



**REPUBLIC OF INDONESIA
MINISTRY OF TRANSPORTATION**

CIVIL AVIATION SAFETY REGULATION (CASR)

PART 1

Revision 1

DEFINITIONS AND ABBREVIATIONS

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Definitions and Abbreviations

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CIVIL AVIATION SAFETY REGULATIONS (CASR)

Part 1 – *Definitions and Abbreviations*

1.1 General definitions.

When the following terms are used in the regulations of Civil Aviation Safety Regulations (CASR), unless the context requires otherwise, they have the following means :

Accident. An occurrence associated with the operation of an aircraft which takes place between the time 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.

Accountable manager mean designed an organization employee.

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

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.

Accredited representative. A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State.

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

Adviser. A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

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

Advisory Circular (AC) means DGCA guidance methods compliance with regulations.

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 service such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement.

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

Aerodrome / Airport certificate. A certificate issued by the appropriate authority under applicable regulations for the operation of an aerodrome.

Aerodrome beacon. Aeronautical beacon used to indicate the location of an aerodrome from the air.

Aerodrome identification sign. A sign placed on an aerodrome to aid in identifying the aerodrome from the air.

Aerodrome control service. Air traffic control service for aerodrome traffic.

Aerodrome control tower. A unit established to provide air traffic control service to aerodrome traffic.

Aerodrome traffic. All traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

Aerodrome traffic zone. An airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

Aerodrome operating minima. The limits of usability of an aerodrome for:

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

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

Aerodrome climatological table. Table providing statistical data on the observed occurrence of one or more meteorological elements at an aerodrome.

Aerodrome control tower. A unit established to provide air traffic control service to aerodrome traffic.

Aerodrome elevation. The elevation of the highest point of the landing area.

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

Aerodrome reference point. The designated geographical location of an aerodrome.

Aerodrome traffic density.

- a) Light. Where the number of movements in the mean busy hour is not greater than 15 per runway or typically less than 20 total aerodrome movements.
- b) Medium. Where the number of movements in the mean busy hour is of the order of 16 to 25 per runway or typically between 20 to 35 total aerodrome movements.
- c) Heavy. Where the number of movements in the mean busy hour is of the order of 26 or more per runway or typically more than 35 total aerodrome movements.

Aerodynamic coefficients means nondimensional coefficients for aerodynamic forces and moments.

Aeronautical beacon. An aeronautical ground light visible at all azimuths, either continuously or intermittently, to designate a particular point on the surface of the earth.

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

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

Aeronautical 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 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 ground light. Any light specially provided as an aid to air navigation, other than a light displayed on an aircraft.

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

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

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.

AIP Amendment. Permanent changes to the information contained in the AIP.

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

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

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

Assemble. A process of merging data from multiple sources into a database and establishing a baseline for subsequent processing.

AIS product. Aeronautical information provided in the form of the elements of the Integrated Aeronautical Information Package (except NOTAM and PIB), including aeronautical charts, or in the form of suitable electronic media.

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 radiobeacon stations may also participate in this service on designated distress and emergency frequencies.

Aeronautical mobile ®* 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 radiobeacon stations may also participate in this service.

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

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

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

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 subnetworks to interoperate by adopting common interface services and protocols based on the International Organization for Standardization (ISO) Open Systems Interconnection (OSI) reference model.

AIDC (ATS interfacility data communication) 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.

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.

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 operational control in telecommunications. 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.

AIRAC. An acronym (aeronautical information regulation and control) signifying a system aimed at advance notification based on common effective dates, of circumstances that necessitate significant changes in operating practices.

Airbase means an area of land and/or water within the territory of the Republic of Indonesia which is used for the aviation activities of the Armed force of the Republic of Indonesia

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.

Air carrier means a person who undertakes directly by lease, or other arrangement, to engage in air transportation.

Air Carrier/Air Operator Certificate Holder mean a person who undertakes directly by lease or other arrangements to engage in air transportation.

Air commerce means interstate, overseas, or foreign air commerce or the transportation of mail by aircraft or any operation or navigation of aircraft within the limits of any airway or any operation or navigation of aircraft which directly affects, or which may endanger safety in, interstate, overseas, or foreign air commerce.

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 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. aeroplane, 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 classification number (ACN). A number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category.

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

Aircraft engine means an engine that is used or intended to be used for propelling aircraft. It includes turbosuperchargers, appurtenances, and accessories necessary for its functioning, but does not include propellers.

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

Aircraft operation 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.

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

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

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.

Air defence identification zone (ADIZ). 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).

Airframe means the fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of engines), and landing gear of an aircraft and their accessories and controls.

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

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.

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 operation.

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.

Airplane reference field length. The minimum field length required for take-off at maximum certificated take-off mass, sea level, standard atmospheric conditions, still air and zero runway slope, as shown in the appropriate aeroplane flight manual prescribed by the certificating authority or equivalent data from the aeroplane manufacturer. Field length means balanced field length for aeroplanes, if applicable, or take-off distance in other cases.

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

Airship means an engine driven lighter-than-air aircraft that can be steered.

Airspace means the airspace over the land and water areas of Republic of Indonesia.

Air-taxiing. Movement of a helicopter/VTOL above the surface of an aerodrome, 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 means aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas or All aircraft in flight or operating on the manoeuvring area of an aerodrome.

Air traffic clearance means an authorization by air traffic control, for the purpose of preventing collision between known aircraft, for an aircraft to proceed under specified traffic conditions within controlled airspace.

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 means a service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

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 manoeuvring 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 aerodrome control tower.

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

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.

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

ATSC class. The ATSC class parameter enables the ATSC user to specify the quality of service expected for the offered data. The ATSC class value is specified in terms of ATN end-to-end transit delay at 95 per cent probability.

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 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 services (ATSMHS). Procedures used to exchange ATS messages 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 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 terminal information service (ATIS). The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof.

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

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.

Air Traffic Service (ATS) route is a specified route designated for channeling the flow of traffic as necessary for the provision of air traffic services. The term “ATS route” refers to a variety of airways, including jet routes, area navigation (RNAV) routes, and

arrival and departure routes. An ATS route is defined by route specifications, which may include:

- (1) An ATS route designator;
- (2) The path to or from significant points;
- (3) Distance between significant points;
- (4) Reporting requirements; and
- (5) The lowest safe altitude determined by the appropriate authority.

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

Air transport means any activity using an aircraft for carrying passengers, cargo and/or post in one or more trips from one airport to another .

Air Transportation Service, the operation for remuneration, including positioning flights, of any aircraft, which is listed on the air carrier's Air operating certificate.

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

Airworthy. Conform to type design and condition for safe operation.

Airworthiness Certificate/Certificate of Airworthiness (C of A) means A document issued by a DGCA to an individual aircraft and the aircraft meets the appropriate airworthiness requirements.

Airworthiness Directive (AD) means the legally enforceable rules that apply to the following products : aircraft, aircraft engines, propellers, and appliances.

Alert Area. An alert area is established to inform pilots of a specific area wherein a high volume of pilot training or an unusual type of aeronautical activity is conducted.

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 aerodrome. An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing. Alternate aerodromes include the following:

Alternate airport means an airport at which an aircraft may land if a landing at the intended airport becomes inadvisable.

Take-off alternate. An alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

En-route alternate. An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en route.

ETOPS en-route alternate. A suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing an engine shutdown or other abnormal or emergency condition while en route in an ETOPS operation.

Destination alternate. An alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Adequate Alternate Airport/Aerodrome Is one at which landing performance requirements can be met and has the necessary facilities and services.

Alternate heliport. A heliport specified in the flight plan to which a flight may proceed when it becomes inadvisable to land at the heliport of intended landing.

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

Altitude engine means a reciprocating aircraft engine having a rated takeoff power that is producible from sea level to an established higher altitude.

Ampere (A). The ampere is that constant electric current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in vacuum, would produce between these conductors a force equal to 2×10^{-7} newton per metre of length.

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.

Appliance means any instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft, and is not part of an airframe, engine, or propeller.

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 aerodromes.

Approach and landing operations using instrument approach procedures. Instrument approach and landing operations are classified as follows:

Non-precision approach and landing operations. An instrument approach and landing which utilizes lateral guidance but does not utilize vertical guidance.

Approach and landing operations with vertical guidance. An instrument approach and landing which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.

Precision approach and landing operations. An instrument approach and landing using precision lateral and vertical guidance with minima as determined by the category of operation.

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 balked landing point.

Appropriate airworthiness requirements. The comprehensive and detailed airworthiness codes established, adopted or accepted by a State for the class of aircraft, engine or propeller under consideration.

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 overflown.

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

Approved. Accepted by a Directorate General of Civil Aviation as suitable for a particular purpose.

Approved maintenance organization. An organization approved by a DGCA, in accordance with the requirements of CASR Part 145 - Aircraft Maintenance, to perform maintenance, preventive maintenance, or alterations of an aircraft, airframe, aircraft engine, propeller, appliances, or components of aircraft or parts thereof and operating under supervision approved by DGCA.

Approved training. Training carried out under special curricula and supervision approved by a Contracting State.

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

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 lowest altitude to be used under instrument meteorological conditions (IMC) that will provide a minimum vertical clearance of 300 m (1 000 ft) or in designated mountainous terrain 600 m (2 000 ft) above all obstacles located in the area specified, rounded up to the nearest (next higher) 30 m (100 ft).

Area navigation (RNAV) means a method of navigation that permits aircraft operations on any desired course within the coverage of station referenced navigation signals or within the limits of self-contained system capability.

Area navigation high route means an area navigation route within the airspace extending upward from, and including, 18,000 feet MSL to flight level 450.

Area navigation low route means an area navigation route within the airspace extending upward from 1,200 feet above the surface of the earth to, but not including, 18,000 feet MSL.

