perform maintenance</b>	30 to 120 day suspension
<b>3. inspection personnel</b>	
a. Failure to make required inspection	30 to 60 day suspension
b. Making improper inspection	30 to 120 day suspension
c. Improperly releasing an aircraft to service	30 to 60 day suspension
<b>4. Records and Reports</b>	
a. Failure to make entries in aircraft log	15 to 60 day suspension
b. Failure to make entries in worksheets	15 to 30 day suspension
c. Failure to sign off work or inspection performed	15 to 30 day suspension
d. Failure to complete and sign maintenance release	15 to 30 day suspension
e. Falsification of records or reports	Revocation
<b>5. Releasing aircraft for service without required equipment.</b>	30 to 60 day suspension
<b>6. Pre-flight</b>	
a. Failure to use pre-flight cockpit checklist	15 to 30 day suspension
b. Failure to check aircraft logs, flight manifest, weather, etc.	30 to 90 day suspension
<b>7. Taxiing</b>	

a. Failure to adhere to taxi clearance or instruction	30 to 60 day suspension
b. Collision while taxiing	30 to 120 day suspension
c. Jet blast	30 to 180 day suspension
d. Taxiing with passenger standing	30 to 60 day suspension
<b>8. Take-off</b>	
a. Takeoff against instruction or clearance	60 to 120 day suspension
b. Takeoff below weather minima	60 to 120 day suspension
c. Takeoff in overloaded aircraft	60 to 120 day suspension
<b>9. En-route</b>	
a. Deviation from clearance or instruction	30 to 90 day suspension
b. Operating VFR within clouds	90 day suspension to revocation
c. Operation of un-airworthy aircraft	30 to 180 day suspension
d. Unauthorized departure from flight desk	15 to 30 day suspension
e. Operating within restricted or prohibited area, or within positive control area with clearance	30 to 90 day suspension
f. Operating without required equipment	15 to 120 day suspension
g. Fuel mismanagement/exhaustion	30 to 150 day suspension
<b>10. Approach to landing</b>	
a. Deviation from clearance or instruction in terminal area	30 to 90 day suspension
b. Approach below weather minimums	45 to 90 day suspension
c. Exceeding speed limitations in airport traffic areas	30 to 60 day suspension
<b>11. Landing</b>	
a. Landing at wrong airport	90 to 180 day suspension
b. Deviation from instrument approach procedure	30 to 90 day suspension
c. Overweight landing	30 to 90 day suspension
d. Hard landing	15 to 60 day suspension
e. Short or long landing	30 to 180 day suspension
f. Wheels up landing	30 to 180 day suspension
g. Failure to comply with preferential runway system	Maximum civil penalty to 15 day suspension
<b>12. Unauthorized admission to flight deck</b>	30 to 90 day suspension
<b>13. Failure to close and lock cockpit door</b>	Maximum civil penalty to 30 day suspension
<b>14. Acting as flight crewmember while under the influence of liquor or drugs, or alcoholic beverage consumption within 8 hrs.</b>	Emergency revocation
<b>15. Denial of authorized entry to flight deck</b>	30 to 60 day suspension
<b>16. Flight time and duty and rest periods requirements</b>	15 to 90 day suspension
<b>17. Operation without required certificate or rating</b>	
a. Medical certificate	15 to 60 day suspension
b. Lack of a type rating	180 day suspension to revocation
c. Missed proficiency check	30 to 90 day suspension
d. Lack of current experience	30 to 90 day suspension
e. Failure to have current certificate or license in possession	Moderate civil penalty to 7 day suspension

<b>18. Operation with known physical disability</b>	Revocation
<b>III. Individuals and General Aviation – Owners, Pilots, Aviation Maintenance Organizations, Maintenance personnel</b>	
<b>1. Owners and operators other than required crewmembers</b>	
a. Failure to comply with airworthiness directives	Moderate to maximum civil penalty
b. Failure to perform or improper performance of maintenance, including required maintenance	Moderate to maximum civil penalty
c. Failure to make proper entries in aircraft logs	Minimum to moderate civil penalties
d. Operation of aircraft beyond annual, 100-hour, or progressive inspection	Minimum to moderate civil penalty
e. Operation of un-airworthy aircraft	Moderate to maximum civil penalty
f. Falsification of any record	Revocation
<b>2. Aviation Maintenance Organizations</b>	
a. Failure to provide adequately for proper servicing maintenance repairs, and inspection	Moderate to maximum civil penalty
b. Failure to provide adequate personnel who can perform, and inspect work for which the sanction is rated	Maximum civil penalty to 7-day suspension and thereafter until adequate personnel are provided
c. Failure to have enough qualified personnel to keep up with the volume of work	Maximum civil penalty to 7-day suspension and thereafter until certificate holder has enough qualified personnel
d. Failure to maintain records of supervisory and inspection personnel	Moderate to maximum civil penalty
e. Failure to maintain performance records and reports	Moderate to maximum civil penalty
f. Failure to ensure correct calibration of all inspection and test equipment is accomplished at prescribed intervals	Minimum to maximum civil penalty
g. Failure to set forth adequate description of work performed	Minimum to maximum civil penalty
h. Failure of mechanic to make log entries, records, or reports	Moderate to maximum civil penalty
i. Failure to sign or complete maintenance release	Minimum to moderate civil penalty
j. Inspection of work performed and approval for return to service by other than a qualified inspector	Maximum civil penalty to 30 day suspension
k. Failure to have an adequate inspection system that procedure satisfactory quality control	Moderate civil penalty to 30 day suspension and thereafter until a an adequate inspection system is
l. Maintaining or altering an article for which it is rated, without using required technical Data, equipment, or facilities	Moderate civil penalty to 30 day suspension
m. Failure to perform or properly perform maintenance, repairs, alterations, and required alterations	Moderate civil penalty to 30 day suspension
n. Maintaining or altering an airframe, power plant, propeller, Instrument, radio, or accessory for which it is not	Maximum civil penalty

rated	
o. Failure to report defects or un-airworthy conditions to the authority in a timely manner	Moderate to maximum civil penalty
p. Failure to satisfy housing and facility requirements	Moderate civil penalty to suspension until housing and facility requirements are satisfied
q. Change of location, housing, or facilities without advance written approval	Moderate civil penalty to suspension until approval is given
r. Operating as a certified repair station without a repair station certificate	Maximum civil penalty
s. Failure to permit Authority to inspect	Maximum civil penalty to suspension until Authority is permitted to inspect
<b>3. General Aviation Maintenance Personnel</b>	
a. Failure to revise aircraft data after major repairs or alterations	30 to 60 day suspension
b. Failure to perform or improper performance of maintenance	30 to 120 day suspension
c. Failure of mechanic to properly accomplish inspection	30 to 60 day suspension
d. Failure of mechanic to record inspection	Minimum civil penalty to 30 day suspension
e. Failure of Inspection Authorization holder to properly accomplish inspection	60 to 80 day suspension of Inspection Authorization
f. Failure of Inspection Authorization holder to record inspection	Moderate civil penalty to 30 day suspension of Inspection Authorization
g. Maintenance performed by person without a certificate	Moderate to maximum civil penalty
h. Maintenance performed by person who exceeded certificate limitations	15 to 60 day suspension
i. Improper approval for return to service	Moderate civil penalty to 60 day suspension
j. j. Failure to make maintenance record	Moderate civil penalty to 60 day suspension
k. k. Failure to set forth adequate description of work performed	Minimum civil penalty to 30 day suspension
l. l. Falsification of maintenance records	Revocation
<b>4. Student Operation</b>	
a. a. Carrying passengers	Revocation
b. b. Solo flight without endorsement	45 to 90 day suspension
c. c. Operation on international flight	60 to 90 day suspension
d. d. Use of aircraft in business	90 to 120 day suspension
e. e. Operation for compensation or hire	Revocation
<b>5. instruction</b>	
a. a. False endorsement of student pilot certificate	Revocation
b. b. Exceeding flight time limitations	30 to 90 days suspension
c. c. Instruction in aircraft for which he/she is not rated	30 to 90 days suspension
<b>6. Operational Violations</b>	
a. Operation without valid airworthiness or registration certificate	30 to 90 day suspension

b. Failure to close flight plan or file arrival notice	Administrative action to minimum civil penalty
c. Operation without valid pilot certificate (no certificate)	Maximum civil penalty
d. Operation while pilot certificate is suspended	Emergency revocation
e. Operation without pilot or medical certificate in personal possession	Administrative action to 15 day suspension
f. Operation without valid medical certificate	30 to 180 day suspension
g. Operation for compensation or hire without commercial pilot certificate	180 day suspension to revocation
h. Failure to comply with special conditions of medical certificate	90 day suspension to revocation
i. Failure to comply with special conditions of medical certificate	90 day suspension to revocation
j. Operation without type of class rating	60 to 120 day suspension
k. Failure to obtain preflight information	30 to 90 day suspension
l. Deviation from ATC instruction or clearance	30 to 90 day suspension
m. Taxiing, take off, or landing without a clearance where ATC tower is in operation	30 to 90 day suspension
n. Failure to maintain radio communications in airport traffic area	30 to 60 day suspension
o. Failure to comply with airport traffic pattern	30 to 60 day suspension
p. Operation in terminal control area without or contrary to a clearance	60 to 90 day suspension
q. Failure to come maintain altitude in airport traffic area	30 to 60 day suspension
r. Exceeding speed limitations in traffic area	30 to 60 day suspension
s. Operation of un-airworthy aircraft	30 to 180 day suspension
t. Failure to comply with Airworthiness directives	30 to 180 day suspension
u. Operation without required instruments and/or equipment	30 to 90 day suspension
v. Exceeding operation limitations	30 to 90 day suspension
w. Operation within prohibited or restricted area, or within positive control area	30 to 90 day suspension
x. Failure to adhere to right of way rules	30 to 90 day suspension
y. Failure to comply with VFR cruising altitudes	30 to 90 day suspension
z. Failure to maintain required minimum altitudes over structures, persons, or vehicles over congested area/sparsely populated area	60 to 180 day suspension 30 to 120 day suspension
aa. Failure to maintain radio watch while under IFR	30 to 60 day suspension
bb. Failure to report compulsory reporting points	30 to 60 day suspension
cc. Failure to display position lights	30 to 60 day suspension