Area navigation (RNAV) is a method of navigation that permits aircraft operations on any desired flight path.

Area navigation (RNAV) route is an ATS route based on RNAV that can be used by suitably equipped aircraft.

Armed Forces means the Army, Navy, Air Force, and , including their regular and reserve components and members serving without component status.

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

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

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

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.

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 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.

Autorotation means a rotorcraft flight condition in which the lifting rotor is driven entirely by action of the air when the rotorcraft is in motion.

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.

Auxiliary rotor means a rotor that serves either to counteract the effect of the main rotor torque on a rotorcraft or to maneuver the rotorcraft about one or more of its three principal axes.

Aviation means anything relating to the use of airspace , aircraft, airports, concerning air transport, aviation security and safety, and other related activities and supporting facilities.

Balloon means a lighter-than-air aircraft that is not engine driven, and that sustains flight through the use of either gas buoyancy or an airborne heater.

Becquerel (Bq). The activity of a radionuclide having one spontaneous nuclear transition per second.

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

By-pass ratio. The ratio of the air mass flow through the by-pass ducts of a gas turbine engine to the air mass flow through the combustion chambers calculated at maximum thrust when the engine is stationary in an international standard atmosphere at sea level.

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.

Brake horsepower means the power delivered at the propeller shaft (main drive or main output) of an aircraft engine.

Cabin Altitude means the pressure inside the cabin of an aircraft in flight ,expressed in feet above Mean Sea Level (MSL).

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.

Calibrated airspeed means the indicated airspeed of an aircraft, corrected for position and instrument error. Calibrated airspeed is equal to true airspeed in standard atmosphere at sea level.

Candela (cd). The luminous intensity, in the perpendicular direction, of a surface of 1/600 000 square metre of black body at the temperature of freezing platinum under a pressure of 101 325 newtons per square metre.

Canard means the forward wing of a canard configuration and may be a fixed, movable, or variable geometry surface, with or without control surfaces.

Canard configuration means a configuration in which the span of the forward wing is substantially less than that of the main wing.

Canopy. Bare Earth supplemented by vegetation height.

Capacitor discharge light. A lamp in which high-intensity flashes of extremely short duration are produced by the discharge of electricity at high voltage through a gas enclosed in a tube.

Captain. A pilot qualified on an aircraft and responsible for the safe operation of that aircraft.

Cargo aircraft. Any aircraft, other than a passenger aircraft, which is carrying goods or property.

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/No). The ratio of the total carrier power to the average noise power in a 1 Hz bandwidth, usually expressed in dBHz.

Category:

- (1) As used with respect to the certification, ratings, privileges, and limitations of airmen, means a broad classification of aircraft. Examples include: airplane; rotorcraft; glider; and lighter-than-air; and
- (2) As used with respect to the certification of aircraft, means a grouping of aircraft based upon intended use or operating limitations. Examples include: transport, normal, utility, acrobatic, limited, restricted, and provisional.

Category A, with respect to transport category rotorcraft, means multiengine rotorcraft designed with engine and system isolation features specified in Part 29 and utilizing scheduled takeoff and landing operations under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight in the event of engine failure.

Category B, with respect to transport category rotorcraft, means single engine or multiengine rotorcraft which do not fully meet all Category A standards. Category B rotorcraft have no guaranteed stay up ability in the event of engine failure and unscheduled landing is assumed.

Categories of precision approach and landing operations:

Category I (CAT I) operation. A precision instrument approach and landing with a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550m.

Category II (CAT II) operation.

1. A precision instrument approach and landing with a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft), and a runway visual range not less than 350 m.
2. with respect to the operation of aircraft, means a straight-in ILS approach to the runway of an airport under a Category II ILS instrument approach procedure issued by the DGCA or other appropriate authority.

Category III operations, with respect to the operation of aircraft, means an ILS approach to, and landing on, the runway of an airport using a Category III ILS instrument approach procedure issued by the DGCA or other appropriate authority.

Category IIIA (CAT IIIA) operation. A precision instrument approach and landing with:

- a) a decision height lower than 30 m (100 ft) or no decision height; and
- b) a runway visual range not less than 200 m (700 feet).

Category IIIB (CAT IIIB) operation. A precision instrument approach and landing with:

- a) a decision height lower than 15 m (50 ft) or no decision height; and
- b) a runway visual range less than 200 m (700 feet) but not less than 50 m (150 feet).

Category IIIC (CAT IIIC) operation. A precision instrument approach and landing with no decision height and no runway visual range limitations.

Causes. Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident.

Celsius temperature (t°C). The Celsius temperature is equal to the difference $t^{\circ}\text{C} = T - T_0$ between two thermodynamic temperatures T and T_0 where T_0 equals 273.15 kelvin.

Ceiling. The height above the ground or water of the base of the lowest layer of cloud below 6 000 metres (20 000 feet) covering more than half the sky **or** means the height above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken", "overcast", or "obscuration", and not classified as "thin" or "partial".

Certificate means a document issued by, or on behalf of DGCA which confirms a regulatory standard as described in document, has been met. A certificate does not convey any authority to act.

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.

Certified aerodrome/airport. An aerodrome whose operator has been granted an aerodrome certificate.

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 10^6 implies the maximum allowed error in the clock is $\pm 1.2 \times 10^{-3}$ Hz.

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.

Charter Air Carrier means any air carrier that provides an air transportation service on a non-scheduled basis.

Civil aircraft means aircraft other than public aircraft.

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

Class:

(1) As used with respect to the certification, ratings, privileges, and limitations of airmen, means a classification of aircraft within a category having similar operating characteristics. Examples include: single engine; multiengine; land; water; gyroplane; helicopter; airship; and free balloon; and

(2) As used with respect to the certification of aircraft, means a broad grouping of aircraft having similar characteristics of propulsion, flight, or landing. Examples include: airplane; rotorcraft; glider; balloon; landplane; and seaplane.

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.

Clearway means:

(1) For turbine engine powered airplanes certificated after August 29, 1959, an area beyond the runway, not less than 500 feet wide, centrally located about the extended centerline of the runway, and under the control of the airport authorities.

The clearway is expressed in terms of a clearway plane, extending from the end of the runway with an upward slope not exceeding 1.25 percent, above which no object nor any terrain protrudes. However, threshold lights may protrude above the plane if their height above the end of the runway is 26 inches or less and if they are located to each side of the runway.

(2) For turbine engine powered airplanes certificated after September 30, 1958, but before August 30, 1959, an area beyond the takeoff runway extending no less than 300 feet on either side of the extended centerline of the runway, at an elevation no higher than the elevation of the end of the runway, clear of all fixed obstacles, and under the control of the airport authorities.

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

Climb phase. The operating phase defined by the time during which the engine is operated in the climb operating mode.

Climbout speed, with respect to rotorcraft, means a referenced airspeed which results in a flight path clear of the height/velocity envelope during initial climbout.

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.

Co-authority dispatch means the shared authority between the PIC and Flight Operation Officer in the formulation of an operational flight plan and flight release.

Collision avoidance logic. The sub-system or part of ACAS that analyses data relating to an intruder and own aircraft, decides whether or not advisories are appropriate and, if so, generates the advisories. It includes the following functions: range and altitude tracking, threat detection and RA generation. It excludes surveillance.

Commercial air transport means any public air transport for remuneration involving collection of fee.

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

Commercial operator means a person who, for compensation or hire, engages in the carriage by aircraft in air commerce of persons or property, other than as an air carrier or foreign air carrier or under the authority. Where it is doubtful that an operation is for "compensation or hire", the test applied is whether the carriage by air is merely incidental to the person's other business or is, in itself, a major enterprise for profit.

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 Check. (CC). Any required operational check performed on company personnel (other than flight crewmembers), by company supervisory personnel duly authorized to perform that check.

Company Check Pilot (CCP). An employee of an air carrier who is the holder of a delegation of authority issued by the Director, authorizing the conduct of certain types of flight checks.

Commuter Air Carrier. any air carrier that provides an air transportation service on a scheduled basis.

Consignment. One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address.

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

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 (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 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.

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) server. An ATS facility that is capable of providing application information relating to other ATSUs to requesting aircraft or ATSUs.

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.

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

Contracting State. Any country or state, which is a signatory to the Convention of the International Civil Aviation Organization, or any other country acceptable to the Director.

Controlled airspace means an airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.

Note - Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E airspace.

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

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

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

Controlled Firing Area. A controlled firing area is established to contain activities, which if not conducted in a controlled environment, would be hazardous to nonparticipating aircraft.

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

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.

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

Controlled Firing Area. A controlled firing area is established to contain activities, which if not conducted in a controlled environment, would be hazardous to nonparticipating aircraft.

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.

Core Curriculum - means a set of courses approved by the Director, for use by a training center and its satellite training centers. The core curriculum consists of training which is required for certification. It does not include training for tasks and circumstances unique to a particular user.

Coulomb ©. The quantity of electricity transported in 1 second by a current of 1 ampere.

Crewmember means a person assigned to perform duty in an aircraft during flight time or A person assigned by an operator to duty on an aircraft during a flight duty period.

Critical altitude means the maximum altitude at which, in standard atmosphere, it is possible to maintain, at a specified rotational speed, a specified power or a specified manifold pressure. Unless otherwise stated, the critical altitude is the maximum altitude at which it is possible to maintain, at the maximum continuous rotational speed, one of the following: (1) The maximum continuous power, in the case of engines for which this power rating is the same at sea level and at the rated altitude. (2) The maximum

continuous rated manifold pressure, in the case of engines, the maximum continuous power of which is governed by a constant manifold pressure.

Critical engine means the engine whose failure would most adversely affect the performance or handling qualities of an aircraft.

Critical power-unit(s). The power-unit(s) failure of which gives the most adverse effect on the aircraft characteristics relative to the case under consideration.

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

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

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

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.

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.

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

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.

Dangerous goods accident. An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or

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

Database. One or more files of data so structured that appropriate applications may draw from the files and update them.

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

Data product. Data set or data set series that conforms to a data product specification.

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 meets 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.

Date of manufacture. The date of issue of the document attesting that the individual aircraft or engine as appropriate conforms to the requirements of the type or the date of an analogous document.

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 the precision approach or approach with vertical guidance 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.

Declared distances.

- a) Take-off run available (TORA). The length of runway declared available and suitable for the ground run of an aeroplane taking off.

- b) Take-off distance available (TODA). The length of the take-off run available plus the length of the clearway, if provided.
- c) Accelerate-stop distance available (ASDA). The length of the take-off run available plus the length of the stopway, if provided.
- d) Landing distance available (LDA). The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

Declared distances - heliports.

- a) Take-off distance available (TODAH). The length of the final approach and take-off area plus the length of helicopter clearway (if provided) declared available and suitable for helicopters to complete the take-off.
- b) Rejected take-off distance available (RTODAH). The length of the final approach and take-off area declared available and suitable for performance class 1 helicopters to complete a rejected take-off.
- c) Landing distance available (LDAH). The length of the final approach and take-off area plus any additional area declared available and suitable for helicopters to complete the landing manoeuvre from a defined height.

Defined point before landing. 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.

Degree Celsius (°C). The special name for the unit kelvin for use in stating values of Celsius temperature.

De-icing/anti-icing facility. A facility where frost, ice or snow is removed (de-icing) from the aeroplane to provide clean surfaces, and/or where clean surfaces of the aeroplane receive protection (anti-icing) against the formation of frost or ice and accumulation of snow or slush for a limited period of time.

De-icing/anti-icing pad. An area comprising an inner area for the parking of an aeroplane to receive de-icing/anti-icing treatment and an outer area for the manoeuvring of two or more mobile de-icing/anti-icing equipment.

Dependent parallel approaches. Simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway centre lines are prescribed.

Derivative version. An aircraft gas turbine engine of the same generic family as an originally type-certificated engine and having features which retain the basic core engine and combustor design of the original model and for which other factors, as judged by the certificating authority, have not changed.

Derived version of an aeroplane. An aeroplane which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely.

Derived version of a helicopter. A helicopter which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely.

Designated Government Check Pilot (DGCP). A person who is the holder of a delegation of authority issued by the Director, authorizing the conduct of certain types of flight checks.

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

Design take-off mass. The maximum mass 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. The maximum mass 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.

Destination alternate. An alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

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

Direction finding - 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.

Director or DGCA. The Director of the Directorate General of Civil Aviation, or any person authorized to act on his behalf.

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

Direct transit arrangements. Special arrangements approved by the public authorities concerned by which traffic which is pausing briefly in its passage through the major property damage. Dangerous goods incident. An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardizes the aircraft or its occupants is also deemed to constitute a dangerous goods incident.

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

Ditching. The forced landing of an aircraft on water.

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

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.

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.

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

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.

Effective intensity. The effective intensity of a flashing light is equal to the intensity of a fixed light of the same colour which will produce the same visual range under identical conditions of observation.

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

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

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

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.

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:

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

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

Energy per symbol to noise density ratio (Es/No). 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.

En-route alternate. An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en route.

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 airspeed means the calibrated airspeed of an aircraft corrected for adiabatic compressible flow for the particular altitude. Equivalent airspeed is equal to calibrated airspeed in standard atmosphere at sea level.

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).

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 aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

ETOPS – Extended Range Twin-Engine Operations. Means twin-engine, turbine powered airplane operations conducted over specified routes that contain a point further than 60 minutes flying time from an adequate alternate airport, at the aircraft's specified single engine cruise speed, as determined for standard atmospheric conditions, in still air.

ETOPS en-route alternate. A suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing an engine shutdown or other abnormal or emergency condition while en route in an ETOPS operation.

Exception. A provision in this Annex which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

Exemption. An authorization issued by an appropriate national authority providing relief from the provisions of this part.

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

External equipment (helicopter). Any instrument, mechanism, part, apparatus, appurtenance, or accessory that is attached to or extends from the helicopter exterior but is not used nor is intended to be used for operating or controlling a helicopter in flight and is not part of an airframe or engine.

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.

Extended over water operation means –

A flight is considered to be in extended over water operations, when it extends beyond the point where special equipment, procedures and/or passenger briefings are required for such operations and specific times and distances can be determined for each aircraft type in CASR 135.351 for aeroplanes and 135.353 for helicopters. Also see CASR Part 91.509 :

- (1) With respect to aircraft other than helicopters, an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline; and
- (2) With respect to helicopters, an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline and more than 50 nautical miles from an offshore heliport structure.

External Load – a load that is carried, or extends, outside of the aircraft fuselage or any cargo load carried by an aircraft which falls into one of the following four load classes:

- (1) Class A is an external cargo load that cannot move freely cannot be jettisoned and does not extend below the landing gear.
- (2) Class B is an external cargo load that can be jettisoned and is lifted free of the land and/or water.
- (3) Class C is an external cargo load that can be jettisoned and remains in contact with the land or water during the rotorcraft operation.
- (4) Class D is an external cargo load other than Class A, B, or C external loads.

External load attaching means the structural components used to attach an external load to an aircraft, including external load containers, the backup structure at the attachment points, and any quick release device used to jettison the external load.

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 (ref. CASR Part 23; 25; 27; 29 used factor safety 1.5).

Farad (F). The capacitance of a capacitor between the plates of which there appears a difference of potential of 1 volt when it is charged by a quantity of electricity equal to 1 coulomb.

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

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.

Feature operation. Operation that every instance of a feature type may perform.

Feature relationship. Relationship that links instances of one feature type with instances of the same or a different feature type.

Feature type. Class of real world phenomena with common properties.

Final takeoff speed means the speed of the airplane that exists at the end of the takeoff path in the en route configuration with one engine inoperative.

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 manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by performance Class 1 helicopters, the defined area includes the rejected take-off area available.

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

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

Fireproof

- (1) With respect to materials and parts used to confine fire in a designated fire zone, means the capacity to withstand at least as well as steel in dimensions

appropriate for the purpose for which they are used, the heat produced when there is a severe fire of extended duration in that zone; and

- (2) With respect to other materials and parts, means the capacity to withstand the heat associated with fire at least as well as steel in dimensions appropriate for the purpose for which they are used.

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

- (1) With respect to sheet or structural members means the capacity to withstand the heat associated with fire at least as well as aluminum alloy in dimensions appropriate for the purpose for which they are used; and
- (2) With respect to fluid carrying lines, fluid system parts, wiring, air ducts, fittings, and powerplant controls, means the capacity to perform the intended functions under the heat and other conditions likely to occur when there is a fire at the place concerned.

First Officer (F/O) A pilot qualified on an aircraft to perform the duties of second in command. May also be taken to mean co-pilot.

Fixed light. A light having constant luminous intensity when observed from a fixed point.

Flag Air Carrier. An air carrier whose operations specifications authorize operations

Flame resistant means not susceptible to combustion to the point of propagating a flame, beyond safe limits, after the ignition source is removed.

Flammable, with respect to a fluid or gas, means susceptible to igniting readily or to exploding.

Flap extended speed means the highest speed permissible with wing flaps in a prescribed extended position.

Flash resistant means not susceptible to burning violently when ignited.

Foot (ft). The length equal to 0.304 8 metre exactly.

Flight – An aircraft is deemed to be in flight any time it is no longer in contact with the earth's surface as the result of its weight being supported by the aerodynamic principles and design features of that particular aircraft.

Flight altitude Means the altitude above mean sea level at which the aircraft is operated.

Flight attendant – a crewmember who performs, in the interest safety of passengers, duties assigned by the operator or the pilot in command of the aircraft, but who shall not act as flight crewmember.

Flight crewmember – a crewmember assigned to duty in an aircraft as a pilot, flight engineer, second officer or navigator or 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 analysing 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. The total time from the moment a flight crew member commences duty, immediately subsequent to a rest period and prior to making a flight or a series of flights, to the moment the flight crew member is relieved of all duties having completed such flight or series of flights.

Flight duty Time – the total elapsed period from the time a crewmember is required to report for duty, to the time that crewmember has completed all official duties with respect to a flight or series of flights and is released for an official crew rest.

Flight following – the process of monitoring the progress of a flight, from its point of departure to its final destination including any enroute stops, and the notification of the appropriate authorities in the event of an overdue or missing aircraft.

Flight information centre. 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.

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

Flight level means:

- (1) A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level 250 represents a barometric altimeter indication of 25,000 feet; flight level 255, an indication of 25,500 feet.
- (2) A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Flight manual/Aircraft Flight Manual (AFM). 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 (FOO) – A person who is authorized by an air carrier to exercise operational control over a flight.

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

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

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 operator's maintenance control manual.

Flight status. An indication of whether a given aircraft requires special handling by air traffic services units or not.

Flight time means the total elapsed time from the moment the aircraft first moves under its own power for the purpose of take off, until the time it comes to rest at the end of the flight.

- (1) Pilot time that commences when an aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after landing; or
- (2) For a glider without self-launch capability, pilot time that commences when the glider is towed for the purpose of flight and ends when the glider comes to rest after landing.

Flight time - aeroplanes. The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest 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 means the average forward horizontal distance, from the cockpit of an aircraft in flight, at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night.

Flight Watch – the process by which a qualified flight operations officer provides flight following services to a flight, and provides any operational information as may be requested by the pilot in command or deemed necessary by the flight operations officer.

Flight watch system – means an air carrier's equipment, facilities and personnel which enable that air carrier to exercise operational control over a flight in progress via direct and timely communications with that flight.

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

Foreign air carrier means any person other than a citizen of the United States, who undertakes directly, by lease or other arrangement, to engage in air transportation.