dd. Failure to maintain proper altimeter settings	30 to 60 day suspension
ee. Weather operations: Failure to comply with visibility minimums in controlled airspace; Failure to comply with visibility minimums outside controlled airspace; Failure to comply with distance from clouds requirements in controlled airspace Failure to comply with distance from clouds requirements outside of controlled airspace	60 to 180 day suspension 30 to 120 day suspension 60 to 180 day suspension 30 to 120 day suspension
ff. Failure to comply with IFR landing minimums	45 to 180 day suspension
gg. Failure to comply with instruments approach procedures	45 to 180 day suspension
hh. Careless or reckless operations  Fuel mismanagement/exhaustion Wheels up landing Short or long landing Landing on or taking off from closed runway Landing or taking off from ramps or other improper areas Taxiing collision Leaving aircraft unattended with motor running Propping aircraft without a qualified person at controls	30 to 150 day suspension 30 to 60 day suspension 30 to 90 day suspension 30 to 60 day suspension  30 to 120 day suspension  30 to 90 day suspension 30 to 90 day suspension  30 to 90 day suspension
ii. Passenger operations Operation without approved seat belts Carrying passengers who are under the influence of drugs or alcohol Performing acrobatics when all passengers are not equipped with approved parachutes	30 to 60 day suspension 60 to 120 day suspension  60 to 90 day suspension
<b>Violation</b>	<b>Sanction per Violation</b>
<b>IV – Security and Safety Violations by Individuals and Certificate holders</b>	
<b>1. Individuals Aiming Laser Beams at Aircraft</b>	
a. Single, first-time, inadvertent or non-deliberate violation by individual	Minimum to Moderate civil penalty
b. Deliberate violation by an individual	Maximum civil penalty to revocation (if Applicable)

**IS 1.2.1.15(a) LIST OF PSYCHOACTIVE SUBSTANCES**

Refer to ICAO Doc 9654

- (a) Alcohol
- (b) Opioids

- (c) Cannabinoids
- (d) Sedatives and hypnotics
- (e) Cocaine and other stimulants (except caffeine)
- (f) Hallucinogens
- (g) Volatile solvents

### IS: 1.5 SAFETY MANAGEMENT SYSTEM

The following specifies the framework for the implementation and maintenance of a safety management system (SMS) by an AOC, ATO or AMO.

- (1) Safety policy and objectives:
  - (i) Management commitment and responsibility.
    - (A) The AOC, ATO or AMO shall define the organization's safety policy which shall be:
      - (aa) in accordance with international and national requirements, and
      - (bb) signed by the accountable executive of the organization.
    - (B) The safety policy shall:
      - (aa) reflect organizational commitments regarding safety;
      - (bb) include a clear statement about the provision of the necessary resources for the implementation of the safety policy;
      - (cc) be communicated with visible endorsement throughout the organization;
      - (dd) include the safety reporting procedures;
      - (ee) clearly indicate which types of operational behaviors are unacceptable;
      - (ff) include the conditions under which disciplinary action would not apply; and
      - (gg) be periodically reviewed to ensure it remains relevant and appropriate to the organization.
  - (ii) Safety accountabilities
    - (A) The AOC, ATO or AMO shall identify, with respect to the safety performance of the SMS:
      - (aa) the accountable executive who, irrespective of other functions, shall have ultimate responsibility and accountability, on behalf of the AOC, ATO or AMO, for the implementation and maintenance of the SMS;
      - (bb) the accountabilities of all members of the management, irrespective of other functions, and
      - (cc) the employees.
    - (B) The AOC, ATO or AMO shall
      - (aa) document safety responsibilities, accountabilities and authorities;
      - (bb) communicate these throughout the organization, and

- (cc) include a definition of the levels of management authority to make decisions regarding safety risk tolerability.
- (iii) Appointment of key safety personnel
  - (A) The AOC, ATO or AMO shall identify a safety manager to be the responsible individual and focal point of the implementation and maintenance of an effective SMS.
- (iv) Coordination of emergency response planning
  - (A) The AOC, ATO or AMO shall ensure that an emergency response plan that provides for the orderly and efficient transition from normal to emergency operations and the return to normal operations is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its services.
- (v) SMS documentation
  - (A) The AOC, ATO or AMO shall develop and maintain:
    - (aa) an SMS implementation plan:
      - (aaa) endorsed by senior management of the organization, and
      - (bbb) that defines the organization's approach to the management of safety in a manner that meets the organization's safety objectives.
    - (bb) SMS documentation describing:
      - (aaa) the safety policy and objectives,
      - (bbb) the SMS requirements,
      - (ccc) the SMS processes and procedures,
      - (ddd) the accountabilities, responsibilities and authorities for processes and procedures and the SMS outputs.
    - (cc) a safety management systems manual (SMSM) to communicate its approach to the management of safety throughout the organization.
- (2) Safety risk management:
  - (i) Hazard identification.
    - (A) The AOC, ATO or AMO shall develop and maintain a formal process that ensures that hazards in operations are identified.
    - (B) The AOC, ATO or AMO shall base its hazard identification on a combination of reactive, proactive and predictive methods of safety data collection.
  - (ii) Safety risk assessment and mitigation.
    - (A) The AOC, ATO or AMO shall develop and maintain a formal process that ensures analysis, assessment and control of the safety risks in training operations.
- (3) Safety assurance:
  - (i) Safety performance monitoring and measurement.
    - (A) The AOC, ATO or AMO shall develop and maintain the means to:
      - (aa) verify the safety performance of the organization, and
      - (bb) validate the effectiveness of safety risk controls.

- (B) The AOC, ATO or AMO shall verify the safety performance of the organization in reference to the safety performance indicators and safety performance targets of the SMS.
- (ii) The management of change
  - (A) The AOC, ATO or AMO shall develop and maintain a formal process to:
    - (aa) identify changes within the organization which may affect established processes and services;
    - (bb) describe the arrangements to ensure safety performance before implementing changes, and
    - (cc) eliminate or modify safety risk controls that are no longer needed or effective due to changes in the operational environment.
  - (iii) Continuous improvement of the SMS
    - (A) The AOC, ATO or AMO shall develop and maintain a formal process to
      - (aa) identify the causes of substandard performance of the SMS.
      - (bb) determine the implications of substandard performance of the SMS in operations; and
      - (cc) eliminate or mitigate such causes.
- (4) Safety promotion:
  - (i) Training and education
    - (A) The AOC, ATO or AMO shall develop and maintain a safety training program that:
      - (aa) ensures that all personnel are trained and competent to perform the SMS duties, and
      - (bb) is appropriate to each individual's involvement in the SMS.
  - (ii) Safety communication.
    - (A) The AOC, ATO or AMO shall develop and maintain formal means for safety communication that:
      - (aa) ensures all personnel are fully aware of the SMS;
      - (bb) conveys safety-critical information;
      - (cc) explains why particular safety actions are taken; and
      - (dd) explains why safety procedures are introduced or changed.

## APPENDIX A: DEFINITIONS

When the following terms are used in these regulations, they shall have the following meanings.

***Airborne collision avoidance system (ACAS).*** An aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

***Accelerate-stop distance available (ASDA).*** The length of the take-off run available plus the length of stopway, if provided.

***Accepting unit.*** Air traffic control unit next to take control of an aircraft.

**Accident.** An occurrence associated with the operation of an aircraft which takes place between the times any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

- (a) a person is fatally or seriously injured as a result of:
  - being in the aircraft, or
  - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
  - direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- (b) the aircraft sustains damage or structural failure which:
  - adversely affects the structural strength, performance or flight characteristics of the aircraft, and
  - would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or
- (c) the aircraft is missing or is completely inaccessible.

**Accredited medical conclusion.** The conclusion reached by one or more medical experts acceptable to the Licensing Authority for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

**Accounting management.** An ATN systems management facility to monitor users for use of network resources and to limit the use of those resources.

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

**Acrobatic flight.** Maneuvers intentionally performed by an aircraft involving an abrupt change in its altitude, an abnormal altitude, or an abnormal variation in speed.

**ADS agreement.** An ADS reporting plan which establishes the conditions of ADS data reporting (i.e. data required by the air traffic services unit and frequency of ADS reports which have to be agreed to prior to the provision of the ADS services).

**ADS-C agreement.** A reporting plan which establishes the conditions of ADS-C data reporting (i.e. data required by the air traffic services unit and frequency of ADS-C reports which have to be agreed to prior to using ADS-C in the provision of air traffic services).

**ADS application.** An ATN application that provides ADS data from the aircraft to the ATS unit(s) for surveillance purposes.

**ADS contract.** A means by which the terms of an ADS agreement will be exchanged between the ground system and the aircraft, specifying under what conditions ADS reports would be initiated, and what data would be contained in the reports.

**Advisory airspace.** An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

**Advisory route.** A designated route along which air traffic advisory service is available.

**Aerial work.** An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

**Aerodrome.** The preferred spelling is Airport however the meaning is identical except the spelling. See Airport entries below.

**Aeronautical Administrative Communication (AAC).** Communication used by aeronautical operating agencies related to the business aspects of operating their flights and transport services. This communication is used for a variety of purposes, such as flight and ground transportation, bookings, deployment of crew and aircraft or any other logistical purposes that maintain or enhance the efficiency of over-all flight operation.

**Aeronautical broadcasting service.** A broadcasting service intended for the transmission of information relating to air navigation.

**Aeronautical chart.** A representation of a portion of the earth, its culture and relief, specifically designated to meet the requirements of air navigation.

**Aeronautical fixed circuit.** A circuit forming part of the aeronautical fixed service (AFS).

**Aeronautical Fixed Service (AFS).** A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

**Aeronautical fixed station.** A station in the aeronautical fixed service.

**Aeronautical Fixed Telecommunication Network (AFTN).** A worldwide system of aeronautical fixed circuits provided, as part of the aeronautical fixed service, for the exchange of messages and/or digital data between aeronautical fixed stations having the same or compatible communications characteristics.

**Aeronautical fixed telecommunication network circuit.** A circuit forming part of the aeronautical fixed telecommunication network (AFTN).

**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 meteorological station.** A station designated to make observations and meteorological reports for use in international air navigation.

**Aeronautical mobile service (RR S1.32).** A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies.

**Aeronautical mobile (R)\* service (RR S1.33).** An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.

**Aeronautical mobile-satellite service (RR S1.35).** A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radio beacon stations may also participate in this service.

**Aeronautical mobile-satellite (R)\* service (RR S1.36).** An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes.

**Aeronautical Operational Control (AOC).** Communication required for the exercise of authority over the initiation, continuation, diversion or termination of flight for safety, regularity and efficiency reasons.

**Aeronautical Passenger Communication (APC).** Communication relating to the non-safety voice and data services to passengers and crew members for personal communication.

**Aeronautical radio navigation service (RR S1.46).** A radio navigation service intended for the benefit and for the safe operation of aircraft.

**Aeronautical station (RR S1.81).** A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

**Aeronautical telecommunication agency.** An agency responsible for operating a station or stations in the aeronautical telecommunication service.

**Aeronautical telecommunication log.** A record of the activities of an aeronautical telecommunication station.

**Aeronautical Telecommunication Network (ATN).** An internetwork architecture that allows ground, air-ground and avionic data sub networks to interoperate by adopting common interface services and protocols based on the International Organization for Standardization (ISO) Open Systems Interconnection (OSI) reference model.

**Aeronautical telecommunication service.** A telecommunication service provided for any aeronautical purpose

**Aeronautical telecommunication station.** A station in the aeronautical telecommunication service.

**Aeroplane.** The preferred spelling is airplane however the meaning is identical except for the spelling. See airplane below

**AFTN communication centre.** An AFTN station whose primary function is the relay or retransmission of AFTN traffic from (or to) a number of other AFTN stations connected to it.

**AFTN destination station.** An AFTN station to which messages and/or digital data are addressed for processing for delivery to the addressee.

**AFTN origin station.** An AFTN station where messages and/or digital data are accepted for transmission over the AFTN.

**AFTN station.** A station forming part of the aeronautical fixed telecommunication network (AFTN) and operating as such under the authority or control of a State.

**AIDC application.** An ATN application dedicated to exchanges between ATS units (ATSUs) of air traffic control (ATC) information in support of flight notification, flight coordination, transfer of control, transfer of communication, transfer of surveillance data and transfer of general data.

**Airborne Collision Avoidance System (ACAS).** An aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

**Aircraft.** Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

**Aircraft address.** A unique combination of twenty-four bits available for assignment to an aircraft for the purpose of air-ground communications, navigation and surveillance

**Aircraft Earth Station (AES).** A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft (see also "GES").

**Aircraft avionics.** A term designating any electronic device, including its electrical part for use in an aircraft, including radio, automatic flight control and instrument systems.

**Aircraft category.** Classification of aircraft according to specified basic characteristics; e.g. airplane, helicopter, glider, free balloon.

**Aircraft certificated for single-pilot operation.** A type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot.

**Aircraft observation.** The evaluation of one or more meteorological elements made from an aircraft in flight.

**Aircraft operating agency.** The person, organization or enterprise engaged in, or offering to engage in, an aircraft operation.

**Aircraft operating manual.** A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

*Note.* - The aircraft operating manual is part of the operations manual.

**Air-report.** A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/ or meteorological reporting.

**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-ground communication.** Two-way communication between aircraft and stations or locations on the surface of the earth.

**Air-to-ground communication.** One-way communication from aircraft to stations or locations on the surface of the earth.

**Air-ground control radio station.** An aeronautical telecommunication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area.

**Airman.** Any individual who engages, as the person in command or as pilot, mechanic, aeronautical engineer, flight radio operator or member of the crew, in the navigation of aircraft while underway and any individual who is directly in charge of inspection, maintenance, overhauling, or repair of aircraft, aircraft engine, propellers, or appliances; and individual who serves in the capacity of aircraft dispatcher or air traffic control operator.

**AIRMET information.** Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of low-level aircraft operations and which was not already included in the forecast issued for low-level flights in the flight information region concerned or sub-area thereof.

**Air Operator Certificate (AOC).** A certificate authorizing an operator to carry out specified commercial air transport operations.

**Aircraft required to be operated with a co-pilot.** A type of aircraft that is required to be operated with a co-pilot, as specified in the flight manual or by the air operator certificate.

**Aircraft station (RR S1.83).** A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft.

**Aircraft tracking.** A process, established by the operator, that maintains and updates, at standardized intervals, a ground-based record of the four dimensional position of individual aircraft in flight.

**Aircraft — type of.** All aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.



**Airmanship.** The consistent use of good judgment and well-developed knowledge, skills and attitudes to accomplish flight objectives.

**Airplane (aeroplane).** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

**Airport (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.

**Airport climatological summary.** Concise summary of specified meteorological elements at an aerodrome, based on statistical data.

**Airport climatological table.** Table providing statistical data on the observed occurrence of one or more meteorological elements at an airport.

**Airport control radio station.** A station providing radio-communication between an aerodrome control tower and aircraft or mobile aeronautical stations.

**Airport control service.** Air traffic control service for Airport traffic.

**Airport control tower.** A unit established to provide air traffic control service to Airport traffic.

**Airport elevation.** The elevation of the highest point of the landing area.

**Airport meteorological office.** An office, located at an Airport, designated to provide meteorological service for international air navigation.

**Airport reference point.** The designated geographical location of an airport.

**Airport traffic.** All traffic on the maneuvering area of an airport and all aircraft flying in the vicinity of an airport.

**Airport traffic zone.** An airspace of defined dimensions established around an airport for the protection of airport traffic.

**Airport operating minima.** The limits of usability of an airport for:

- (a) **take-off**, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- (b) **landing in 2D instrument approach** operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and
- (c) **landing in 3D instrument approach** operations expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) appropriate to the type and/or category of the operation.

**Air-report.** A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

**Airship.** A power-driven lighter-than-air aircraft.

**Air-taxiing.** Movement of a helicopter/VTOL above the surface of an Airport, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).

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

**Air traffic.** All aircraft in flight or operating on the maneuvering area of an Airport.

**Air traffic advisory service.** A service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans

**Air traffic control clearance.** Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

**Air traffic control service.** A service provided for the purpose of:

- (a) preventing collisions:
  - (1) between aircraft, and
  - (2) on the maneuvering area between aircraft and obstructions, and
- (b) expediting and maintaining an orderly flow of air traffic.

**Air traffic control unit.** A generic term meaning variously, area control centre, approach control unit or Airport control tower.

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

**Air traffic 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 Airport control service).

**Air transit route.** A defined path on the surface established for the air transiting of helicopters

**Air traffic services airspaces.** Airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

**Air traffic services reporting office.** A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

**Air traffic services unit.** A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

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

**Airworthy.** The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

**ALERFA.** The code word used to designate an alert phase.

**Alert phase.** A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

**Alerting service.** A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

**Alternate airport/aerodrome/heliport.** An airport/heliport to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the airport/heliport of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate airports/heliports include the following:

- (a) **Take-off alternate.** An alternate airport/heliport at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the airport/heliport of departure.
- (b) **En-route alternate.** An alternate airport/heliport at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.
- (c) **Destination alternate.** An alternate airport/heliport at which an aircraft would be able to land should it become either impossible or inadvisable to land at the airport/heliport of intended landing.

**Alternative means of communication.** A means of communication provided with equal status, and in addition to the primary means.

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

**Anticipated operating conditions.** Those conditions which are known from experience or which can be reasonably envisaged to occur during the operational life of the aircraft taking into account the operations for which the aircraft is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, to the configuration of terrain, to the functioning of the aircraft, to the efficiency of personnel and to all the factors affecting safety in flight. Anticipated operating conditions do not include:

- (a) those extremes which can be effectively avoided by means of operating procedures; and
- (b) those extremes which occur so infrequently that to require the Standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical.

**Application.** Manipulation and processing of data in support of user requirements (ISO 19104\*).

**Application.** The ultimate use of an information system, as distinguished from the system itself.

**Application Entity (AE).** Part of an application process that is concerned with communication within the OSI environment. The aspects of an application process that need to be taken into account for the purposes of OSI are represented by one or more AEs.

**Application information.** Refers to the application names (e.g. AE qualifiers such as ADS and CPC), version numbers, and addresses (the long or short TSAP, as required) of each application.

**Approach control service.** Air traffic control service for arriving or departing controlled flights.

**Approach control unit.** A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more airports.

**Approach and landing phase – helicopters.** That part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the bailed landing point.

**Appropriate airworthiness requirements.** The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration (refer to 3.2.2 of Part II of Annex 8).

**Appropriate ATS authority.** The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned.

**Appropriate authority.**

- (a) Regarding flight over the high seas: The relevant authority of the State of Registry.
- (b) Regarding flight other than over the high seas: The relevant authority of the State having sovereignty over the territory being over flown.

**Approved.** Means approved by or on behalf of the Civil Aviation Authority in accordance with the pertinent requirements of national regulations.

**Approved maintenance organization.** An organization approved by the Philippine authority, in accordance with the requirements of Annex 6, Part I, Chapter 8 – Aeroplane

Maintenance, to perform maintenance of aircraft or parts thereof and operating under supervision approved by the Philippine Republic.

*Note.* — *Nothing in this definition is intended to preclude that the organization and its supervision be approved by more than one State.*

**Approved training.** Training conducted under special curricula and supervision approved by the Authority.

**Approved training organization.** An organization approved by and operating under the supervision of this Authority in accordance with the requirements of PCAR to perform approved training.

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

**Area control centre.** A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

**Area control service.** Air traffic control service for controlled flights in control areas.

**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.

**Area Navigation (RNAV).** A method of navigation which permits aircraft operation on any desired flight path within the coverage of station-referenced navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

**Area navigation route.** An ATS route established for the use of aircraft capable of employing area navigation

**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.

**ATIS application.** A FIS application that supports the D-ATIS.

**ATN directory services (DIR).** A service which provides the capability for an application entity or user in the ATN community to query a distributed directory data base and retrieve addressing, security and technical capabilities information relating to other users or entities within the ATN community

**ATN security services.** A set of information security provisions allowing the receiving end system or intermediate system to unambiguously identify (i.e. authenticate) the source of the received information and to verify the integrity of that information.

**ATN Systems Management (SM).** A collection of facilities to control, coordinate and monitor the resources which allow communications to take place in the ATN environment. These facilities include fault management, accounting management, configuration management, performance management and security management.

**ATS Communications (ATSC).** Communication related to air traffic services including air traffic control, aeronautical and meteorological information, position reporting and services related to safety and regularity of flight. This communication involves one or more air traffic service administrations. This term is used for purposes of address administration

**ATS direct speech circuit.** An aeronautical fixed service (AFS) telephone circuit, for direct exchange of information between air traffic services (ATS) units.