Foreign air commerce means the carriage by aircraft of persons or property for compensation or hire, or the carriage of mail by aircraft, or the operation or navigation of aircraft in the conduct or furtherance of a business or vocation, in commerce between a place in the Republic of Indonesia and any place outside thereof.

Foreign air transportation means the carriage by aircraft of persons or property as a common carrier for compensation or hire, or the carriage of mail by aircraft, in commerce in to and out from the Republic of Indonesia and any place outside of the Republic of Indonesia.

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

Foreign civil aircraft means an aircraft registered and or bearing non-Indonesian nationality and registration marks.

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.

Forward wing means a forward lifting surface of a canard configuration or tandem-wing configuration airplane. The surface may be a fixed, movable, or variable geometry surface, with or without control surfaces.

Frangible object. An object of low mass designed to break, distort or yield on impact so as to present the minimum hazard to aircraft.

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.

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.

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.

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.

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

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.

Go-around power or thrust setting means the maximum allowable in-flight power or thrust setting identified in the performance data.

Government Check Pilot (GCP). A DGCA inspector authorized to perform flight checks.

Gray (Gy). The energy imparted by ionizing radiation to a mass of matter corresponding to 1 joule per kilogram.

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.

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 aerodrome, as reported by an accredited observer.

Gyrodyne means a rotorcraft whose rotors are normally engine driven for takeoff, hovering, and landing, and for forward flight through part of its speed range, and whose means of propulsion, consisting usually of conventional propellers, is independent of the rotor system.

Gyroplane means:

- (1) 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.
- (2) a rotorcraft whose rotors are not engine driven, except for initial starting, but are made to rotate by action of the air when the rotorcraft is moving; and whose means of propulsion, consisting usually of conventional propellers, is independent of the rotor system.

Hazard beacon. An aeronautical beacon used to designate a danger to air navigation.

He or She (unless specified), taken in context with that section.

His or Hers (unless specified), taken in context with that section.

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

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

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

Helicopter means a rotorcraft that, for its horizontal motion, depends principally on its engine driven rotors or an aircraft which is heavier than air, capable of flying with rotary wings, and travels by its own power.

Helicopter clearway. A defined area on the ground or water under the control of the appropriate authority, selected and/or prepared as a suitable area over which a performance class 1 helicopter may accelerate and achieve a specific height.

Helicopter ground taxiway. A ground taxiway for use by helicopters only.

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 means :

- (1) An area of land, water, or structure used or intended to be used for the landing and takeoff of helicopters.
- (2) An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

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.

Henry (H). The inductance of a closed circuit in which an electromotive force of 1 volt is produced when the electric current in the circuit varies uniformly at a rate of 1 ampere per second.

Hertz (Hz). The frequency of a periodic phenomenon of which the period is 1 second.

Holding bay. A defined area where aircraft can be held, or bypassed, to facilitate efficient surface movement of aircraft.

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

Holdover time. The estimated time the anti-icing fluid (treatment) will prevent the formation of ice and frost and the accumulation of snow on the protected (treated) surfaces of an aeroplane.

Hovering is a maneuver in which the helicopter is maintained in nearly motionless flight over a reference point at a constant altitude and on a constant heading. The maneuver requires a high degree of concentration and coordination.

Hovering autorotation means the maneuver is used to land from a hover without using the engine. This would normally occur because the engine or tail rotor failed. Hovering autorotation is really a misnomer, because the helicopter actually never enters autorotation. Instead, the inertia of the spinning rotor system is used to produce thrust.

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

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

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

Idle thrust means the jet thrust obtained with the engine power control level set at the stop for the least thrust position at which it can be placed.

Identification marks of an aircraft, registered aircraft consist of a nationality marks and registration mark (example, PK-XXX). The nationality shall precede the registration marks and shall be separated from it by a hyphen.

Identification beacon. An aeronautical beacon emitting a coded signal by means of which a particular point of reference can be identified.

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.

IFR conditions means weather conditions below the minimum for flight under visual flight rules.

IFR over the top, with respect to the operation of aircraft, means the operation of an aircraft over the top on an IFR flight plan when cleared by air traffic control to maintain “VFR conditions” or “VFR conditions on top”.

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

Incompatible. Describing dangerous goods which, if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance.

Independent parallel approaches. Simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway centre lines are not prescribed.

Independent parallel departures. Simultaneous departures from parallel or near-parallel instrument runways.

Indicated airspeed means the speed of an aircraft as shown on its pitot static airspeed indicator calibrated to reflect standard atmosphere adiabatic compressible flow at sea level uncorrected for airspeed system errors

Indonesia aircraft means an aircraft registered and bearing Indonesian nationality and registration marks.

Indonesian Armed Forces Aircraft means a state used officially by the Armed Forces of the Republic of Indonesia

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

Instrument means a device using an internal mechanism to show visually or aurally the attitude, altitude, or operation of an aircraft or aircraft part. It includes electronic devices for automatically controlling an aircraft in flight.

Instrument approach procedure. A series of predetermined manoeuvres 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 flight time. Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

Instrument ground time. Time during which a pilot is practising, on the ground, simulated instrument flight in a synthetic flight trainer approved by the Licensing Authority.

Instrument meteorological conditions (IMC) means meteorological conditions expressed in term of visibility, distance from cloud, and ceiling, less than the minimum specified for visual meteorological conditions.

Instrument runway. One of the following types of runways intended for the operation of aircraft using instrument approach procedures:

- a) Non-precision approach runway. An instrument runway served by visual aids and a non-visual aid providing at least directional guidance adequate for a straight-in approach.
- b) Precision approach runway, category I. An instrument runway served by ILS and/or MLS and visual aids intended for operations with a decision height not lower than 60 m (200 ft) and either a visibility not less than 800 m or a runway visual range not less than 550 m.
- c) Precision approach runway, category II. An instrument runway served by ILS and/or MLS and visual aids intended for operations with a decision height lower than 60 m (200 ft) but not lower than 30 m (100 ft) and a runway visual range not less than 350 m.
- d) Precision approach runway, category III. An instrument runway served by ILS and/or MLS to and along the surface of the runway and:
 - A - intended for operations with a decision height lower than 30 m (100 ft), or no decision height and a runway visual range not less than 200 m.
 - B - intended for operations with a decision height lower than 15 m (50 ft), or no decision height and a runway visual range less than 200 m but not less than 50 m.
 - C - intended for operations with no decision height and no runway visual range limitations.

Instrument time. Instrument flight time or instrument ground time.

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

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

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.

Integrated Aeronautical Information Package. A package which consists of the following elements:

- AIP, including amendment service;
- Supplements to the AIP;
- NOTAM and PIB;
- AIC; and
- checklists and lists of valid NOTAM.

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 airport. Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

International NOTAM office (NOF). An office designated by a State for the exchange of NOTAM internationally.

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.

Investigation. A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations.

Investigator-in-charge. A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

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.

Joule (J). The work done when the point of application of a force of 1 newton is displaced a distance of 1 metre in the direction of the force.

Kelvin (K). A unit of thermodynamic temperature which is the fraction $1/273.16$ of the thermodynamic temperature of the triple point of water.

Kilogram (kg). The unit of mass equal to the mass of the international prototype of the kilogram.

Kite means a framework, covered with paper, cloth, metal, or other material, intended to be flown at the end of a rope or cable, and having as its only support the force of the wind moving past its surfaces.

Knot (kt). The speed equal to 1 nautical mile per hour.

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 gear extended speed means the maximum speed at which an aircraft can be safely flown with the landing gear extended.

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.

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

Laser-beam critical flight zone (LCFZ). Airspace in the proximity of an aerodrome but beyond the LFFZ where the irradiance is restricted to a level unlikely to cause glare effects.

Laser-beam free flight zone (LFFZ). Airspace in the immediate proximity to the aerodrome where the irradiance is restricted to a level unlikely to cause any visual disruption.

Laser-beam sensitive flight zone (LSFZ). Airspace outside, and not necessarily contiguous with, the LFFZ and LCFZ where the irradiance is restricted to a level unlikely to cause flash-blindness or after-image effects.

Large aircraft means any aircraft having a maximum certified take-off weight (MTOW) of greater than 5700 kg (12500 pounds).

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

Lighting system reliability. The probability that the complete installation operates within the specified tolerances and that the system is operationally usable.

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

Licence. A document issued by, or under a delegation of authority from the Director, which authorizes the holder to exercise certain privileges as specified in that license, subject to the conditions and limitations contained therein.

A basic certificate is equivalent to a licence without ratings and is issued by the DGCA to persons who meet the age, knowledge, skill and experience requirements of CASR Part 65.

A certificate of maintenance approval is equivalent to a licence, but the group or type ratings may be limited in respect of validity and scope.

A licence is the document described in Annex 1, Chapter 4, paragraph 4.2.

A group rating is a rating covering a group of aircraft or components. Groups of aircraft or components shall be as determined by the DGCA.

A type rating is a rating for a specified individual aircraft or component.

A group or type rating, when added to a basic certificate, is a licence.

The scope of a group or type rating defines the range of aircraft or components for which the rating is valid. The *scope* of a *licence* rating is fixed. The *scope* of a rating on a *certificate of maintenance approval* may be limited as the DGCA decides.

A workshop engineer, is a person who holds a *licence rating* or a *certificate of maintenance approval* granting privileges for the certification of specified aircraft or components after overhaul or repair.

Licensing Authority. The Authority designated by a Contracting State as responsible for the licensing of personnel.

Lighter-than-air aircraft means aircraft that can rise and remain suspended by using contained gas weighing less than the air that is displaced by the gas.

Litre (L). A unit of volume restricted to the measurement of liquids and gases which is equal to 1 cubic decimetre.

Load factor means the ratio of a specified load to the total weight of the aircraft. The specified load is expressed in terms of any of the following: aerodynamic forces, inertia forces, or ground or water reactions.

Long-range communication system (LRCS). A system that uses satellite relay, data link, high frequency, or another approved communication system which extends beyond line of sight.

Long-range navigation system (LRNS). An electronic navigation unit that is approved for use under instrument flight rules as a primary means of navigation, and has at least one source of navigational input, such as inertial navigation system, global positioning system, Omega/very low frequency, or Loran C.

Lumen (lm). The luminous flux emitted in a solid angle of 1 steradian by a point source having a uniform intensity of 1 candela.

Lux (lx). The illuminance produced by a luminous flux of 1 lumen uniformly distributed over a surface of 1 square metre.

Mach number means the ratio of true airspeed to the speed of sound.

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

Main rotor means the rotor that supplies the principal lift to a rotorcraft.

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

Maintenance release mean a document which contains a certification conforming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedure described in maintenance organizations procedures manual or under an equivalent system.

Major alteration means an alteration not listed in the aircraft, aircraft engine, or propeller specifications - (1) That might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or (2) That is not done according to accepted practices or cannot be done by elementary operations.

Major repair means a repair: (1) That, if improperly done, might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or (2) That is not done according to accepted practices or cannot be done by elementary operations.

Manifold pressure means absolute pressure as measured at the appropriate point in the induction system and usually expressed in inches of mercury.

Manoeuvring 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.

Marker. An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

Master minimum equipment list (MMEL) means 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 flight. The MMEL may be associated with special operating condition, limitations or procedures.

Maximum mass. Maximum certificated take-off mass.

Maximum speed for stability characteristics, VFC/MFC means a speed that may not be less than a speed midway between maximum operating limit speed (VMO/MMO) and demonstrated flight diving speed (VDF/MDF), except that, for altitudes where the Mach number is the limiting factor, MFC need not exceed the Mach number at which effective speed warning occurs.

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 licence holder meets specific requirements of medical fitness. It is issued following an evaluation by the Licensing Authority of the report submitted by the designated medical examiner who conducted the examination of the applicant for the licence.

Medical certificate means acceptable evidence of physical fitness on a form prescribed by the DGCA..

Metadata. Data about data (ISO 19115).

METAR application. A FIS application that supports the D-METAR.

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

Meteorological bulletin. A text comprising meteorological information preceded by an appropriate heading.

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.

Meteorological satellite. An artificial Earth satellite making meteorological observations and transmitting these observations to Earth.

Metre (m). The distance travelled by light in a vacuum during 1/299 792 458 of a second.

Military operations area. A military operations area (MOA) is airspace established outside Class A airspace to separate or segregate certain nonhazardous military activities from IFR Traffic and to identify for VFR traffic where these activities are conducted.

Minimum descent altitude (MDA) or minimum descent height (MDH) means the lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle to land maneuvering in execution of a standard instrument approach procedure, where no electronic glide slope is provided.

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 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 centred on a radio aid to navigation.

Minor alteration means an alteration other than a major alteration.

Minor repair means a repair other than a major repair.

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

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

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.

Mole (mol). The amount of substance of a system which contains as many elementary entities as there are atoms in 0.012 kilogram of carbon-12.

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).

Multi-Landing Operation – Any helicopter operation where a pilot performs 30 take-off and landings within a 24 hour period.

Nautical mile (NM). The length equal to 1 852 metres exactly.

Navigable airspace means airspace at and above the minimum flight altitudes prescribed by or under this chapter, including airspace needed for safe takeoff and landing.

Near-parallel runways. Non-intersecting runways whose extended centre lines have an angle of convergence/divergence of 15 degrees or less.

Net Take-off Path. Means the one-engine-inoperative flight path that starts at a height of 35 feet at the end of the take-off distance required and extends to a height of at least 1500 feet AGL, reduced at each point by a gradient of climb equal to 0.8 per cent for two-engine aeroplanes, 0.9 per cent for three-engine aeroplanes and 1.0 percent for four-engine aeroplanes.

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

Newton (N). The force which when applied to a body having a mass of 1 kilogram gives it an acceleration of 1 metre per second squared.

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 the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority.

Non-instrument runway. A runway intended for the operation of aircraft using visual approach procedures.

Non precision approach procedure means a standard instrument approach procedure in which no electronic glide slope is provided.

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

Normal flight zone (NFZ). Airspace not defined as LFFZ, LCFZ or LSFZ but which must be protected from laser radiation capable of causing biological damage to the eye.

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.

Obstacle/terrain data collection surface. A defined surface intended for the purpose of collecting obstacle/terrain data.

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.

Ohm (Ω). The electric resistance between two points of a conductor when a constant difference of potential of 1 volt, applied between these two points, produces in this conductor a current of 1 ampere, this conductor not being the source of any electromotive force.

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.

Open Water. Means a water mass which does not have any landmasses within the maximum times or distances prescribed by a regulation.

Operate, with respect to aircraft, means use, cause to use or authorize to use aircraft, for the purpose (except as provided in 91.13 of this chapter) of air navigation including the piloting of aircraft, with or without the right of legal control (as owner, lessee, or otherwise).

Operator means a person, organization or enterprise engaged in or offering to engage in an aircraft operation.

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 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 System (OCS). Means an air carrier's system for the exercise of authority over the formulation, execution and amendment of an operational flight plan in respect of a flight or series of flights.

Operational flight plan. The operators plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned

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

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

Operation Specifications (OPSPEC) means the data approved by DGCA attached to the certificate of organization approval, include operation limitation of the organization.

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.

Overseas air commerce --- Reserve.

Overseas air transportation means the carriage by aircraft of persons or property as a common carrier for compensation or hire, or the carriage of mail by aircraft.

Over the top means above the layer of clouds or other obscuring phenomena forming the ceiling.

Oxides of nitrogen. The sum of the amounts of the nitric oxide and nitrogen dioxide contained in a gas sample calculated as if the nitric oxide were in the form of nitrogen dioxide.

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.

Package. The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

Packaging. Receptacles and any other components or materials necessary for the receptacle to perform its containment function.

Parachute means a device used or intended to be used to retard the fall of a body or object through the air.

Pascal (Pa). The pressure or stress of 1 newton per square metre.

Passenger. Any person on board an aircraft during flight time, who is not acting as a crewmember.

Passenger aircraft. An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.

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

Performance Class 2 helicopter. A helicopter with performance such that, in case of critical power-unit 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 power-unit failure at any point in the flight profile, a forced landing must be performed.

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

Person means an individual, firm, partnership, corporation, company, association, joint-stock association, or governmental entity. It includes a trustee, receiver, assignee, or similar representative of any of them.

Person In respect of an air carrier, means any person who is an owner, or operator of an aircraft listed on that air carrier's operations specifications or, is otherwise acting as an employee or agent of that air carrier.

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 or the person who: A pilot assigned to act as the Captain of an aircraft.

- (1) Has final authority and responsibility for the operation and safety of the flight;

- (2) Has been designated as pilot in command before or during the flight; and
- (3) Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.

Pilotage means navigation by visual reference to landmarks.

Pilot Flying (PF). The flight crewmember who is manipulating the flight controls of an aircraft during flight time.

Pilot Not Flying (PNF). The pilot who is performing tasks during flight time, in support of the pilot flying.

Pilot Proficiency Check (PPC). A flight check performed in whole or in part, in an aeroplane type simulator or an aircraft. Conducted by a GCP, CCP, or DGCP for the purpose of establishing the level of proficiency, of a flight crewmember.

Pilot Self-dispatch means a system where authority and responsibility for flight release, operation and flight following have been delegated solely to the PIC.

Pitch setting means the propeller blade setting as determined by the blade angle measured in a manner, and at a radius, specified by the instruction manual for the propeller.

Point light. A luminous signal appearing without perceptible length.

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.

Post spacing. Angular or linear distance between two adjacent elevation points.

Positive control means control of all air traffic, within designated airspace, by air traffic control.

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 means a heavier-than-air aircraft capable of vertical takeoff, vertical landing, and low speed flight that depends principally on engine-driven lift devices or engine thrust for lift during these flight regimes and on nonrotating airfoil(s) for lift during horizontal flight.

Precision. The smallest difference that can be reliably distinguished by a measurement process.

Precision approach runway, see Instrument runway.

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

Pre-flight information bulletin (PIB). A presentation of current NOTAM information of operational significance, prepared prior to flight.

Preliminary Report. The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

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

Prevailing visibility. The visibility value, observed in accordance with the definition of “visibility”, which is reached or exceeded 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.

Preventive maintenance means simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations.

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.

Primary runway(s). Runway(s) used in preference to others whenever conditions permit.

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 manoeuvre 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.

Product :

- (1) **A Class I** product is a complete aircraft, aircraft engine, or propeller, which -
 - (i) Has been type certificated in accordance with this Decree and for which DGCA Approved Specifications or type certificate data sheets have been issued; or
 - (ii) Is identical to a type certificated product specified in paragraph(b)(1)(i) of this section in all respects except as is otherwise acceptable to the civil aviation authority of the importing state.

- (2) **A Class II** product is a major component of a Class I product(e.g., wings, fuselages, empennage assemblies, landing gears, power transmissions, control surfaces, etc), the failure of which would jeopardize the safety of a Class I product; or any part, material, or appliance, approved and manufactured under the TSO system in the "C" series.
- (3) **A Class III** product is any part or component which is not a Class I or Class II product and includes standard parts.

Production Certificate (PC) means A document issued by a DGCA to the aircraft manufacture, which have been meet the appropriate Airworthiness requirements related organization and the production facilities.

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.

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

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.

Propeller means a device for propelling an aircraft that has blades on an engine driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of engines.

Protected flight zones. Airspace specifically designated to mitigate the hazardous effects of laser radiation.

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. Totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs.