**ATS Interfacility Data Communication (AIDC).** Automated data exchange between air traffic services units, particularly in regard to co-ordination and transfer of flights.

**ATS Message Handling Service (ATSMHS).** An ATN application consisting of procedures used to exchange ATS messages in store-and-forward mode over the ATN such that the

conveyance of an ATS message is in general not correlated with the conveyance of another ATS message by the service provider.

**ATS Message Handling System (AMHS).** The set of computing and communication resources implemented by ATS organizations to provide the ATS message handling service.

**ATS route.** A specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.

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

**ATS Unit (ATSU).** A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

**Authentication.** A process used to ensure the identity of a person/user/network entity.

**Authorized path.** A communication path that the administrator(s) of the routing domain(s) has pre-defined as suitable for a given traffic type and category.

**Automatic Dependent Surveillance (ADS).** A surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position-fixing systems, including aircraft identification, four-dimensional position and additional data as appropriate.

**Automatic Dependent Surveillance - Broadcast (ADS-B).** A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

**Automatic Dependent Surveillance - Broadcast (ADS-B) OUT.** A function on an aircraft or vehicle that periodically broadcasts its state vector (position and velocity) and other information derived from on-board systems in a format suitable for ADS-B IN capable receivers.

**Automatic Dependent Surveillance - Broadcast (ADS-B) IN.** A function that receives surveillance data from ADS-B OUT data sources

**Automatic Dependent Surveillance - Contract (ADS-C).** A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

**ATS surveillance service.** A term used to indicate a service provided directly by means of an ATS surveillance system.

**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 mono-pulse SSR.*

**Automatic relay installation.** A teletypewriter installation where automatic equipment is used to transfer messages from incoming to outgoing circuits.

**Automatic telecommunication log.** A record of the activities of an aeronautical telecommunication station recorded by electrical or mechanical means.

**Automatic Terminal Information Service (ATIS).** The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof.

**Data Link - Automatic Terminal Information Service (D-ATIS).** The provision of ATIS via data link.

**Voice - Automatic Terminal Information Service (Voice-ATIS).** The provision of ATIS by means of continuous and repetitive voice broadcasts.

**Balloon.** A non-power-driven lighter-than-air aircraft.

*Note.* - For the purposes of this Part, this definition applies to free balloons.

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

**Base turn.** A turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal.

**Bit Error Rate (BER).** The number of bit errors in a sample divided by the total number of bits in the sample, generally averaged over many such samples.

**Blind transmission.** A transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission

**Broadcast.** A transmission of information relating to air navigation that is not addressed to a specific station or stations.

**Briefing.** Oral commentary on existing and/or expected meteorological conditions.

**Cabin crew member.** A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

**Calendar.** Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108\*).

**Canopy.** Bare Earth supplemented by vegetation height.

**Carrier-to-multipath ratio (C/M).** The ratio of the carrier power received directly, i.e. without reflection, to the multipath power, i.e. carrier power received via reflection.

**Carrier-to-noise density ratio (C/N).** The ratio of the total carrier power to the average noise power in a 1 Hz bandwidth, usually expressed in dBHz.

**Category A.** With respect to helicopters, means a multi-engine helicopter designed with engine and system isolation features specified in ICAO Annex 8, Part IVB and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

**Category B.** With respect to helicopters, means a single-engine or multi-engined helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed.

**Ceiling.** The height above the ground or water of the base of the lowest layer of cloud below 6,000 meters (20,000 feet) covering more than half the sky.

**Certify as airworthy (to).** To certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof.

**Change-over point.** The point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omnidirectional radio ranges is expected to

transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft

**Channel rate.** The rate at which bits are transmitted over the RF channel. These bits include those bits used for framing and error correction, as well as the information bits. For burst transmission, the channel rate refers to the instantaneous burst rate over the period of the burst.

**Channel rate accuracy.** This is relative accuracy of the clock to which the transmitted channel bits are synchronized. For example, at a channel rate of 1.2 Kbits/s, maximum error of one part in 10<sup>6</sup> implies the maximum allowed error in the clock is  $\pm 1.2 \times 10^{-3}$  Hz.

**Circuit mode.** A configuration of the communications network which gives the appearance to the application of a dedicated transmission path.

**Clearance limit.** The point to which an aircraft is granted an air traffic control clearance.

**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.

**Cloud of operational significance.** A cloud with the height of cloud base below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater, or a cumulonimbus cloud or a towering cumulus cloud at any height.

**Combined vision system (CVS).** A system to display images from a combination of an enhanced vision system (EVS) and a synthetic vision system (SVS).

**COMAT.** Operator material carried on an operator's aircraft for the operator's own purposes.

**Commercial air transport operation.** An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

**Common mark.** A mark assigned by the International Civil Aviation Organization to the common mark registering authority registering aircraft of an international operating agency on other than a national basis.

**Common mark registering authority.** The authority maintaining the non-national register or, where appropriate, the part thereof, in which aircraft of an international operating agency are registered.

**Communication centre.** An aeronautical fixed station which relays or retransmits telecommunication traffic from (or to) a number of other aeronautical fixed stations directly connected to it.

**Competency.** A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

**Competency element.** An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

**Competency unit.** A discrete function consisting of a number of competency elements.

**Conference communications.** Communication facilities whereby direct speech conversation may be conducted between three or more locations simultaneously

**Configuration (as applied to the aeroplane).** A particular combination of the positions of the moveable elements, such as wing flaps and landing gear, etc., that affect the aerodynamic characteristics of the aeroplane.

**Configuration deviation list (CDL).** A list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains,

where necessary, any information on associated operating limitations and performance correction.

**Configuration management.** An ATN systems management facility for managers to change the configuration of remote elements

**Congested Area.** In relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes.

**Congested hostile environment.** A hostile environment within a congested area.

**Consensus standard** means, for the purpose of certificating light-sport aircraft, an industry-developed consensus standard that applies to aircraft design, production, and airworthiness. It includes, but is not limited to, standards for aircraft design and performance, required equipment, manufacturer quality assurance systems, production acceptance test procedures, operating instructions, maintenance and inspection procedures, identification and recording of major repairs and major alterations, and continued airworthiness.

**Consultation.** Discussion with a meteorologist or another qualified person of existing and/or expected meteorological conditions relating to flight operations; a discussion includes answers to questions.

**Context Management (CM) application.** An ATN application that provides a log-on service allowing initial aircraft introduction into the ATN and a directory of all other data link applications on the aircraft. It also includes functionality to forward addresses between ATS units.

**Continuing Airworthiness.** The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

**Continuous descent final approach (CDFA).** A technique, consistent with stabilized approach procedures, for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare maneuver should begin for the type of aircraft flown.

**Control area.** A controlled airspace extending upwards from a specified limit above the earth.

**Controlled airport.** An airport at which air traffic control service is provided to airport traffic.

**Controlled airspace.** An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

**Controlled flight.** Any flight which is subject to an air traffic control clearance.

**Controller-Pilot Data Link Communications (CPDLC).** A means of communication between controller and pilot, using data link for ATC communications.

**Control zone.** A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

**Co-pilot.** A licensed pilot serving in any piloting capacity other than as pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

**CPDLC application.** An ATN application that provides a means of ATC data communication between controlling, receiving or downstream ATS units and the aircraft, using air-ground and ground-ground subnetworks, and which is consistent with the ICAO phraseology for the current ATC voice communication.

**Credit.** Recognition of alternative means or prior qualifications.



**Crew member.** A person assigned by an operator to duty on an aircraft during a flight duty period.

**Critical engine(s).** Any engine whose failure gives the most adverse effect on the aircraft characteristics relative to the case under consideration.

**Cross-country.** A flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.

**Cruise climb.** An aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases.

**Cruise relief pilot.** A flight crew member who is assigned to perform pilot tasks during cruise flight, to allow the PIC or a co-pilot to obtain planned rest.

**Cruising level.** A level maintained during a significant portion of a flight.

**Culture.** All man-made features constructed on the surface of the Earth by man, such as cities, railways, and canals.

**Current data authority.** The designated ground system through which a CPDLC dialogue between a pilot and a controller currently responsible for the flight is permitted to take place.

**Current flight plan.** The flight plan, including changes, if any, brought about by subsequent clearances.

**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.

**Dangerous goods.** Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

**Data integrity.** The probability that data has not been altered or destroyed.

**Data link communications.** A form of communication intended for the exchange of messages via a data link.

**D-METAR.** The symbol used to designate data link aviation weather report service.

**Data product specification.** Detailed description of a data set or data set series together with additional information that will enable it to be created, supplied to and used by another party.

**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.

**Data set.** Identifiable collection of data.

**Data set series.** Collection of data sets sharing the same product specification.

**Datum.** Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities.

**Decision Altitude (DA) or Decision Height (DH).** A specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

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

**Defined Point After Take-Off (DPATO).** The point, within the take-off and initial climb phase, before which the helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

**Defined Point Before Landing (DPBL).** The point, within the approach and landing phase, after which the helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

**Design landing mass (weight).** The maximum weight of the aircraft at which, for structural design purposes, it is assumed that it will be planned to land.

**Design take-off mass (weight).** The maximum weight at which the aircraft, for structural design purposes, is assumed to be planned to be at the start of the take-off run.

**Design taxiing mass (weight).** The maximum weight of the aircraft at which structural provision is made for load liable to occur during use of the aircraft on the ground prior to the start of take-off.

**DETRESFA.** The code word used to designate a distress phase.

**Digital Elevation Model (DEM).** The representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum.

**Discrete source damage.** Structural damage of the aeroplane that is likely to result from: impact with a bird, uncontained fan blade failure, uncontained engine failure, uncontained high energy rotating machinery failure or similar causes.

**Displaced threshold.** A threshold not located at the extremity of a runway.

**Distress phase.** A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

**Doppler shift.** The frequency shift observed at a receiver due to any relative motion between transmitter and receiver.

**Double channel simplex.** Simplex using two frequency channels, one in each direction.

**Downstream clearance.** A clearance issued to an aircraft by an air traffic control unit that is not the current controlling authority of that aircraft.

**Downstream data authority.** A designated ground system, different from the current data authority, through which the pilot can contact an appropriate ATC unit for the purposes of receiving a downstream clearance.

**Dual instruction time.** Flight time during which a person is receiving flight instruction from a properly authorized pilot on board the aircraft.