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 fulfil requirements for quality.

Quality control. The operational techniques and activities that are used to fulfil 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. The organizational structure, procedures, processes and resources needed to implement quality management.

Radar vectoring. Provision of navigational guidance to aircraft in the form of specific headings, based on the use of radar.

Radian (rad). The plane angle between two radii of a circle which cut off on the circumference an arc equal in length to the radius.

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. A form of radiocommunication primarily intended for the exchange of information in the form of speech.

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.

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

Rated output. For engine emissions purposes, the maximum power/thrust available for take-off under normal operating conditions at ISA sea level static conditions without the use of water injection as approved by the certificating authority. Thrust is expressed in kilonewtons.

Rated maximum continuous augmented thrust, with respect to turbojet engine type certification, means the approved jet thrust that is developed statically or in flight, in standard atmosphere at a specified altitude, with fluid injection or with the burning of fuel in a separate combustion chamber, within the engine operating limitations established under Part 33 of this chapter, and approved for unrestricted periods of use.

Rated maximum continuous power, with respect to reciprocating, turbopropeller, and turboshaft engines, means the approved brake horsepower that is developed statically or in flight, in standard atmosphere at a specified altitude, within the engine operating limitations established under Part 33, and approved for unrestricted periods of use.

Rated maximum continuous thrust, with respect to turbojet engine type certification, means the approved jet thrust that is developed statically or in flight, in standard atmosphere at a specified altitude, without fluid injection and without the burning of fuel in a separate combustion chamber, within the engine operating limitations established under Part 33 of this chapter, and approved for unrestricted periods of use.

Rated takeoff augmented thrust, with respect to turbojet engine type certification, means the approved jet thrust that is developed statically under standard sea level conditions, with fluid injection or with the burning of fuel in a separate combustion chamber, within the engine operating limitations established under Part 33 of this chapter, and limited in use to periods of not over 5 minutes for takeoff operation.

Rated takeoff power, with respect to reciprocating, turbopropeller, and turboshaft engine type certification, means the approved brake horsepower that is developed

statically under standard sea level conditions, within the engine operating limitations established under Part 33, and limited in use to periods of not over 5 minutes for takeoff operation.

Rated takeoff thrust, with respect to turbojet engine type certification, means the approved jet thrust that is developed statically under standard sea level conditions, without fluid injection and without the burning of fuel in a separate combustion chamber, within the engine operating limitations established under Part 33 of this chapter, and limited in use to periods of not over 5 minutes for takeoff operation.

Rated 30 minute OEI power, with respect to rotorcraft turbine engines, means the approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine under Part 33 of this chapter, and limited in use to a period of not more than 30 minutes after the failure of one engine of a multiengine rotorcraft.

Rated 30-second OEI power, with respect to rotorcraft turbine engines, means the approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine under part 33 of this chapter, for continued one-flight operation after the failure of one engine in multiengine rotorcraft, limited to three periods of use no longer than 30 seconds each in any one flight, and followed by mandatory inspection and prescribed maintenance action.

Rated 2-minute OEI power, with respect to rotorcraft turbine engines, means the approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine under part 33 of this chapter, for continued one-flight operation after the failure of one engine in multiengine rotorcraft, limited to three periods of use no longer than 2 minutes each in any one flight, and followed by mandatory inspection and prescribed maintenance action.

Rated 2 ½ minute OEI power, with respect to rotorcraft turbine engines, means the approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine under Part 33 of this chapter, and limited in use to a period of not more than 2 ½ minutes after the failure of one engine of a multiengine rotorcraft.

Rated continuous OEI power, with respect to rotorcraft turbine engines, means the approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine under Part 33 of this chapter, and limited in use to the time required to complete the flight after the failure of one engine of a multiengine rotorcraft.

Rating. An authorization entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence **or** means a statement that, as a part of a certificate, sets forth special conditions, privileges, or limitations.

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.

Reference landing speed means the speed of the airplane, in a specified landing configuration, at the point where it descends through the 50 foot height in the determination of the landing distance.

Reference pressure ratio. The ratio of the mean total pressure at the last compressor discharge plane of the compressor to the mean total pressure at the compressor entry plane when the engine is developing take-off thrust rating in ISA sea level static conditions.

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.

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

Remote Area means an area of land considered hostile to survival, which lies beyond a specified radius from any known civilization, development or surface conveyance, through which refuge could reasonably be sought. Such radii is equal to 25 nautical miles in the case of mountainous or jungle areas, 50 nautical miles in the case of unoccupied land mass surrounded by water and in all other areas, 100 nautical miles. The Director may designate other areas as remote based upon unique consideration.

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

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.

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.

RNAV way point (W/P) means a predetermined geographical position used for route or instrument approach definition or progress reporting purposes that is defined relative to a VORTAC station position.

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

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.

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.

Requirements for quality. Expression of the needs or their translation into a set of quantitatively or qualitatively stated requirements for the characteristics of an entity to enable its realization and examination.

Required Day Off. A period of time consisting of 24 consecutive hours, commencing at 0000 local time, in which a pilot, flight attendant or flight operations officer are free from all duties or contact by the company. A required day off is considered to be taken at a person's residence and is exclusive of any travel time between that person's residence, and the place where such person reports for, or is released from duty.

Rescue. An operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

Rescue coordination centre (RCC). 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.

Rescue subcentre (RSC). A unit subordinate to a rescue coordination centre, established to complement the latter according to particular provisions of the responsible authorities.

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

Rest Period – The period of time during which a crewmember is released from all official duty or contact by the company. This period must exclude all time spent commuting by the most direct route, between the company designated rest facility and assigned duty station and, a specified period of prone rest with at least one additional hour provided for physiological needs.

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

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

Road. An established surface route on the movement area meant for the exclusive use of vehicles.

Road-holding position. A designated position at which vehicles may be required to hold.

Rocket means an aircraft propelled by ejected expanding gases generated in the engine from self-contained propellants and not dependent on the intake of outside substances. It includes any part which becomes separated during the operation.

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

Rotorcraft load combination means the combination of a rotorcraft and an external load, including the external load attaching means. Rotorcraft load combinations are designated as Class A, Class B, Class C, and Class D, as follows:

- (1) Class A rotorcraft load combination means one in which the external load cannot move freely, cannot be jettisoned, and does not extend below the landing gear.
- (2) Class B rotorcraft load combination means one in which the external load is jettisonable and is lifted free of land or water during the rotorcraft operation.
- (3) Class C rotorcraft load combination means one in which the external load is jettisonable and remains in contact with land or water during the rotorcraft operation.
- (4) Class D rotorcraft load combination means one in which the external load is other than a Class A, B, or C and has been specifically approved by the Administrator for that operation.

Route segment means a part of a route. Each end of that part is identified by: (1) A continental or insular geographical location; or (2) A point at which a definite radio fix can be established. **Or Route segment.** A route or portion of route usually flown without an intermediate stop. Route segment is a portion of a route bounded on each end by a fix or navigation aid (NAVAID).

Route stage. A route or portion of a route flown without an intermediate landing.

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 end safety area (RESA). An area symmetrical about the extended runway centre line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

Runway guard lights. A light system intended to caution pilots or vehicle drivers that they are about to enter an active runway.

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 turn pad. A defined area on a land aerodrome adjacent to a runway for the purpose of completing a 180-degree turn on a runway.

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.

Safety area. A defined area on a heliport surrounding the FATO which is free of obstacles, other than those required for air navigation purposes, and intended to reduce the risk of damage to helicopters accidentally diverging from the FATO.

Safety management system. A system for the management of safety at aerodromes, including the organizational structure, responsibilities, procedures, processes and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for control of safety at, and the safe use of, the aerodrome.

Safety recommendation. A proposal of the accident investigation authority of the State conducting the investigation, based on information derived from the investigation, made with the intention of preventing accidents or incidents.

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.

Scheduled Air Service - Any air transportation service which is operated on a weekly basis and in accordance with a published schedule.

Sea level engine means a reciprocating aircraft engine having a rated takeoff power that is producible only at sea level.

Search. An operation normally coordinated by a rescue coordination centre or rescue subcentre using available personnel and facilities to locate persons in distress.

Search and rescue aircraft. An aircraft provided with specialized equipment suitable for the efficient conduct of search and rescue missions.

Search and rescue facility. Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.

Search and rescue region (SRR). An area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

Search and rescue service. The performance of distress monitoring, communication, coordination and search and rescue functions, initial medical assistance or medical evacuation, through the use of public and private resources, including cooperating aircraft, vessels and other craft and installations.

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

Seating Capacity .The maximum number of passenger seats authorized by, the type certificate, type approval, or other equivalent document.

Second (s). The duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom.

Second in command (SIC) means a pilot who is designated to be second in command of an aircraft during flight time.

Second Officer (SO). A pilot who is the holder of a commercial or higher pilot license and is endorsed on an aircraft type, as competent on the flight engineers panel and may act as a flight crewmember with respect to the flight engineer duties.

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.

Segregated parallel operations. Simultaneous operations on parallel or near-parallel instrument runways in which one runway is used exclusively for approaches and the other runway is used exclusively for departures.

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.

Serious incident. An incident involving circumstances indicating that an accident nearly occurred.

Serious injury. An injury which is sustained by a person in an accident and which:

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

Service area (world area forecast system). A geographical area within which a regional area forecast centre is responsible for issuing area forecasts to meteorological authorities and other users.

Service Difficulty Report (SDR) means the certificate holder report the occurrence or detection of each failure, malfunction, or defect. (ref. CASR 121.703)

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

Show, unless the context otherwise requires, means to show to the satisfaction of the DGCA.

SIC – Second in command. A pilot assigned to act as a first officer or co-pilot of an aircraft.

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.

Siemens (S). The electric conductance of a conductor in which a current of 1 ampere is produced by an electric potential difference of 1 volt.

Sievert (Sv). The unit of radiation dose equivalent corresponding to 1 joule per kilogram.

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

Single Pilot – the operation of an aircraft with only one pilot on board.

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

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

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.

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.

Sign.

- a) Fixed message sign. A sign presenting only one message.
- b) Variable message sign. A sign capable of presenting several pre-determined messages or no message, as applicable.

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

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.

Slush. Water-saturated snow which with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Small aircraft means aircraft of 12,500 pounds (5 700 kg) or less, maximum certificated takeoff weight. Small aeroplane.

Small light aeroplane means an aeroplane having a maximum total weight authorized (MTWA) not exceeding 300 kg for single seat airplanes, or 450 kg for two seat airplanes and designed to carry not more than two persons.

Smoke. The carbonaceous materials in exhaust emissions which obscure the transmission of light.

Smoke Number. The dimensionless term quantifying smoke emissions.

Snow (on the ground).

- a) Dry snow. Snow which can be blown if loose or, if compacted by hand, will fall apart again upon release; specific gravity: up to but not including 0.35.

- b) Wet snow. Snow which, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.
- c) Compacted snow. Snow which has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.

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.

S/O – Second Officer. A pilot who is the holder of a commercial or higher pilot licence and is endorsed on an aircraft type, as competent on the flight engineers panel and may act as a flight crewmember with respect to the flight engineer duties.

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

Special VFR conditions mean meteorological conditions that are less than those required for basic VFR flight in controlled airspace and in which some aircraft are permitted flight under visual flight rules.

Special VFR operations means aircraft operating in accordance with clearances within controlled airspace in meteorological conditions less than the basic VFR weather minima. Such operations must be requested by the pilot and approved by ATC.

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

Specific Operation – means a specialized area of operation within the group of aerial work operations, described as special purpose air transportation services, in CASR 135.3(b) and Appendix A-A of this Part.

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

Standard atmosphere means an atmosphere defined as follow :

- a) The air a perfect dry gas ;
- b) The physical constants are :
 - Sea level means molar mass:
 $M_o = 28.964420 \times 10^{-3} \text{ kg mol}^{-1}$
 - Sea level atmospheric pressure :
 $P_o = 1013.250 \text{ hPo}$
 - Sea level temperature :
 $t_o = 15^\circ \text{ C}$
 $T_o = 288.15 \text{ K}$
 - Sea level atmospheric density :

$$P_0 = 1.2250 \text{ kg m}^{-3}$$

- 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(km); Temperature gradient (Kelvin per

	From	To	Standard geopotential kilometre)
•	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

State of Design. The State having jurisdiction over the organization responsible for the type design of Manufacture. The State having jurisdiction over the State organization responsible for the final assembly of the aircraft.

State of Origin. The State in the territory of which the cargo was first loaded on an aircraft.

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.

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

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.

State of Manufacture. The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

State of Occurrence. The State in the territory of which an accident or incident occurs.

Steradian (sr). The solid angle which, having its vertex in the centre of a sphere, cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere.

Stopway means an area beyond the takeoff runway, no less wide than the runway and centered upon the extended centerline of the runway, able to support the airplane during an aborted takeoff, without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating the airplane during an aborted takeoff or 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.

Surface level heliport. A heliport located on the ground or on the water.

Supplemental Air Carrier. An air carrier whose operations specifications authorize charter or all cargo operations.

Surveillance radar. Radar equipment used to determine the position of an aircraft in range and azimuth.

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.

Switch-over time (light). The time required for the actual intensity of a light measured in a given direction to fall from 50 per cent and recover to 50 per cent during a power supply changeover, when the light is being operated at intensities of 25 per cent or above.

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.

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 and institutional). The system level requirements are the basis for the functional requirements and lower-level requirements.

Synthetic flight trainer. 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 a flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, aircraft system 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 function of mechanical, electrical, electronic, etc. aircraft system, and the performance 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 condition.

Tandem wing configuration means a configuration having two wings of similar span, mounted in tandem.

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 phase. The operating phase defined by the time during which the engine is operated at the rated output.

Takeoff power:

- (1) With respect to reciprocating engines, means the brake horsepower that is developed under standard sea level conditions, and under the maximum conditions of crankshaft rotational speed and engine manifold pressure approved for the normal takeoff, and limited in continuous use to the period of time shown in the approved engine specification; and
- (2) With respect to turbine engines, means the brake horsepower that is developed under static conditions at a specified altitude and atmospheric temperature, and under the maximum conditions of rotor shaft rotational speed and gas temperature approved for the normal takeoff, and limited in continuous use to the period of time shown in the approved engine specification.

Take-off runway. A runway intended for take-off only.

Takeoff safety speed means a referenced airspeed obtained after liftoff at which the required one engine inoperative climb performance can be achieved.

Takeoff thrust, with respect to turbine engines, means the jet thrust that is developed under static conditions at a specific altitude and atmospheric temperature under the maximum conditions of rotorshaft rotational speed and gas temperature approved for the normal takeoff, and limited in continuous use to the period of time shown in the approved engine specification.

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.

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

Taxi/ground idle. The operating phases involving taxi and idle between the initial starting of the propulsion engine(s) and the initiation of the take-off roll and between the time of runway turn-off and final shutdown of all propulsion engine(s).

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 aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

Taxiway intersection. A junction of two or more taxiways.

Taxiway strip. An area including a taxiway intended to protect an aircraft operating on the taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.

TCAS I means a TCAS that utilizes interrogations of, and replies from, airborne radar beacon transponders and provides traffic advisories to the pilot.

TCAS II means a TCAS that utilizes interrogations of, and replies from airborne radar beacon transponders and provides traffic advisories and resolution advisories in the vertical plane.

TCAS III means a TCAS that utilizes interrogation of, and replies from, airborne radar beacon transponders and provides traffic advisories and resolution advisories in the vertical and horizontal planes to the pilot.

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.

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. 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.

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.

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 centred 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.

Tesla (T). The magnetic flux density given by a magnetic flux of 1 weber per square metre.

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

Threshold Time Is the flight time from as adequate en-route alternate aerodrome beyond which time operations by aeroplanes with two turbine power units must be authorized by DGCA. This threshold time should be 60 minutes.

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.

Time in service, with respect to maintenance time records, means the time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing.

Tonne (t). The mass equal to 1 000 kilograms.

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.

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.

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 aeroplanes first contact the runway.

Traceability. Ability to trace the history, application or location of an entity by means of recorded identifications (ISO 8402*).

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

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 manoeuvres 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 pattern means the traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from, an airport.

Training center - means an organization governed by the applicable requirements of this part that provides training, testing, and checking under contract or other arrangement to airmen subject to the requirements of this chapter.

Courseware - means instructional material developed for each course or curriculum, including lesson plans, flight event descriptions, computer software programs, audiovisuals programs, workbooks, and handouts or training displays.

Evaluator - means a person employed by a training center certificate holder who performs tests for certification, added ratings, authorizations, and proficiency checks that are authorized by the certificate holders training specification, and who is authorized by the Director to administer such checks and tests.

Instructor - means a person employed by a training center and designated to provide instruction in accordance with subpart C of this part.

Line-Operational Simulation - means simulation conducted using operational oriented flight scenarios that accurately replicate interaction among flight crew members and between flight crewmembers and dispatch facilities, other crewmembers, air traffic control, and ground operations. Line operational simulation simulations are conducted for training and evaluation purposes and include random, abnormal, and emergency occurrences. Line operational simulation specifically includes line-oriented flight training, special purpose operational training, and line operational evaluation.

Specialty Curriculum - means a set of courses that is designed to satisfy a requirement of the CASR and that is approved by the Director for use by a particular training center or satellite training center. The specialty curriculum includes training requirements unique to one or more training center clients.

Training program - means courses, courseware, facilities, flight training equipment, and personnel necessary to accomplish a specific training objective. It may include a core curriculum and a specialty curriculum.

Training and checking credit - means the hours or specific operational areas of an approved course, which may be credited toward the flight hour requirements of that course.

Training device - means simulator or advanced training device that has been given training and checking credit by the Director.

Training specifications - means a document issued to a training center certificate holder by the Director that prescribes that center's training, checking, and testing authorizations and limitations, and specifies training program requirements.

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.

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

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.

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 centres and international OPMET data banks regarding the position, forecast direction and speed of movement, central pressure and maximum surface wind of tropical cyclones.

True airspeed means the airspeed of an aircraft relative to undisturbed air. True airspeed is equal to equivalent airspeed multiplied by $(r_0 / r) 0.5$.

Type:

- (1) As used with respect to the certification, ratings, privileges, and limitations of airmen, means a specific make and basic model of aircraft, including modifications thereto that do not change its handling or flight characteristics. Examples include: DC-7, 1049, and F-27; and Boeing 737-200.
- (2) As used with respect to the certification of aircraft, means those aircraft which are similar in design. Examples include: DC-7 and DC-7C; 1049G and 1049H; and F-27 and F-27F.
- (3) As used with respect to the certification of aircraft engines means those engines which are similar in design. For example, JT8D and JT8D-7 are engines of the same type, and JT9D-3A and JT9D-7 are engines of the same type.

Type Certificate (TC). A document issued by a DGCA to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements.

Type Certificate Data Sheet (TCDS) means the data approved by DGCA attached to the Type Certificate include operation limitation of the aircraft type.

Type design means the configuration and the design features of the product shown to comply with the airworthiness requirements (see CASR Part 21.31).

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

Unburned hydrocarbons. The total of hydrocarbon compounds of all classes and molecular weights contained in a gas sample, calculated as if they were in the form of methane.

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

Unit load device. Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

UN number. The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

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.

Usability factor. The percentage of time during which the use of a runway or system of runways is not restricted because of the cross-wind component.