**Duplex.** A method in which telecommunication between two stations can take place in both directions simultaneously.

**Duty.** Any task that flight or cabin crew members are required by the operator to perform, including for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue.

**Duty period.** A period which starts when flight or cabin crew personnel are required by an operator to report for or to commence a duty and ends when that person is free from all duties.

**Effective acceptance bandwidth.** The range of frequencies with respect to the assigned frequency for which reception is assured when all receiver tolerances have been taken into account.

**Effective adjacent channel rejection.** The rejection that is obtained at the appropriate adjacent channel frequency when all relevant receiver tolerances have been taken into account.

**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.

**Electronic flight bag (EFB).** An electronic information system, comprised of equipment and applications, for flight crew which allows for storing, updating, displaying and processing of EFB functions to support flight operations or duties.

**Elevated heliport.** A heliport located on a raised structure on land.

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

**Ellipsoid height (Geodetic height).** The height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question.

**Emergency Locator Transmitter (ELT).** A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

- **Automatic Fixed ELT (ELT(AF)).** An automatically activated ELT which is permanently attached to an aircraft.
- **Automatic Portable ELT (ELT(AP)).** An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.
- **Automatic Deployable ELT (ELT(AD)).** An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.
- **Survival ELT (ELT(S)).** An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

**Emergency phase.** A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

**End-to-end.** Pertaining or relating to an entire communication path, typically from (1) the interface between the information source and the communication system at the transmitting end to (2) the interface between the communication system and the information user or processor or application at the receiving end.

**End System (ES).** A system that contains the OSI seven layers and contains one or more end user application processes.

**End-user.** An ultimate source and/or consumer of information.

**Energy per symbol to Noise density ratio ( $E_s/N_0$ ).** The ratio of the average energy transmitted per channel symbol to the average noise power in a 1 Hz bandwidth, usually expressed in dB. For A-BPSK and A-QPSK, one channel symbol refers to one channel bit.

**Engine.** A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for the functioning and control, but excludes the propeller/rotors (if applicable).

**Enhanced Vision System (EVS).** A system to display electronic real-time images of the external scene achieved through the use of image sensors.

*Note. EVS does not include night vision imaging systems (NVIS).*

**En-route phase.** That part of the flight from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.

**Entity.** An active element in any layer which can be either a software entity (such as a process) or a hardware entity (such as an intelligent I/O chip).

**Equivalent isotropically radiated power (e.i.r.p).** The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (*absolute or isotropic gain*).

**Error.** An action or inaction by an operational person that leads to deviations from organizational or the operational person's intentions or expectations.

*Note — See Attachment E of Annex 13 — Aircraft Accident and Incident Investigation for a description of operational personnel.*

**Error management.** The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired states.

*Note — See Attachment C to Chapter 3 of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868) and Circular 31-1 — Threat and Error Management (TEM) in Air Traffic Control\* for a description of undesired states.*

**Estimated off-block time.** The estimated time at which the aircraft will commence movement associated with departure.

**Estimated time of arrival.** For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the airport, the time at which the aircraft will arrive over the airport. For VFR flights, the time at which it is estimated that the aircraft will arrive over the airport.

**Expected approach time.** The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding fix to complete its approach for a landing.

**Extended diversion time operations (EDTO).** Any operation by an airplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the Authority.

**EDTO critical fuel.** The fuel quantity necessary to fly to an en-route alternate aerodrome considering, at the most critical point on the route, the most limiting system failure.

**EDTO-significant system.** An airplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an airplane during an EDTO diversion.

**Extended range operation.** Any flight by an aeroplane with two turbine power-units where the flight time at the one power-unit inoperative cruise speed (in ISA and still air conditions), from a point on the route to an adequate alternate aerodrome, is greater than the threshold time approved by the State of the Operator.

**Factor of safety.** A design factor used to provide for the possibility of loads greater than those assumed, and for uncertainties in design and fabrication.

**Fan marker beacon.** A type of radio beacon, the emissions of which radiate in a vertical fan-shaped pattern.

**Fatigue.** A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness, circadian phase, or workload (mental and/or physical activity) that can impair a crew member's alertness and ability to safely operate an aircraft or perform safety-related duties.

**Fatigue Risk Management System (FRMS).** A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.

**Fault management.** An ATN systems management facility to detect, isolate and correct problems.

**Feature.** Abstraction of real world phenomena.

**Feature attribute.** Characteristic of a feature.

**Filed flight plan.** The flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes.

**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.

**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 helicopters operating in performance Class 1, 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.

**Fireproof.** The capability to withstand the application of heat by a flame for a period of 15 minutes.

**Fireproof material.** A material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose.

**Fire resistant.** The capability to withstand the application of heat by a flame for a period of 5 minutes.

**FIS application.** An ATN application that provides to aircraft information and advice useful for the safe and efficient conduct of flights.

**Flight crew member.** A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

**Flight Data Analysis.** A process of analyzing recorded flight data in order to improve the safety of flight operations.

**Flight documentation.** Written or printed documents, including charts or forms, containing meteorological information for a flight.

**Flight duty period.** A period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which finishes when the airplane finally comes to rest and the engines are shut down at the end of the last flight on which he/she is a crew member.

**Flight information center.** A unit established to provide flight information service and alerting service.

**Flight information region.** An airspace of defined dimensions within which flight information service and alerting service are provided.

**Flight Information Service. (FIS).** A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

**Flight level.** A surface of constant atmospheric pressure which is related to a specific pressure datum, 1013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

**Flight manual.** A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

**Flight operations officer/flight dispatcher.** A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with Annex 1, who supports, briefs, and/or assists the pilot-in-command in the safe conduct of the flight.

**Flight plan.** Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

**Flight procedures trainer.** See Flight simulation training device.

**Flight recorder.** Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

**Flight safety documents system.** A set of inter-related documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operators' maintenance control manual.

**Flight simulation training device.** Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

**A flight simulator,** which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;

**A flight procedures trainer,** which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;

**A basic instrument flight trainer,** which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

**Flight simulator.** See Flight simulation training device.

**Flight time — airplanes.** The total time from the moment an airplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

*Note.* -- *Flight time as here defined is synonymous with the term "block to block" time or "chock to chock" time in general usage which is measured from time an airplane first moves for the purpose of taking off until it finally stops at the end of the flight.*

**Flight time — helicopters.** The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

**Flight visibility.** The visibility forward from the cockpit of an aircraft in flight.

**Forecast.** A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

**Forward Error Correction (FEC).** The process of adding redundant information to the transmitted signal in a manner which allows correction, at the receiver, of errors incurred in the transmission.

**Frequency channel.** A continuous portion of the frequency spectrum appropriate for a transmission utilizing a specified class of emission.

**Fully automatic relay installation.** A teletypewriter installation where interpretation of the relaying responsibility in respect of an incoming message and the resultant setting-up of the connections required to effect the appropriate retransmissions is carried out automatically, as well as all other normal operations of relay, thus obviating the need for operator intervention, except for supervisory purposes.

**Gain-to-noise temperature ratio.** The ratio, usually expressed in dB/K, of the antenna gain to the noise at the receiver output of the antenna subsystem. The noise is expressed as the temperature that a 1 ohm resistor must be raised to produce the same noise power density.

**GAMET area forecast.** An area forecast in abbreviated plain language for low-level flights for a flight information region or sub-area thereof, prepared by the meteorological office designated by the meteorological authority concerned and exchanged with meteorological offices in adjacent flight information regions, as agreed between the meteorological authorities concerned.

**General aviation operation.** An aircraft operation other than a commercial air transport operation or an aerial work operation.

**Geodesic distance.** The shortest distance between any two points on a mathematically defined ellipsoidal surface.

**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.

**Geoid undulation.** The distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid.

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

**Glider.** A non-power-driven heavier-than-air aircraft, deriving, its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

**Glider flight time.** The total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it comes to rest at the end of the flight.

**Gregorian calendar.** Calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar (ISO 19108\*).

**Grid point data in digital form.** Computer processed meteorological data for a set of regularly spaced points on a chart, for transmission from a meteorological computer to another computer in a code form suitable for automated use.

**Ground Earth Station (GES).** An earth station in the fixed satellite service, or, in some cases, in the aeronautical mobile-satellite service, located at a specified fixed point on land to provide a feeder link for the aeronautical mobile-satellite service.

**Ground handling.** Services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services

**Ground-to-air communication.** One-way communication from stations or locations on the surface of the earth to aircraft.

**Ground visibility.** The visibility at an airport, as reported by an accredited observer or by automatic systems.

**Gyroplane.** A heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors which rotate freely on substantially vertical axes.

**Heading.** The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid)

**Head-up display (HUD).** A display system that presents flight information into the pilot's forward external field of view.

**Heavier-than-air.** Any aircraft deriving its lift in flight chiefly from aerodynamic forces.

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

**Helicopter.** A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

**Helicopter stand.** An aircraft stand which provides for parking a helicopter and, where air taxiing operations are contemplated, the helicopter touchdown and lift-off.

**Helideck.** A heliport located on a floating or fixed off-shore structure.

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

**Heliport operating minima.** The limits of usability of a heliport 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.

**Holding procedure.** A predetermined manoeuvre which keeps an aircraft within a specified airspace while awaiting further clearance.

**Homing.** The procedure of using the direction-finding equipment of one radio station with the emission of another radio station, where at least one of the stations is mobile, and whereby the mobile station proceeds continuously towards the other station.



**Hostile environment.** An environment in which:

- (a) a safe forced landing cannot be accomplished because the surface and surrounding environment are inadequate; or
- (b) the helicopter occupants cannot be adequately protected from the elements; or
- (c) search and rescue response/capability is not provided consistent with anticipated exposure; or
- (d) there is an unacceptable risk of endangering persons or property on the ground.

**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.

**Human performance.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

**Hypsometric tints.** A succession of shades or colour gradations used to depict ranges of elevation.

**IFR.** The symbol used to designate the instrument flight rules.

**IFR flight.** A flight conducted in accordance with the instrument flight rules.

**IMC.** The symbol used to designate instrument meteorological conditions.

**INCERFA.** The code word used to designate an uncertainty phase.

**Incident.** An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

**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 approaches fix or point.

**Instrument approach operations.** An approach and landing using instrument for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

- (a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; and
- (b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

*Note: Lateral and vertical navigation guidance refers to the guidance provided either by:*

- a) a ground-based radio navigation aid; or*
- b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.*

**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. Instrument approach procedures are classified as follows:

**Non-precision approach (NPA) procedure.** An instrument approach procedure designed for 2D instrument approach operations Type A.