Validation. Confirmation by examination and provision of objective evidence that the particular requirements for a specific intended use are fulfilled.

Verification. Confirmation by examination and provision of objective evidence that specified requirements have been fulfilled.

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

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

VFR over the top, with respect to the operation of aircraft, means the operation of an aircraft over the top under VFR when it is not being operated on an IFR flight plan.

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.

Voice-automatic terminal information service (Voice-ATIS). The provision of ATIS by means of continuous and repetitive voice broadcasts.

Volcanic ash advisory centre (VAAC). A meteorological centre designated by regional air navigation agreement to provide advisory information to meteorological watch offices, area control centres, flight information centres, world area forecast centres 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.

Volt (V). The unit of electric potential difference and electromotive force which is the difference of electric potential between two points of a conductor carrying a constant current of 1 ampere, when the power dissipated between these points is equal to 1 watt.

VTOSS. The minimum speed at which climb shall be achieved with the critical power-unit inoperative, the remaining power-units operating within approved operating limits.

Watt (W). The power which gives rise to the production of energy at the rate of 1 joule per second.

Warning area. A warning area is airspace of defined dimensions, extending from 3 nautical miles outward from the coast of the United States, that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both.

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.

Weber (Wb). The magnetic flux which, linking a circuit of one turn, produces in it an electromotive force of 1 volt as it is reduced to zero at a uniform rate in 1 second.

Winglet or tip fin means an out-of-plane surface extending from a lifting surface. The surface may or may not have 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 centres provide aeronautical meteorological en-route forecasts in uniform standardized formats.

{CASR Part 1, Rev. 0, issued Dec. 27 1993; Rev. 1, issued....., 2006 ; Ref. FAA -FAR Part 1 Amdt. Up to 1-51 e-CFR Data is current as December 19, 2005 and ICAO Annex and Safety Oversight Compliance check list, October 2004 }

1.2 Abbreviations and symbols.

Abbreviations and symbols are used in the regulations of Civil Aviation Safety Regulations (CASR), unless the context requires otherwise, they have the following means :

“AD” means Airworthiness directive.

“AC” means Advisory Circular.

“AFM” means Aircraft Flight Manual.

“AGL” means above ground level.

“ALS” means approach light system.

“ALI” means Airworthiness Limitation Inspection.

“AMO” means Approved Maintenance Organization.

“AMEL” means Aircraft Maintenance Engineer Licence.

“AMM” means Aircraft Maintenance Manual.

“AOM” means Aircraft Operating Manual.

“ARC” means Authorized Release Certificate (old was AAT : means Airworthiness Approval Tag)

“ASR” means airport surveillance radar.

“ATC” means air traffic control.

“BAA” means Bilateral Airworthiness Agreement.

“C of A” means Certificate of Airworthiness.

“C of R” means Certificate of Registration.

“CAS” means calibrated airspeed.

“CAT II” means Category II.

“CCP” Company Check Pilot/Flight Engineer/Navigator

“CIP” Conformity Inspection Plan.

“CO” Carbon monoxide

“COMA” Certificate of maintenance.

“CONSOL or CONSOLAN” means a kind of low or medium frequency long range navigational aid.

“DG” means Directorate General

“DGCA” Directorate General of Civil Aviation

“DAC” Directorate of Airworthiness Certification.

“DGCP/FE/N” means Designated Government Check Pilot/Flight Engineer / Navigator

“DGFAS” Designated Government Flight Attendant Supervisor
“DGFOOS” Designated Government Flight Operations Officer Supervisor
“DH” means decision height.
“DME” means Distance Measuring Equipment compatible with TACAN.
“Dp” The mass of any gaseous pollutant emitted during the reference emissions landing and take-off cycle
“EAS” means equivalent airspeed.
“Fn” Thrust in International Standard Atmosphere (ISA), sea level conditions, for the given operating mode
“Foo” Rated output (see definition)
“F*oo” Rated output with afterburning applied
“FAA” means Federal Aviation Administration.
“FAS” means Flight Attendant Supervisor
“FI” means Flight Instructor
“FM” means fan marker.
“FOOS” means Flight Operations Officer Supervisor
“GS” means glide slope.
“GCP/FE/N” means Government Check Pilot/Flight Engineer/Navigator
“GFAS” Government Flight Attendant Supervisor
“GFOOS” Government Flight Operations Officer Supervisor
“GI” Ground Instructor
“HIRL” means high intensity runway light system.
“HC” Unburned hydrocarbons (see definition)
“IAS” means indicated airspeed.
“ICAO” means International Civil Aviation Organization.
“IFR” means Instrument Flight Rules.
“ILS” means instrument landing system.
“IM” means ILS inner marker.
“IMC” Instrument Meteorological Conditions
“INT” means intersection.
“LDA” means localizer-type directional aid.
“LFR” means low frequency radio range.
“LMM” means compass locator at middle marker.

“LOC” means ILS localizer.

“LOM” means compass locator at outer marker.

“M” means mach number.

“MAA” means maximum authorized IFR altitude.

“MALS” means medium intensity approach light system.

“MALSR” means medium intensity approach light system with runway alignment indicator lights.

“MCA” means minimum crossing altitude.

“MDA” means minimum descent altitude.

“MEA” means minimum enroute IFR altitude.

“MM” means ILS middle marker.

“MOCA” means minimum obstruction clearance altitude.

“MSA” Minimum Sector Altitude.

“MRA” means minimum reception altitude.

“MSL” means mean sea level.

“NDB(ADF)” means nondirectional beacon (automatic direction finder).

“NOPT” means no procedure turn required.

“NO” Nitric oxide

“NO₂” Nitrogen dioxide

“NO_x” Oxides of nitrogen (see definition)

“OEI” means one engine inoperative.

“OM” means ILS outer marker.

“OPSPEC” Operation Specifications.

“PAR” means precision approach radar.

“PC” means Production Certificate.

“PMA” means Part Manufacturing Approval.

“PM” means Program Manager.

“PI” means Principle Inspector.

“PMI” means Principle Maintenance Inspector.

“poo” means Reference pressure ratio (see definition)

“RAIL” means runway alignment indicator light system.

“RBN” means radio beacon.

“RCLM” means runway centerline marking.

“RCLS” means runway centerline light system.

“REIL” means runway end identification lights.

“RII” means Required Inspection Item.

“RR” means low or medium frequency radio range station.

“RTS” means return to service.

“RVR” means runway visual range as measured in the touchdown zone area.

“RVSM” means Reduce Vertical Separation Minimum.

“SALS” means short approach light system.

“SB” means Service Bulletin.

“SDR” Service Difficulty Report.

“SSALS” means simplified short approach light system.

“SSALSR” means simplified short approach light system with runway alignment indicator lights.

“SI” means Staff Instructions.

“SN” Smoke Number (see definition)

“S/N” means Serial Number of product or parts.

“SNI” means National Standards of Indonesia (Standard Nasional Indonesia)

“STC” means Supplement Type certificate.

“TACAN” means ultra high frequency tactical air navigational aid.

“TAS” means true airspeed.

“TC” means Type Certificate.

“TCDS” means Type Certificate Data Sheet.

“TCAS” means a traffic alert and collision avoidance system.

“TIA” means Type Inspection Authorization.

“TSOA” means Technical Standard Order Authorization.

“TSN” means Time since new.

 “TSO” Time sine overhaul.

 “CSN” Cycle since new.

 “CSO” Cycle since overhaul.

“TDZL” means touchdown zone lights.

“TVOR” means very high frequency terminal omnirange station.

“VA” means design maneuvering speed.

“VB” means design speed for maximum gust intensity.

“VC” means design cruising speed.

“VD” means design diving speed.

“VDF/MDF” means demonstrated flight diving speed.

“VEF” means the speed at which the critical engine is assumed to fail during takeoff.

“VF” means design flap speed.

“VFC/MFC” means maximum speed for stability characteristics.

“VFE” means maximum flap extended speed.

“VFR” means Visual Flight Rules.

“VFTO” means final takeoff speed.

“VH” means maximum speed in level flight with maximum continuous power.

“VLE” means maximum landing gear extended speed.

“VLO” means maximum landing gear operating speed.

“VLOF” means liftoff speed.

“VMC” means minimum control speed with the critical engine inoperative.

“VMO/MMO” means maximum operating limit speed.

“VMU” means minimum unstick speed.

“VNE” means never exceed speed.

“VNO” means maximum structural cruising speed.

“VR” means rotation speed.

“VREF” means reference landing speed.

“VS” means the stalling speed or the minimum steady flight speed at which the airplane is controllable.

“VS0” means the stalling speed or the minimum steady flight speed in the landing configuration.

“VS1” means the stalling speed or the minimum steady flight speed obtained in a specific configuration.

“VSR” means reference stall speed.

“VSR0” means reference stall speed in the landing configuration.

“VSR1” means reference stall speed in a specific configuration.

“VSW” means speed at which onset of natural or artificial stall warning occurs.

“VTOSS” means takeoff safety speed for Category A rotorcraft.

“VX” means speed for best angle of climb.

“VY” means speed for best rate of climb.

“V1” means the maximum speed in the takeoff at which the pilot must take the first action (e.g., apply brakes, reduce thrust, deploy speed brakes) to stop the airplane within the accelerate-stop distance. V1 also means the minimum speed in the takeoff, following a failure of the critical engine at VEF, at which the pilot can continue the takeoff and achieve the required height above the takeoff surface within the takeoff distance.

“V2” means takeoff safety speed.

“V2”min means minimum takeoff safety speed.

“VFR” means visual flight rules.

“VHF” means very high frequency.

“VOR” means very high frequency omnirange station.

“VORTAC” means collocated VOR and TACAN.

MENTERI PERHUBUNGAN

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M. HATTA RAJASA

Salinan sesuai dengan aslinya
Kepala Biro Hukum dan KSLN

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