*Note: Non-precision procedures may be flown using a continuous descent final approach technique (CDFA). CDFA with advisory VNAV guidance calculated by on-board equipment (see PANS-OPS (Doc 8168), Volume I, part I, Section 4, Chapter I, paragraph 1.8.1) are considered 3D instrument approach operations. CDFA with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more information on CDFA refer to PANS-OPS (Doc 8168), Volume I, Section 1.7 and 1.8.*

**Approach procedure with vertical guidance (APV).** A performance-based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or B.

*Note: Refer to Subsection 8.8.1.7 paragraph (f) for instrument approach operation types.*

**Minimum Descent Altitude (MDA)** or minimum descent height (MDH). A specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.

**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: 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 approach procedures 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 procedure is referenced to the aerodrome elevation.*

**Inter-Centre Communications (ICC).** ICC is data communication between ATS units to support ATS, such as notification, coordination, transfer of control, flight planning, airspace management and air traffic flow management.

**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.

**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.

**Intermediate System (IS).** A system which performs relaying and routing functions and comprises the lowest three layers of the OSI reference model.

**International telecommunication service.** A telecommunication service between offices or stations of different States, or between mobile stations which are not in the same State, or are subject to different States.

**Internet communications service.** The internet communications service is an internetwork architecture which allows ground, air-to-ground and avionics data subnetworks to interoperate by adopting common interface services and protocols based on the ISO/OSI reference model.

**Interpilot air-to-air communication.** Two-way communication on the designated air-to-air channel to enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems.

**Isogonal.** A line on a map or chart on which all points have the same magnetic variation for a specified epoch.

**Isogriv.** A line on a map or chart which joins points of equal angular difference between the North of the navigation grid and Magnetic North.

**Isolated aerodrome.** A destination aerodrome for which there is no destination alternate aerodrome suitable for a given airplane type.

**Instrument flight time.** Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

**Instrument Meteorological Conditions (IMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

**Instrument ground time.** Time during which a pilot is practicing, on the ground, simulated instrument flight in a flight simulation training device approved by the Licensing Authority.

**Instrument time.** Instrument flight time or instrument ground time.

**Integrated survival suit.** A survival suit which meets the combined requirements of the survival suit and life jacket.

**Integrity (aeronautical data).** A degree of assurance that an aeronautical data and its value has not been lost nor altered since the data origination or authorized amendment.

**International airways volcano watch (IAVW).** International arrangements for monitoring and providing warnings to aircraft of volcanic ash in the atmosphere.

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

**International operating agency.** An agency of the kind contemplated in Article 77 of the Convention.

**Land distance available (LDA).** The length of runway which is declared available and suitable for the ground run of an airplane landing.

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

**Landing Decision Point (LDP).** The point used in determining landing performance from which, a power-unit failure occurring at this point, the landing may be safely continued or a balked landing initiated.

**Landing direction indicator.** A device to indicate visually the direction currently designated for landing and for take-off.

**Landing surface.** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft landing in a particular direction.

**Level.** A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

**Licensing Authority.** The Authority designated by a Contracting State as responsible for the licensing of personnel, in the case of Philippines, the Civil Aviation Authority of the Philippines, hereinafter referred to as "the Authority".

*Note.* — In the provisions of these Regulations, the Authority is deemed to have been given the following responsibilities by the State:

- (a) assessment of an applicant's qualifications to hold a license or rating;
- (b) issue and endorsement of licenses and ratings;
- (c) designation and authorization of approved persons;
- (d) approval of training courses;
- (e) approval of the use of flight simulation training devices and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a license or rating, and
- (f) validation of licenses issued by other Contracting States.

**Light-sport aircraft** means an aircraft, other than a helicopter or powered-lift that, since its original certification, has continued to meet the following:

- (1) A maximum takeoff weight of not more than--
  - (i) 660 pounds (300 kilograms) for lighter-than-air aircraft;
  - (ii) 1,320 pounds (600 kilograms) for aircraft not intended for operation on water; or
  - (iii) 1,430 pounds (650 kilograms) for an aircraft intended for operation on water.
- (2) A maximum airspeed in level flight with maximum continuous power (VH) of not more than 120 knots CAS under standard atmospheric conditions at sea level.
- (3) A maximum never-exceed speed (VNE) of not more than 120 knots CAS for a glider.
- (4) A maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices (VS1) of not more than 45 knots CAS at the aircraft's maximum certificated takeoff weight and most critical center of gravity.
- (5) A maximum seating capacity of no more than two persons, including the pilot.
- (6) A single, reciprocating engine, if powered.
- (7) A fixed or ground-adjustable propeller if a powered aircraft other than a powered glider.
- (8) A fixed or autofeathering propeller system if a powered glider.
- (9) A fixed-pitch, semi-rigid, teetering, two-blade rotor system, if a gyroplane.
- (10) A nonpressurized cabin, if equipped with a cabin.
- (11) Fixed landing gear, except for an aircraft intended for operation on water or a glider.
- (12) Fixed or repositionable landing gear, or a hull, for an aircraft intended for operation on water.
- (13) Fixed or retractable landing gear for a glider.

**Likely.** In the context of the medical provisions in Chapter 6, *likely* means with a probability of occurring that is unacceptable to the medical assessor.

**Lighter-than-air aircraft.** Any aircraft supported chiefly by its buoyancy in the air.

**Limit loads.** The maximum loads assumed to occur in the anticipated operating conditions.

**Load factor.** The ratio of a specified load to the weight of the aircraft, the former being expressed in terms of aerodynamic forces, inertia forces, or ground reactions.

**Location indicator.** A four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station.

**Logon address.** A specified code used for data link logon to an ATS unit.

**Magnetic variation.** The angular difference between True North and Magnetic North.

**Maintenance.** The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

**Maintenance organization's procedures manual.** A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

**Maintenance program.** A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

**Maintenance release.** A certification confirming that the maintenance work to which it relates has been complied with in accordance with the applicable standards of airworthiness, using approved data.

**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.

**Master Minimum Equipment List (MMEL).** A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

**Maximum diversion time.** Maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome.

**Maximum weight.** Maximum certificated take-off weight.

**Mean power (of a radio transmitter).** The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.

**Medical Assessment.** The evidence issued by a Contracting State that the license holder meets specific requirements of medical fitness.

**Medical assessor.** A physician, appointed by the Licensing Authority, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.

*Note 1: Medical assessors evaluate reports submitted to the Licensing Authority by medical examiners.*

*Note 2: Medical assessors are expected to maintain the currency of their professional knowledge. (per Memorandum Circular no. 05-16, series of 2016)*

**Medical examiner.** A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Licensing Authority, to conduct medical examinations of fitness of applicants for licenses or ratings for which medical requirements are prescribed.

**Message field.** An assigned area of a message containing specified elements of data.

**Metadata.** Data about data.

**METAR application.** A FIS application that supports the D-METAR. Open systems interconnection (OSI) reference model. A model providing a standard approach to network design introducing modularity by dividing the complex set of functions into seven more manageable, self-contained, functional layers. By convention these are usually depicted as a vertical stack.

**Meteorological authority.** The authority providing or arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State.

**Meteorological information.** Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

**Meteorological office.** An office designated to provide meteorological service for international air navigation.

**Meteorological operational channel.** A channel of the aeronautical fixed service (AFS), for the exchange of aeronautical meteorological information.

**Meteorological operational telecommunication network.** An integrated system of meteorological operational channels, as part of the aeronautical fixed service (AFS), for the exchange of aeronautical meteorological information between the aeronautical fixed stations within the network.

**Meteorological report.** A statement of observed meteorological conditions related to a specified time and location.

**Minimum Descent Altitude (MDA) or minimum descent height (MDH).** A specified altitude or height in a non-precision approach or circling approach below which descent must not be made without the required visual reference.

**Minimum En-route Altitude (MEA).** The altitude for an en-route segment that provides adequate reception of relevant navigation facilities and ATS communications, complies with the airspace structure and provides the required obstacle clearance.

**Minimum Equipment List (MEL).** A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.

**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 300 m (1 000 ft) above all objects located in the area contained within a sector of a circle of 46 km (25 NM) 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.

**Mobile surface station.** A station in the aeronautical telecommunication service, other than an aircraft station, intended to be used while in motion or during halts at unspecified points.

**Mode S subnetwork.** A means of performing an interchange of digital data through the use of secondary surveillance radar (SSR) Mode S interrogators and transponders in accordance with defined protocols

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

**Navigation specification.** A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specification:

*Required navigation performance (RNP) specification.* A navigation specification based on an area navigation that includes that requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

*Area navigation (RNAV) specification.* A navigation specification based on area navigation that does not include the requirements for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

*Note 1: The Performance based Navigation Manual (ICAO Doc 9613) Volume 2 contains detailed guidance on navigation specifications.*

*Note 2: The term RNP as previously defined as “a statement of the navigation performance, necessary for operation within a defined airspace”, has been removed from ICAO Annex 6 PART 1 as the concept of RNP has been overtaken by the concept of PBN. The term RNP in of Annex 6 is now solely used in context of navigation specifications that require performance monitoring and alerting. E.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in ICAO Doc 9613.*

**Network station.** An aeronautical station forming part of a radiotelephony network.

**Next data authority.** The ground system so designated by the current data authority through which an onward transfer of communications and control can take place.

**Night.** The hours between sunset and sunrise.

**Non-congested hostile environment.** A hostile environment outside a congested area.

**Non-hostile environment.** An environment in which:

- (a) a safe forced landing can be accomplished because the surface and surrounding environment are adequate;
- (b) the helicopter occupants can be adequately protected from the elements;
- (c) search and rescue response/capability is provided consistent with anticipated exposure; and
- (d) the assessed risk of endangering persons or property on the ground is acceptable.

**Non-network communications.** Radiotelephony communications conducted by a station of the aeronautical mobile service, other than those conducted as part of a radiotelephony network.

**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.

**Observation (meteorological).** The evaluation of one or more meteorological elements.

**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.

**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.

**Obstacle Free Zone (OFZ).** The airspace above the inner approach surface, inner transitional surfaces, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes.

**Offset frequency simplex.** A variation of single channel simplex wherein telecommunication between two stations is effected by using in each direction frequencies that are intentionally slightly different but contained within a portion of the spectrum allotted for the operation.

**Offshore operations.** Operations which routinely have a substantial proportion of the flight conducted over sea areas to or from offshore locations. Such operations include, but are not limited to, support of offshore oil, gas and mineral exploitation and sea-pilot transfer.

**Operation.** An activity or group of activities which are subject to the same or similar hazards and which require a set of equipment to be specified, or the achievement and maintenance of a set of pilot competencies, to eliminate or mitigate the risk of such hazards.

**Operational control communications.** Communications required for the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of a flight.

**Operational control.** The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

**Operational flight plan.** The operator's plan for the safe conduct of the flight based on considerations of helicopter performance, other operating limitations and relevant expected conditions on the route to be followed and at the heliports concerned.

**Operational planning.** The planning of flight operations by an operator.

**Operations manual.** A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

**Operator.** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

**Operator's maintenance control manual.** A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

**Operations in performance Class 1.** Operations with performance such that, in the event of a critical power- unit failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, unless the failure occurs prior to reaching the take-off decision point (TDP) or after passing the landing decision point (LDP), in which cases the helicopter must be able to land within the rejected take-off or landing area.

**Operations in performance Class 2.** Operations with performance such that, in the event of critical power-unit failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, except when the failure occurs early during the take-off maneuvers or late in the landing maneuver, in which cases a forced landing may be required.

**Operations in performance Class 3.** Operations with performance such that, in the event of a power-unit failure at any time during the flight, a forced landing will be required.

**Organization responsible for the type design.** The organization that holds the type certificate, or equivalent document, for an aircraft, engine or propeller type, issued by a Contracting State.



**Ornithopter.** A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on planes to which a flapping motion is imparted.

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

**Packet.** The basic unit of data transfer among communications devices within the network layer.

**Packet Layer Protocol (PLP).** A protocol to establish and maintain a connection between peer level entities at the network layer, and to transfer data packets between them. In the context of this standard, the term refers to the protocol defined by the ISO 8208 standard used in this document.

**Performance Class 1 helicopter.** A helicopter with performance such that, in case of engine failure, it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area.

**Performance Class 2 helicopter.** A helicopter with performance such that, in case of engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which cases a forced landing may be required.

**Performance Class 3 helicopter.** A helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.

**Performance criteria.** Simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved.

**Performance management.** An ATN systems management facility to monitor and evaluate the performance of the systems.

**Pilot (to).** To manipulate the flight controls of an aircraft during flight time.

**Pilot-in-command.** The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

**Pilot-in-command under supervision.** Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, in accordance with a method of supervision acceptable to the Licensing Authority.

**Point light.** A luminous signal appearing without perceptible length.

**Point of no return.** The last possible geographic point at which an airplane can proceed to the destination aerodrome as well as to an available en route alternate aerodrome for a given flight.

**Point-to-point.** Pertaining or relating to the interconnection of two devices, particularly end-user instruments. A communication path of service intended to connect two discrete end-users; as distinguished from broadcast or multipoint service.

**Portrayal.** Presentation of information to humans (ISO 19117\*).

**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.

**Power-unit.** A system of one or more engines and ancillary parts which are together necessary to provide thrust, independently of the continued operation of any other power-unit(s), but not including short period thrust-producing devices.

**Powered-lift.** A heavier-than-air aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight.

**Powered parachute** means a powered aircraft comprised of a flexible or semi-rigid wing connected to a fuselage so that the wing is not in position for flight until the aircraft is in motion. The fuselage of a powered parachute contains the aircraft engine, a seat for each occupant and is attached to the aircraft's landing gear.

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

**Pressure-altitude.** An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

**Prevailing visibility.** The greatest visibility value, observed in accordance with the definition of "visibility", which is reached within at least half the horizon circle or within at least half of the surface of the aerodrome. These areas could comprise contiguous or non-contiguous sectors.

**Primary frequency.** The radiotelephony frequency assigned to an aircraft as a first choice for air-ground communication in a radiotelephony network.

**Primary means of communication.** The means of communication to be adopted normally by aircraft and ground stations as a first choice where alternative means of communication exist.

**Printed communications.** Communications which automatically provide a permanent printed record at each terminal of a circuit of all messages which pass over such circuit.

**Problematic use of substances.** The use of one or more psychoactive substances by aviation personnel in a way that:

- (a) constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or
- (b) causes or worsens an occupational, social, mental or physical problem or disorder.

**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.

**Prognostic chart.** A forecast of a specified meteorological element(s) for a specified time or period and a specified surface or portion of airspace, depicted graphically on a chart.

**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.

**Protected service volume.** A part of the facility coverage where the facility provides a particular service in accordance with relevant SARPs and within which the facility is afforded frequency protection

**Psychoactive substances.** Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

**Quality assurance.** All the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfill requirements for quality.

**Quality control.** The operational techniques and activities that are used to fulfill requirements for quality.

**Quality management.** All activities of the overall management function that determine the quality policy, objectives and responsibilities, and implementing them by means such as quality planning, quality control, quality assurance and quality improvement within the quality system.

**Quality system.** Documented organizational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement.

**Radio bearing.** The angle between the apparent direction of a definite source of emission of electro-magnetic waves and a reference direction, as determined at a radio direction-finding station. A true radio bearing is one for which the reference direction is that of true North. A magnetic radio bearing is one for which the reference direction is that of magnetic North.

**Radio direction finding (RR S1.12).** Radiodetermination using the reception of radio waves for the purpose of determining the direction of a station or object.

**Radio direction-finding station (RR S1.91).** A radiodetermination station using radio direction finding.

**Radiotelephony network.** A group of radiotelephony aeronautical stations which operate on and guard frequencies from the same family and which support each other in a defined manner to ensure maximum dependability of air-ground communications and dissemination of air-ground traffic.

**RCP type.** A label (e.g. RCP 240) that represents the values assigned to RCP parameters for communication transaction time, continuity, availability and integrity.

**Readback.** A procedure whereby the receiving station repeats a received message or an appropriate part thereof back to the transmitting station so as to obtain confirmation of correct reception

**Regular station.** A station selected from those forming an en-route air-ground radiotelephony network to communicate with or to intercept communications from aircraft in normal conditions.

**Radiotelephony.** A form of radio communication primarily intended for the exchange of information in the form of speech.

**Rated air traffic controller.** An air traffic controller holding a license and valid ratings appropriate to the privileges to be exercised.

**Rating.** An authorization entered on or associated with a license and forming part thereof, stating special conditions, privileges or limitations pertaining to such license.

**Regional air navigation agreement.** Agreement approved by the Council of ICAO normally on the advice of a regional air navigation meeting.

**Relief.** The inequalities in elevation of the surface of the Earth represented on the aeronautical charts by contours, hypsometric tints, shading or spot elevations.

**Rendering (a Certificate of Airworthiness) valid.** The action taken by a Contracting State, as an alternative to issuing its own Certificate of Airworthiness, in accepting a Certificate of Airworthiness issued by any other Contracting State as the equivalent of its own Certificate of Airworthiness.

**Rendering (a license) valid** The action taken by a Contracting State, as an alternative to issuing its own license, in accepting a license issued by any other Contracting State as the equivalent of its own license.

**Repair.** The restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness

requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear.

**Repetitive Flight Plan (RPL).** A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

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

**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.

**Required Communication Performance (RCP).** A statement of the performance requirements for operational communication in support of specific ATM functions.

**Required Communication Performance type (RCP type).** A label (e.g. RCP 240) that represents the values assigned to RCP parameters for communication transaction time, continuity, availability and integrity.

**Required Navigation Performance (RNP).** A statement of the navigation performance necessary for operation within a defined airspace.

**Rescue Coordination Centre.** A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

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

**Rest Period.** A continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

**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.

**Return to Service (RTS).** A document signed by an authorized representative of an approved maintenance organization (AMO) in respect of an inspection, repair or modification on a complete aircraft, engine or propeller after it has received a Maintenance Release for the maintenance performed at an AMO.

*Note: An air operator's aircraft are returned to service following maintenance by a person specifically authorized by an AMO rather than by an individual on their own behalf. A return to service can only be signed when all maintenance has been completed, accounted for and a maintenance release signed as described in Parts 5 and 6. The person signing the RTS acts in the capacity of an authorized agent for the AMO and is certifying that the maintenance covered by the RTS was accomplished according to the air operator's continuous maintenance program. Responsibility for each step of the accomplished maintenance is borne by the person signing for that step and the RTS certifies the entire maintenance work package. This arrangement in no way reduces the responsibility of licensed aircraft maintenance technicians (AMT) or maintenance organizations for maintenance functions or tasks they perform or supervise. The RTS is required for all commercially operated aircraft including flight training aircraft having undergone maintenance at an AMO; however this may also be used for Non-Commercial aircraft.*

**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 (4 NM) on a 95 per cent containment basis.

**Rotorcraft.** A power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors.

**Routing Directory.** A list in a communication centre indicating for each addressee the outgoing circuit to be used.

**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.

**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 centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

**Safe forced landing.** Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

**State safety program.** An integrated set of regulations and activities aimed at improving safety.

**Safety management system.** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**Safety-sensitive personnel.** Persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers.

**Satisfactory evidence.** A set of documents or activities that a Contracting State accepts as sufficient to show compliance with an airworthiness requirement.

**Search and rescue services unit.** A generic term meaning, as the case may be, rescue coordination center, rescue subcenter or alerting post.

**Secondary frequency.** The radiotelephony frequency assigned to an aircraft as a second choice for air-ground communication in a radiotelephony network.

**Secondary surveillance radar (SSR).** A surveillance radar system which uses transmitters/receivers (interrogators) and transponders.

**Security management.** An ATN systems management facility for access control, authentication and data integrity.

**Semi-automatic relay installation.** A teletypewriter installation where interpretation of the relaying responsibility in respect of an incoming message and the resultant setting-up of the connections required to effect the appropriate retransmissions require the intervention of an operator but where all other normal operations of relay are carried out automatically.

**Series of flights.** Series of flights are consecutive flights that:

- (a) begin and end within a period of 24 hours; and

(b) are all conducted by the same pilot-in-command.

**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.

**SIGMET information.** Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations.

**Signal area.** An area on an aerodrome used for the display of ground signals.

**Sign a maintenance release (to).** To certify that maintenance work has been completed satisfactorily in accordance with the applicable Standards of airworthiness, by issuing the maintenance release referred to in Annex 6.

**Significant.** In the context of the medical provisions in Chapter 6, *significant* means to a degree or of a nature that is likely to jeopardize flight safety.

**Simplex.** A method in which telecommunication between two stations takes place in one direction at a time.

**Single channel simplex.** Simplex using the same frequency channel in each direction.

**Slotted aloha.** A random access strategy whereby multiple users access the same communications channel independently, but each communication must be confined to a fixed time slot. The same timing slot structure is known to all users, but there is no other coordination between the users.

**SNOWTAM.** A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format.

**Solo flight time.** Flight time during which a student pilot is the sole occupant of an aircraft.

**Special VFR flight.** A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

**Standard atmosphere.** An atmosphere defined as follows:

(a) the air is a perfect dry gas;

(b) the physical constants are:

– Sea level mean molar mass:

$$M_0 = 28.964420 \times 10^{-3} \text{ kg mol}^{-1}$$

– Sea level atmospheric pressure:

$$P_0 = 1013.250 \text{ hPa}$$

– Sea level temperature:

$$t_0 = 15^\circ\text{C}$$

$$T_0 = 288.15 \text{ K}$$

– Sea level atmospheric density:

$$\rho_0 = 1.225 \text{ 0 kg m}^{-3}$$

– Temperature of the ice point:

$$T_i = 273.15 \text{ K}$$

– Universal gas constant:

$$R^* = 8.31432 \text{ JK}^{-1} \text{ mol}^{-1}$$

(c) the temperature gradients are:

Geopotential altitude		Temperature gradient
(km)		(Kelvin per standard geopotential kilometre)
From	To	
-5.0	11.0	-6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8
47.0	51.0	0.0
51.0	71.0	-2.8
71.0	80.0	-2.0

**Standard isobaric surface.** An isobaric surface used on a worldwide basis for representing and analyzing the conditions in the atmosphere.

**State of Design.** The State having jurisdiction over the organization responsible for the type design.

**State of Manufacture.** The State having jurisdiction over the organization responsible for the final assembly of the aircraft, engine or propeller.

**State of Registry.** The State on whose register the aircraft is entered.

**State of the Aerodrome.** The State in whose territory the aerodrome is located.

**State of the Operator.** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

**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.

**Subnetwork.** An actual implementation of a data network that employs a homogeneous protocol and addressing plan and is under control of a single authority.

**Switched Virtual Circuit (SVC).** The primary circuit management technique provided within the ISO 8208 protocol. The network resources are dynamically allocated when needed and released when no longer required.

**Synthetic vision system (SVS).** A system to display data-derived synthetic images of the external scene from the perspective of the flight deck.

**System level requirement.** The system level requirement is a high-level technical requirement that has been derived from operational requirements, technological constraints and regulatory constraints (administrative basis for the functional requirements and lower-level requirements).

**Take-off and initial climb phase.** That part of the flight from the start of take-off to 300 m (1,000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases.

**Take-off Decision Point (TDP).** The point used in determining take-off performance from which, a power-unit failure occurring at this point, either a rejected take-off may be made or a take-off safely continued.

**Take-off surface.** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking off in a particular direction.

**Target Level of Safety (TLS).** A generic term representing the level of risk which is considered acceptable in particular circumstances.

**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.
- (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 airplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

**Telecommunication (RR S1.3).** Any transmission, emission, or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.

**Teletypewriter tape.** A tape on which signals are recorded in the 5-unit Start-Stop code by completely severed perforations (Chad Type) or by partially severed perforations (Chadless Type) for transmission over teletypewriter circuits.

**Terminal control area.** A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes.

**Terminal Arrival Altitude (TAA).** The lowest altitude that will provide a minimum clearance of 300 m (1 000 ft) 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.

**Threat.** Events or errors that occur beyond the influence of an operational person, increase operational complexity and must be managed to maintain the margin of safety.

*Note.* — See Attachment E of Annex 13 — Aircraft Accident and Incident Investigation for a description of operational personnel.

**Threat management.** The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states.

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



**Threshold time.** The range, expressed in time, established by the Authority, to an en-route alternate aerodrome, whereby any time beyond requires an EDTO approval from the Authority.

**Time Division Multiplex (TDM).** A channel sharing strategy in which packets of information from the same source but with different destinations are sequenced in time on the same channel.

**Time Division Multiple Access (TDMA).** A multiple access scheme based on time-shared use of an RF channel employing: (1) discrete contiguous time slots as the fundamental shared resource; and (2) a set of operating protocols that allows users to interact with a master control station to mediate access to the channel.

**“Torn-tape” relay installation.** A teletypewriter installation where messages are received and relayed in teletypewriter tape form and where all operations of relay are performed as the result of operator intervention.

**Touchdown.** The point where the nominal glide path intercepts the runway.

**Touchdown and Lift-Off Area (TLOF).** A load bearing area on which a helicopter may touch down or lift off.

**Touchdown zone.** The portion of a runway, beyond the threshold, where it is intended landing airplanes first contact 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).

**Traffic avoidance advice.** Advice provided by an air traffic services unit specifying maneuvers to assist a pilot to avoid a collision.

**Traffic information.** Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

**Traffic Information Service-Broadcast (TIS-B) IN.** A surveillance function that receives and processes surveillance data from TIS-B OUT data sources.

**Traffic Information Service-Broadcast (TIS-B) OUT.** A function on the ground that periodically broadcasts the surveillance information made available by ground sensors in a format suitable for TIS-B IN capable receivers.

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

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

**Transit delay.** In packet data systems, the elapsed time between a request to transmit an assembled data packet and an indication at the receiving end that the corresponding packet has been received and is ready to be used or forwarded

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

**Tributary station.** An aeronautical fixed station that may receive or transmit messages and/or digital data but which does not relay except for the purpose of serving similar stations connected through it to a communication centre.

**Tropical cyclone.** Generic term for a non-frontal synoptic-scale cyclone originating over tropical or sub-tropical waters with organized convection and definite cyclonic surface wind circulation.

**Tropical Cyclone Advisory Centre (TCAC).** A meteorological centre designated by regional air navigation agreement to provide advisory information to meteorological watch offices, world area forecast centers and international OPMET data banks regarding the position, forecast direction and speed of movement, central pressure and maximum surface wind of tropical cyclones.

**Total estimated elapsed time.** For IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from take-off to arrive over the destination aerodrome.

**Total Vertical Error (TVE).** The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level).

**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).

**Traffic avoidance advice.** Advice provided by an air traffic services unit specifying maneuvers to assist a pilot to avoid a collision.

**Traffic information.** Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

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

**Type Certificate.** A document issued by a Contracting State to define the design of an aircraft, engine or propeller type and to certify that this design meets the appropriate airworthiness requirements of that State.

**Type design.** The set of data and information necessary to define an aircraft, engine or propeller type for the purpose of airworthiness determination.

**Uncertainty phase.** A situation wherein uncertainty exists as to the safety of an aircraft and its occupants

**Ultimate load.** The limit load multiplied by the appropriate factor of safety.

**Unmanned free balloon.** A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

**Upper-air chart.** A meteorological chart relating to a specified upper-air surface or layer of the atmosphere.

**Upper Layers (UL) communications service.** A term pertaining to the session, presentation and application layers of the OSI reference model.

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

**VFR.** The symbol used to designate the visual flight rules.

**VFR flight.** A flight conducted in accordance with the visual flight rules.

**VHF Digital Link (VDL).** A constituent mobile subnetwork of the aeronautical telecommunication network (ATN), operating in the aeronautical mobile VHF frequency band. In addition, the VDL may provide non-ATN functions such as, for instance, digitized voice.

**Visibility.** Visibility for aeronautical purposes is the greater of:

- (a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;
- (b) the greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background.

**Visual approach procedure.** A series of predetermined manoeuvres 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.

**Visual Meteorological Conditions (VMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling\*, equal to or better than specified minima.

**VMC.** The symbol used to designate visual meteorological conditions.

**Volcanic Ash Advisory Centre (VAAC).** A meteorological centre designated by regional air navigation agreement to provide advisory information to meteorological watch offices, area control centers, flight information centers, world area forecast centers and international OPMET data banks regarding the lateral and vertical extent and forecast movement of volcanic ash in the atmosphere following volcanic eruptions.

**VOLMET.** Meteorological information for aircraft in flight.

**Data link-VOLMET (D-VOLMET).** Provision of current aerodrome routine meteorological reports (METAR) and aerodrome special meteorological reports (SPECI), aerodrome forecasts (TAF), SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET via data link.

**VOLMET broadcast.** Provision, as appropriate, of current METAR, SPECI, TAF and SIGMET by means of continuous and repetitive voice broadcasts.

**$V_{TOSS}$ .** The minimum speed at which climb shall be achieved with the critical power-unit inoperative, the remaining power-units operating within approved operating limits.

**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:

**Fly-by waypoint.** A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure, or

**Flyover waypoint.** A waypoint at which a turn is initiated in order to join the next segment of a route or procedure.

**Weight-shift-control aircraft** means a powered aircraft with a framed pivoting wing and a fuselage controllable only in pitch and roll by the pilot's ability to change the aircraft's center of gravity with respect to the wing. Flight control of the aircraft depends on the wing's ability to flexibly deform rather than the use of control surfaces.

**World Area Forecast Centre (WAFC).** A meteorological centre designated to prepare and issue significant weather forecasts and upper-air forecasts in digital form on a global basis direct to States by appropriate means as part of the aeronautical fixed service.

**World Area Forecast System (WAFS).** A worldwide system by which world area forecast centers provide aeronautical meteorological en-route forecasts in uniform standardized formats.

**Z marker beacon.** A type of radio beacon, the emissions of which radiate in a vertical cone-shaped pattern.

**Terms used with a limited meaning:**

For the purpose of these Regulations, the following terms are used with a limited meaning as indicated below:

- (a) to avoid confusion in respect of the term “service” between the meteorological service considered as an administrative entity and the service which is provided, “meteorological authority” is used for the former and “service” for the latter;
- (b) “provide” is used solely in connection with the provision of service;
- (c) “issue” is used solely in connection with cases where the obligation specifically extends to sending out the information to a user;
- (d) “make available” is used solely in connection with cases where the obligation ends with making the information accessible to a user; and
- (e) “supply” is used solely in connection with cases where either (c) or (d) applies.